Maternal and Child Health Services Title V Block Grant

Puerto Rico

FY 2020 Application/ FY 2018 Annual Report

Created on 10/1/2019 at 11:15 AM

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I. General Requirements

I.A. Letter of Transmittal

GOBIERNO DE PUERTO RICO

Departamento de Salud

July 15, 2019

Michele H. Lawler, M.S., R.D.
Director
Division of State and Community Health
Maternal and Child Health Bureau
Health Resources and Services Administration
5600 Fishers Lane, Room 18N33
Rockville, Maryland 20857

Dear Ms. Lawler:

The Puerto Rico Department of Health is submitting the Title V – Maternal and Child Services Block Grant Application for FY 2020 including the Annual Report for FY 2018. The information included is according to the Guidance –OMB No: 0915-0172 for this year Application and Annual Report. The Puerto Rico Department of Health is requesting a total of $15,800,897 in federal funds to be matched with $11,850,673 in state funds. No waiver is requested.

Thank you in advance for your consideration and approval of the requested funds. We look forward to continue working in partnership with the MCHB to improve the health and well being of the Puerto Rico MCH population.

If further information is required please do not hesitate to contact the MCH Director, Manuel I. Vargas Bernal, MD, MPH. He can be reached at (787) 765-2929 Ext. 4550 or by e-mail mivargas@salud.pr.gov.

Sincerely,

Rafael Rodríguez Mercado, MD, FAANS, FACS
Secretary
Puerto Rico Department of Health

PO Box 70184, San Juan, PR 00936-8184
www.salud.gov.pr ♦ (787)765-2929

I.B. Face Sheet

The Face Sheet (Form SF424) is submitted electronically in the HRSA Electronic Handbooks (EHBs).

I.C. Assurances and Certifications

The State certifies assurances and certifications, as specified in Appendix F of the 2018 Title V Application/Annual Report Guidance, are maintained on file in the States' MCH program central office, and will be able to provide them at HRSA's request.

I.D. Table of Contents

This report follows the outline of the Table of Contents provided in the *"Title V Maternal and Child Health Services Block Grant To States Program Guidance and Forms,"* OMB NO: 0915-0172; Expires: December 31, 2020.

II. Logic Model

Please refer to figure 4 in the "Title V Maternal and Child Health Services Block Grant To States Program Guidance and Forms," OMB No: 0915-0172; Expires: December 31, 2020.

III. Components of the Application/Annual Report

III.A. Executive Summary

III.A.1. Program Overview

The Title V Program in Puerto Rico operates within the Department of Health (DOH) and is housed in the Maternal, Child and Adolescent Health Division (Component A & B or MCAH Program) and the Children with Special Medical Needs Division (Component C or CSHCN Program).

PR TITLE V PROGRAMS AND SERVICES

HOME VISITING PROGRAM (HVP) staffed by the ***Home Visiting Nurses (HVNs)***, operates in 73 municipalities. The HVP offers holistic case management, care coordination, support and education services to pregnant and parenting women, their children up to age 2, and their families. A series of screening tools are used to identify participants' needs and strengths and services are tailored accordingly. The HVNs work in partnership with participants to devise the action plans that can be changed if new needs arise throughout the period of participation in the program.

COMMUNITY HEALTH PROMOTION is overseen by the ***Health Educators (HEs)*** – one in each of the 7 Health Regions – that offer education to communities and provide technical assistance to the ***Community Health Workers*** **(CHWs).** The HEs and CHWs offer the following courses: a) Prenatal Course that provides pregnant women with tools to maintain a healthy pregnancy and prevent risk factors; b) Parenting Courses targeted at parents of children 0-5 years old and parents of children aged 6-11 years old on healthy eating, physical activity, preventive medical visits, violence prevention, home safety and positive childrearing. A key aspect of health promotion are media/internet campaigns, dissemination of educational materials and training to families and professionals.

PERINATAL SERVICES are provided by the ***Perinatal Nurses (PNs)*** that visit birthing hospitals across PR to offer pregnancy and breastfeeding support and post-partum and infant health education. They also promote the HVP and the Prenatal and Responsible Parenting Courses.

COMPREHENSIVE ADOLESCENT HEALTH PROGRAM (CAHP) promotes adolescence health based on the Positive Youth Development Model (PYDM). The ***Comprehensive Adolescent Health Program Coordinators (CAHPCs)***, one in each of the 7 Health Regions, coordinate the Youth Health Promoters Project (YHPP) implemented in selected schools. The YHPPs are voluntary students that promote healthy lifestyles among their peers. There is also a Youth Advisory Council (YAC) that help identify and implement strategies to improve youth health and wellbeing.

PEDIATRIC AND AUTISM CENTERS. Provide comprehensive, quality and family-centered health, social and support services to CSHCN and their families. The seven Pediatric Centers (RPCs) and the two Autism Centers have a complete health workforce that comprises Pediatricians, Nurses, Physical and Occupational Therapists, Speech Pathologists, Speech Therapists, Psychologists, Social Workers, Service Coordinators and Specialized Physicians.

The greatest challenge Title V faces is Puerto Rico's economic crisis characterized by an outstanding public debt, public cutbacks, shrinking labor market, poverty, large migration to the US and a slow recovery from the devastation caused by Hurricane María in 2017 that caused billions in damages.

Based on the 2019 Interim Health Needs Assessment (HNA) and input from professional, family and youth

stakeholders, we assessed the priority needs, strategies, resources and measures (NPMs, SPMs, ESMs) of the action plan. All 10 priorities identified in the 2015-5YR HNA remain unchanged.

PUERTO RICO TITLE V PRIORITIES	
1.	Improve women in reproductive age health and wellbeing including emergent conditions
2.	Improve birth outcomes
3.	Decrease infant mortality
4.	Improve children health and wellbeing
5.	Improve adolescent health and wellbeing
6.	Increase the number of CSHCN who receive regular ongoing comprehensive health care within a medical home
7.	Increase the number of CSHCN aged 12 to 17 years who receive adequate support and services for their transition to adult health care
8.	Decrease the age when children at risk for Autism Spectrum Disorders (ASD) receive their first diagnostic evaluation
9.	Reduce the prevalence at birth of neural tube defects
10.	Implementation of health information technology (EHR and tele-health) to increase access to necessary health services, ensure consistent tracking and monitoring of CSHCN and improve CSHCN Program data

Before presenting the summary for each domain, it must be clarified that in 2017-2018 PR Title V focused attention on emergent storm-related needs joining recovery efforts. In the aftermath of the storm, life became a struggle for survival as people, especially those most vulnerable, lacked access to their most basic needs. Consequently, PR Title V adjusted it strategies and timelines across all domains.

Women/Maternal Health:

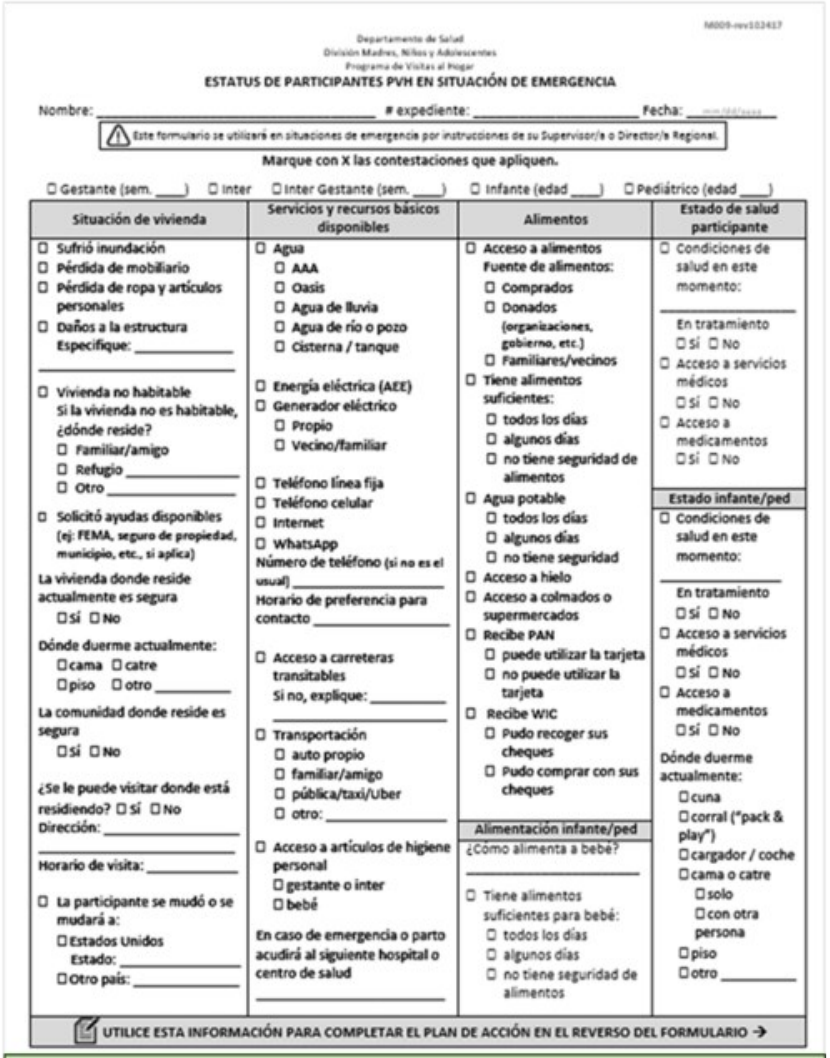
Despite personal losses due to the catastrophe, the MCAHP staff worked tirelessly to help the MCA populations, particularly those staying in shelters or in unsafe living conditions.

The HVNs reached 165 pregnant women, 624 postpartum women, 299 infants and 264 children (12-24 m/o), assessed their needs and endeavored to find the resources needed to supply them.

The staff developed and disseminated educational materials on emergent public health topics: leptospirosis, scabies, lice, clean drinking water, safe food storage, personal hygiene, hand washing, interpersonal violence, and unintentional injuries.

A needs inventory tool was developed for HVP participants to tend to their most pressing necessities, which may have differed from the pre-hurricane needs and plan.

HVP POST HURRICANE NEEDS INVENTORY



M009-rev102417

Departamento de Salud
División Madres, Niños y Adolescentes
Programa de Visitas al Hogar

ESTATUS DE PARTICIPANTES PVH EN SITUACIÓN DE EMERGENCIA

Nombre: _____ # expediente: _____ Fecha: _____

⚠ Este formulario se utilizará en situaciones de emergencia por instrucciones de su Supervisor/a o Director/a Regional.

Marque con X las contestaciones que apliquen.

☐ Gestante (sem. ____) ☐ Inter ☐ Inter Gestante (sem. ____) ☐ Infante (edad ____) ☐ Pediátrico (edad ____)

Situación de vivienda

- ☐ Sufrió inundación
- ☐ Pérdida de mobiliario
- ☐ Pérdida de ropa y artículos personales
- ☐ Daños a la estructura
  Especifique: _____

_____

- ☐ Vivienda no habitable
  Si la vivienda no es habitable, ¿dónde reside?
  - ☐ Familiar/amigo
  - ☐ Refugio _____
  - ☐ Otro _____
- ☐ Solicitó ayudas disponibles (ej: FEMA, seguro de propiedad, municipio, etc., si aplica)

La vivienda donde reside actualmente es segura
☐ Sí ☐ No

Dónde duerme actualmente:
☐ cama ☐ catre
☐ piso ☐ otro _____

La comunidad donde reside es segura
☐ Sí ☐ No

¿Se le puede visitar donde está residiendo? ☐ Sí ☐ No
Dirección: _____

_____

Horario de visita: _____

- ☐ La participante se mudó o se mudará a:
  - ☐ Estados Unidos
    Estado: _____
  - ☐ Otro país: _____

Servicios y recursos básicos disponibles

- ☐ Agua
  - ☐ AAA
  - ☐ Oasis
  - ☐ Agua de lluvia
  - ☐ Agua de río o pozo
  - ☐ Cisterna / tanque
- ☐ Energía eléctrica (AEE)
- ☐ Generador eléctrico
  - ☐ Propio
  - ☐ Vecino/familiar
- ☐ Teléfono línea fija
- ☐ Teléfono celular
- ☐ Internet
- ☐ WhatsApp

Número de teléfono (si no es el usual) _____
Horario de preferencia para contacto _____

- ☐ Acceso a carreteras transitables
  Si no, explique: _____

_____

- ☐ Transportación
  - ☐ auto propio
  - ☐ familiar/amigo
  - ☐ pública/taxi/Uber
  - ☐ otro: _____
- ☐ Acceso a artículos de higiene personal
  - ☐ gestante o inter
  - ☐ bebé

En caso de emergencia o parto acudirá al siguiente hospital o centro de salud

_____

Alimentos

- ☐ Acceso a alimentos
  Fuente de alimentos:
  - ☐ Comprados
  - ☐ Donados (organizaciones, gobierno, etc.)
  - ☐ Familiares/vecinos
- ☐ Tiene alimentos suficientes:
  - ☐ todos los días
  - ☐ algunos días
  - ☐ no tiene seguridad de alimentos
- ☐ Agua potable
  - ☐ todos los días
  - ☐ algunos días
  - ☐ no tiene seguridad
- ☐ Acceso a hielo
- ☐ Acceso a colmados o supermercados
- ☐ Recibe PAN
  - ☐ puede utilizar la tarjeta
  - ☐ no puede utilizar la tarjeta
- ☐ Recibe WIC
  - ☐ Pudo recoger sus cheques
  - ☐ Pudo comprar con sus cheques

Alimentación infante/ped

¿Cómo alimenta a bebé?

_____

- ☐ Tiene alimentos suficientes para bebé:
  - ☐ todos los días
  - ☐ algunos días
  - ☐ no tiene seguridad de alimentos

Estado de salud participante

- ☐ Condiciones de salud en este momento:

_____

En tratamiento
☐ Sí ☐ No

- ☐ Acceso a servicios médicos
  ☐ Sí ☐ No
- ☐ Acceso a medicamentos
  ☐ Sí ☐ No

Estado infante/ped

- ☐ Condiciones de salud en este momento:

_____

En tratamiento
☐ Sí ☐ No

- ☐ Acceso a servicios médicos
  ☐ Sí ☐ No
- ☐ Acceso a medicamentos
  ☐ Sí ☐ No

Dónde duerme actualmente:
- ☐ cuna
- ☐ corral ("pack & play")
- ☐ cargador / coche
- ☐ cama o catre
  - ☐ solo
  - ☐ con otra persona
- ☐ piso
- ☐ otro _____

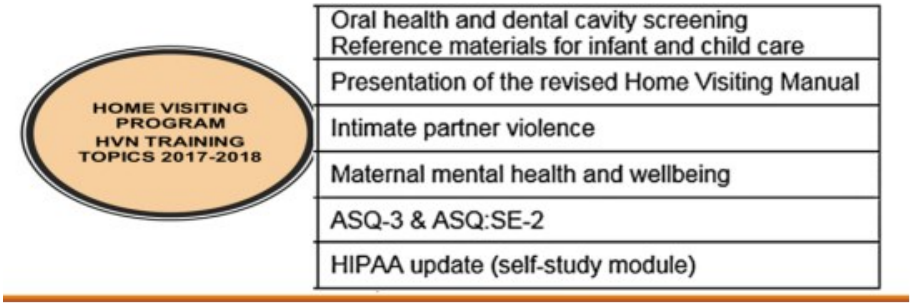
UTILICE ESTA INFORMACIÓN PARA COMPLETAR EL PLAN DE ACCIÓN EN EL REVERSO DEL FORMULARIO →

- **Housing situation:** damages to or loss of the home and personal possessions, current living arrangements, availability of a safe space for baby to sleep, plan to relocate, etc.
- **Status of utilities and basic services:** water, electric power (grids or generator), transportation, etc.
- **Drinking water and safe food for adults, infants and children:** access to supermarkets, availability of foodstuffs in stores, availability of baby food or formula if not breastfeeding, access to ice or refrigeration for safe storage of perishables, etc.
- **Health status of participant and family members:** access to physical and mental health care, adequate supply of medications and vaccines, if needed, etc.
- **For pregnant participants:** plans for delivery if their hospital or OB of choice was not available, plans for transportation to hospital, etc.

Health interventions and actions for 2017-2018 were gradually resumed. The HVNs provided services to 6,347 participants (e.g. pregnant and parenting women, infants and children 12-24 months), completed 26,111 home visits and carried out 54,097 interventions in the HVP.

The HVNs offer education to partners, relatives and friends of HVP participants so they can give support. They also offer education, support and care coordination to pregnant and parenting women unqualified for the HVP or who are unable to engage in the program. The HVNs made 7,414 interventions with non-participants in 2017-2018.

Each year, the HVNs receive skills building trainings. One such training was the **Family Inclusion in Title V** that focus on families as partners at all levels of actions.



The 8 Perinatal Nurses (PNs) offered education and referrals to pregnant and postpartum women and their companions in birthing hospitals across PR. The total population reached in 2017-2018 was 8,513 (unduplicated).

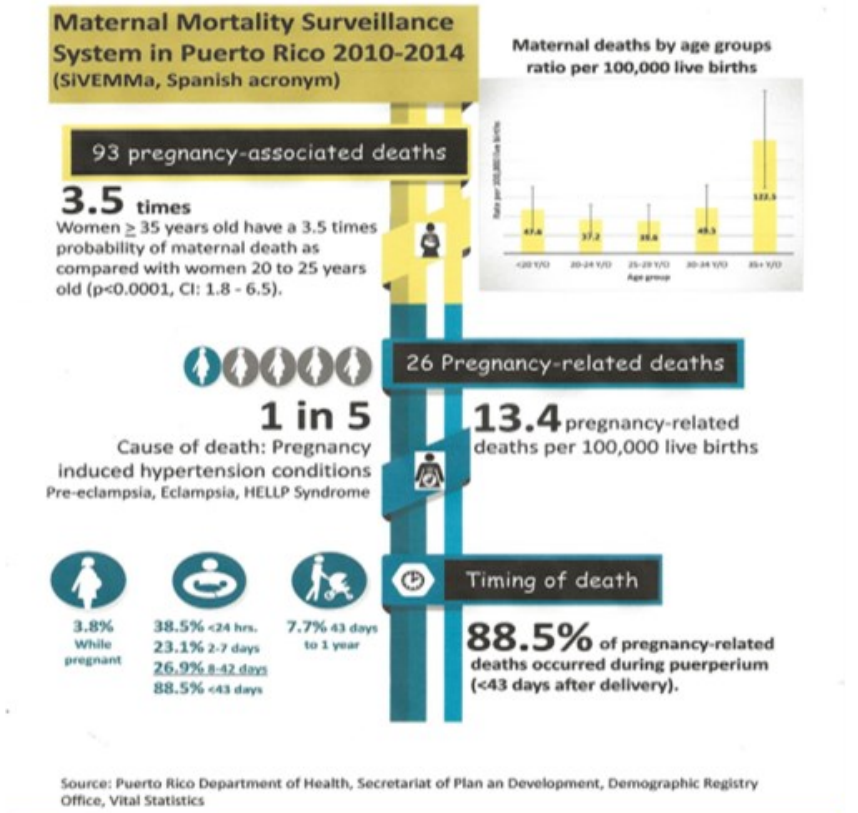
In 2017- 2018 the CHWs and HEs reached a total of 36,810 persons aged 10 and up in individual orientations and group activities in schools, communities and health care providers sites. In addition, 3,500 children ages 3-9 participated in CHWs/HEs activities.

They also offered the 4-Session Prenatal Courses targeted at pregnant women and companions to promote healthy pregnancy and prevent risk factors. The courses were a success as 92.6% (1,323 out of 1,429) of participants completed all sessions.

The prenatal education campaign “Encounter of my life” promotes 40 weeks gestation, healthy pregnancy, and prenatal care. Its dissemination will be continued in digital, broadcast and print media, with emphasis on social media and the web page www.encuentrodemivida.com.

Health promotion efforts described will be continued to enhance the progress made in this domain.

Maternal Mortality is a serious public health issue and an important priority in the MCAHP.



"Violent or traumatic causes of death was very frequent among almost all age groups in Puerto Rico form 2010 to 2014. Younger women (less than 20 y/o) had the highest proportion of violent deaths. The group of women 35 y/o or older was the only group without violent or traumatic deaths, being heart disease the main cause of death with 19%."

In 2017-2018, the agencies and entities required to be represented in the Maternal Mortality Review Committee (MMRC) as stipulated by Act 186 of 2016 were furnished with copies of the law, the MMRC protocol, and a request to submit the name of the representative.

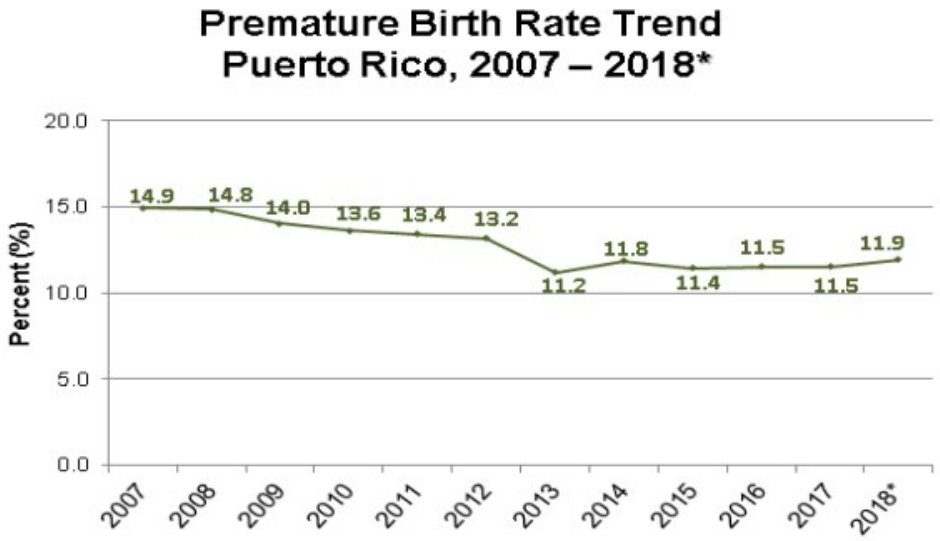
MATERNAL MORTALITY REVIEW COMMITTEE PLAN FOR 2019-2020

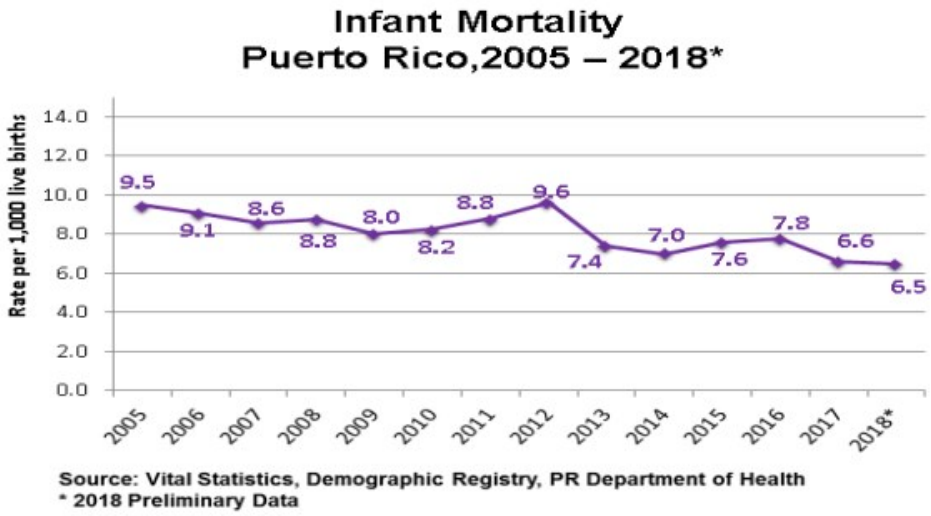
- Prepare a brochure regarding Law 186 of 2016, known as the *Puerto Rico Maternal Mortality Epidemiological Surveillance System Law* (SiVEMMa, Spanish acronym) for dissemination in hospitals and among health care service providers.
- Prepare a presentation on the requirements of Law 186 to be offered in hospitals.
- Garner collaboration of the Hospital Association, PR Health Insurance Administration (PRHIA), the Administration of Medical Services of Puerto Rico (ASEM) and other stakeholders.
- Visit hospitals (SiVEMMa coordinator and OB-GYN consultant) where a maternal death has occurred to train the Perinatal Nurses on data extraction from the hospital records, which will increase our capacity to present cases to the MMRC.
- Convene the MMRC members for review of cases.
- Sign the MOU with CDC to use the Maternal Mortality Review Information Application (MMRIA), which allows data to be compared nationally.
- Develop reports to be shared with stakeholders.
- Develop strategies to decrease Maternal Mortality

Perinatal/Infant Health:

As described in the previous domain, the MCAHP staff reached families to address emergent post-storm issues affecting infants.

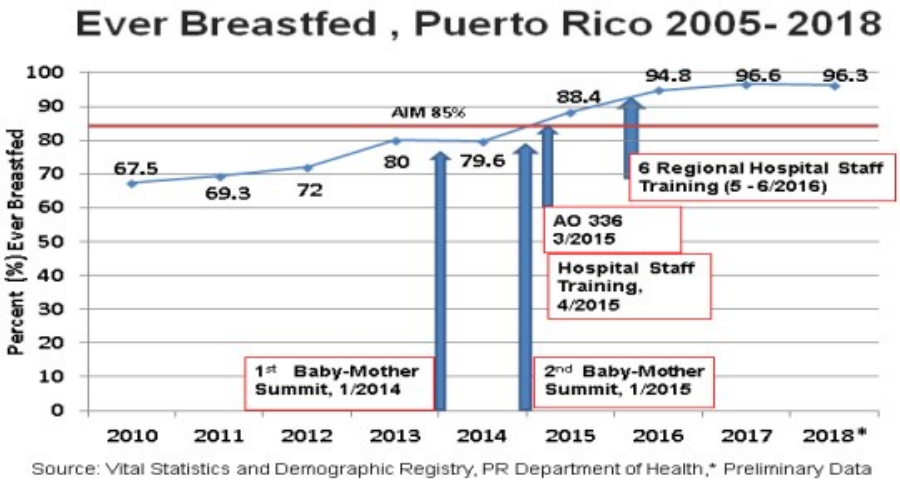
The promotion of healthy pregnancy leads to better birth outcomes and considerable progress has been made in reducing prematurity and Infant Mortality (IM) over the past 10 years. The 2018 VS preliminary data reported an 11.9% of premature births and an IM of 6.5 /1000 live births.





The FIMR evaluates IM and fetal deaths to identify priorities and gaps in perinatal services and recommend strategies to decrease IM. The FIMR was instrumental in identifying gaps and making recommendations to improve disaster preparedness in hospitals that deliver maternal infant services.

MCAH supports and promotes breastfeeding through advocacy and education. As the charts shows, 9 out of 10 infants are ever breastfed in PR.



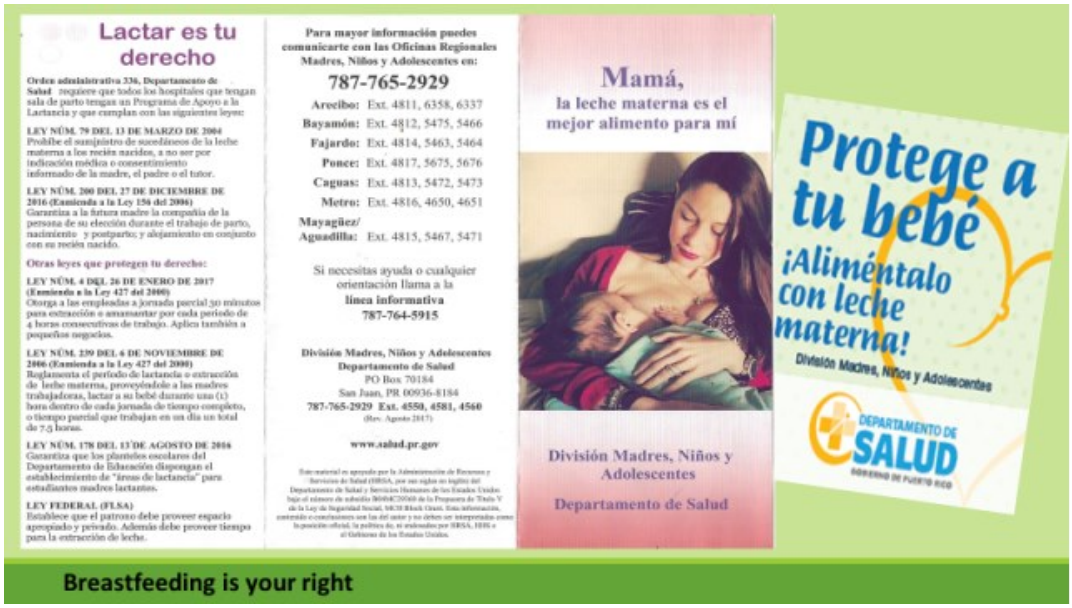
	Among Infants Born in 2015⁺		PR PRAMS 2017-2018	Healthy People 2020
	US National average %	PR %	% born 2017	Healthy People 2020 %
Ever Breastfed	83.2	85.9*	93.5*	81.9
Breastfed up to 6 months	57.6	47	45	60.6
Breastfed up to 12 months	35.9	29.8	n/a	34.1
Exclusive BF up to 3 months	46.9	48.8*	n/a	46.2
Exclusive BF up to 6 months	24.9	26.5*	n/a	25.5
Fed formula first 2 days	17.2	19.6	n/a	14.2
Baby Friendly Hospitals	26.1	1.1	n/a	8.1

⁺Breastfeeding Report Card, National Immunization Survey, CDC, United States, 2018

* PR surpassed the HP 2020 goal

The MCAHP leadership in health promotion, partnerships and public policy has made possible the increase in BF. One key policy is DOH Administrative Order 336 requiring hospitals to promote the Baby friendly steps. The MCAHP led efforts for its implementation in hospitals through multiple workshops and forums in the last three years. As a result, the first USA Baby Friendly Hospital in PR was designated in 2017.

Through campaigns and educational materials, the staff promoted BF as a protective measure in general and as the safest way to feed infants after a disaster. They also informed women and the general public about the existing laws in PR that protect and support the right to BF.



The MCAHP is participant in the CDC LOCATe evaluation of hospital collecting data comparable to other states. Results will help offer recommendations to optimize the system of care.

Efforts will be continued to decrease prematurity and infant mortality, promote BF and improve infant health through education, policy and partnerships.

Child Health:

The MCAHP staff played a key role in identifying the emergent storm-related needs of children becoming the main liaison for the mitigation and recovery efforts directed to families due to their knowledge and established relationships in communities.

The staff collaborated in the development of a “train the trainer” initiative to enable community leaders to effectively help sustain the health and wellbeing of children after a catastrophe. The trainings included the identification of common conditions that arise in children after a disaster and how to manage them, prevention of unintentional injury, and a strategy to mitigate the effects of storm-related stress. They also served as a bridge between local/mainland organizations and communities to provide basic life needs support and recovery.

TRAINING SESSIONS: ON A MITIGATION STRATEGY TO PROVIDE FAMILIES WITH THE TOOLS TO HELP THEIR CHILDREN OVERCOME THE TRAUMA OF THE STORM
Train the trainer for leaders of not for Profit Day Care Centers ▪ Trinka and Juan a tool to help families and their children overcome the trauma of a hurricane ▪ Participation of 340 representatives of 105 day care centers ▪ Participation of 173 leaders from 96 community non for profit organizations

Recovery and Mitigation Efforts after Hurricanes Irma and María, Collaboration with United Ways of PR and PR AAP Chapter

Health promotion initiatives for 2017-2018 were gradually resumed. The MCAHP completed the feeding guidelines for children between 0 and 24 months of age and updated the preventive pediatric care guidelines (PRPPHCSG).

The staff promoted preventive visits, nutrition, physical activity, on schedule immunization, oral health care since early childhood and healthy lifestyles. The HEs and HCWs delivered the parental courses (0 to 5 y/o and 6 to 11 y/o) and a total of 3,082 persons completed them.

The staff also collaborated in unintentional injury prevention, safe water campaigns, prevention of shaking baby syndrome and policy development of Head Start and Early Head Start. The MCAHP is participant in the Children Justice Act Committee which aims at improving the system that evaluates and manages child maltreatment in PR.

In the 2017 Behavioral Risk Factor Surveillance System (BRFSS) survey, 71% of parents with children between the ages of 1 and 11 y/o stated that their child was in excellent or good health and 86% reported their child had a preventive visit.

Notwithstanding the progress made, the promotion of children's health, well-visits and healthy lifestyles will be continued.

Adolescent Health:

The CAHPCs were deeply involved in aiding the most vulnerable, particularly youth and their families in shelters and communities. They reached over 700 families, and as social workers, gave people emotional support and information about available crisis intervention counseling services.

A major action was the translation and adaptation of the Hope after Hurricanes (HAH) session of Our Climate Curriculum of the Alliance for Climate Education's (ACE), adding a new question on the positive (resiliency), a mindfulness initial activity and a closing activity. This intervention was first done with CAHPCs and afterwards with participants of the Youth Health Promoters Program (YHPP). A total of 742 YHPP participants in 53 schools received the HAH sessions. The PR-adapted HAH included:

1. Introduction 	Introductions and brief facts about the hurricane's path through PR for youth to have a sense of scale of impact
2. Mindfulness 	Sitting in a circle, the group does a grounding exercise (toes to head) to individually have the experience of a quiet moment of reflection and to connect within
3. Think 	A one page handout is distributed to be answered individually in words or drawings about: a. Experience: What did you experience? b. Impressions: What were your first thoughts? What did you do? What did you see, hear, smell, and touch? c. Emotion: What were you feeling? How did you feel? d. Experiences after the event: What did you feel afterwards? What positive things do you remember?
4. Talk 	Ask volunteers to share his/her story and normalize the reactions
5. Inspire "Message of Hope" 	Tell them other youths have being through this event and ask what message of hope they could give them. Ask each to write down the ideas and how to deliver them on the other side of the handout. Discuss the ideas and plan together an activity to share the messages of hope
6. Closure "Stones" 	Ask each to select one small stone from a pile in the center of the circle, place it close to her/his heart to connect with it and write a word on it that conveys a message to share or keep as a symbol of connectedness, stability, strength & endurance

The HAH allowed youths to better understand and respond to their own emotions, increased feeling of personal control and solidarity with others. Youth needing additional professional support were referred to the schools' health professionals for evaluation and follow up.

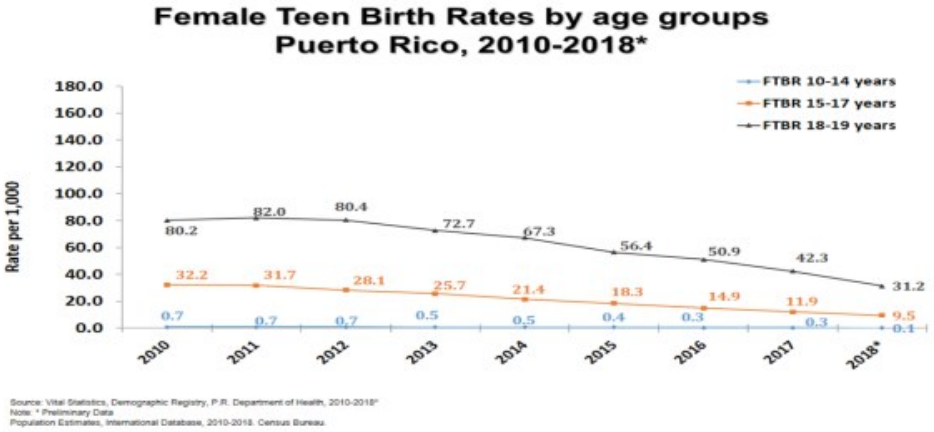
Health interventions and actions for 2017-2018 were gradually resumed. A main challenge was limited school hours. The CAHPCs rearranged the theme schedule of the "Healthy Youth in Action" curriculum used in the YHPP, a peer-to-peer school-based initiative of the Comprehensive Adolescent Health Program (CAHP) in collaboration with the PR Department of Education. Yet, they trained and gave support to 1,159 YHPP participants in 67 schools distributed in 60 municipalities.

YHPP CURRICULUM THEMES		
Year 1	**Year 2**	**Year 3 (in process)**
-YHPP Pre Survey -Team work -What is health -Youth Health Promotion -Human rights -Effective Communication -Interpersonal relationships -Growth and development -My body is changing (physical, mental, social, emotional and brain changes in adolescence)	-Sexual Health: pregnancy, STIs -Communication / non discrimination -Plan, do and assess a health promotion activity -Annual health visit: 6 areas of health, wheel of health, HEADSS model, what to do before, during and after a health visit, design a youth friendly health services clinic -Assess adolescent health campaign video	-My body is changing (changes in adolescence continuation) -Plan, do and assess a health promotion activity -My whole day: nutrition, physical activity, sleep, relationships, use of time -Brain development -Our steps as YHPs -YHPP Post Survey

In 2017-2018, the CAHPCs offered 46 educational activities on a variety of youth health topics to 1,252 10-19 y/o (Not YHPs) in schools and other settings. As described in the Women/Maternal Health domain, the HEs also provided education to teens.

The CAHPCs offered 13 adult educational activities on youth health reaching 287 adults. They also offered 9 Understanding Adolescence workshops to 121 parents/caregivers, school personnel and professionals.

Risk-behavior prevention among youth leads to better health outcomes. In PR great strides have been made in reducing teen birth rates in all age groups as shown below.



Source: Vital Statistics, Demographic Registry, P.R. Department of Health, 2010-2018*
Note: * Preliminary Data
Population Estimates, International Database, 2010-2018. Census Bureau.

The CAHP promotion efforts will be continued to maintain and enhance youth health and wellbeing in PR.

It is worth noting that CAHP has two distinct MCAHP sponsored youth groups that are its closest partners:

YOUTH HEALTH PROMOTERS (YHPs), are voluntary teens that participate in the YHPP to promote health and wellbeing among their peers in schools. They participate in the program for three consecutive years and receive support and training on different aspects of youth health. In 2017-2018, the YHPs reached 2,599 peers and 110 adults.

YHPs
HEALTH PROMOTION
MAIN THEMES
2017-2018

Personal Hygiene
Sexuality
Teen Pregnancy
Physical Activity
Annual Health Visit
Bullying Prevention
Healthy Relationships
Substance Abuse Effects in the Brain
Dating Violence Prevention
Changes during Adolescence
Human Rights
Pet Abuse Prevention
Wheel of Health
Six Areas of Health
Suicide Prevention

A group of YHPs carrying out activity "Wheel of Health"

YOUTH ADVISORY COUNCIL (YAC), established by DOH Administrative Order 359 (2016), is composed of 20 youths ages 14 to 24 that advise on initiatives and public policies regarding adolescent health, carry out public educations, and represent the DOH in conferences within and outside PR.

YAC MAIN ACTIVITIES 2017-2018	
	Review of the Adolescent Health Domain and Plan
	Messages of Hope after the Hurricane María
	Presentations in AMCHP Conference 2018
	Evaluation of Youth Depression Tools for PRAAP
	Presentation of "Screening Youth for Depression with Carlos Tool" in PRAAP assembly
	Co-trainers of the "Family Inclusion in Title V' staff trainings
	Participation in the PR Free Tobacco Summit
	Review of YAC selection process for 2018-2020
	Aid to communities after Hurricane María
	Video production: Hope After Hurricane intervention
	Participation in LGBTTQ health and Services workshop
	Participant of the HAH intervention in YAC

AMCHP 2018: AMCHP's CEO congratulates PR YAC representatives for HAH video

Children with Special Health Care Needs:

As a response to the 2017 Hurricanes aftermath, a CSMND team was activated to address the needs of Technology Dependent Children and Youth (TDCY) and their families, who were confronting huge challenges and even possible death. The team immediately worked on the identification of TDCY population through Pediatric Home Cares, Pulmonologists and Pediatric Centers, and detected needs such a water, food, catheters, 0_2 concentrators and generators. A collection center was established at the CSMND's and donations were made by community entities. Supplies were delivered to 45 families by the CSHCNP central and regional level staff. In time, a Service Coordinator was recruited to make sure each new family identified have access to their specific needs and an emergency plan. A virtual map with pin locations of the TDCY residence was developed. The Office for the Preparation and Coordination of Public Response of the PR Department of Health is collaborating in updating the information.

Registry of TDCY

This experience motivated the creation of a Registry of TDCY as well as the virtual map with each TDCY's location in case of emergencies. As of May, 2019, there were 170 TDCY identified. The purpose of the RTDCY is to:

1- Identify the TDCY population under 22 years of age (prevalence)
2- Obtain demographic information that will support the establishment of public policies to meet the needs of the TDCY population
3- Document strengths and needs of families and establish response to catastrophic events
4- Provide T/A to families in the preparation of an Emergency Response Plan.

The Service Coordinator coordinates with local and municipal agencies such as police, first responders, Red Cross, and FEMA and gives follow-up to families.

The CSMND continues with its efforts on the 2016 Zika Outbreak response. The HRSA- Developmental Surveillance and Service Coordination Program (DSSCP) has now a complete staff of 34 Service Coordinators and 13 Family Engagement and Support Advocates (FESAs), and is extending its services to children up to five years of age. As of June 2019, more than 1,300 infants and children have received services from the Program. A major asset are the FESAs, mothers of a CSHCN or who had a lab result of possible ZIKA infection during pregnancy. FESAs inform and support families, participate in quality improvement and coordinate educational activities.

Medical Home

The CSHCNP Quality Improvement Committee (QIC) continues identifying strategies to improve medical home elements. Since access to quality health care is CSHCNP keystone, a sound service coordination is in place that assures families, especially those whose child has recently been diagnosed with a chronic condition, gain access to health care services island wide. Main QIC achievements are the enrichment of inter-disciplinary health care providers/service coordinators work teams at the CSHCNP, and family support. In PR the prevalence of CSHCN from birth to 18 years old is 18.6%.

Transition to Adult Health Care

During 2017-2018, the CSHCNP implemented the Got Transition Model. The Transition to Adult Health Care Procedures Manual was created and presented to RPCs staff (116 health care providers, social workers and service coordinators). The transition to adult health care brochure is disseminated among YSHCN and families. Added collaborators for transition to adult health care are: "*Movimiento para el Alcance de Vida Independiente*" and SER de Puerto Rico

The QIC Transition to Adult Health Care Sub-Committee identifies CSHCN youth issues to be addressed, devises strategies and develops educational materials to facilitate and enhance the transition process from pediatric to adult health care.

Transition to Adult Health Care Sub-Committee Meeting

The brochure on CSHCN youth transition explains:

- ❑ What is meant by transition to adult health care
- ❑ Who participates in the transition process
- ❑ Steps for a transition plan

Early TEA Identification and Diagnosis

The CSMND continues the promotion of early identification and diagnosis of Autism Spectrum Disorders (ASD). As of December 2018, approximately 45,000 booklets of "*Pasaporte a la Salud*" has been distributed to families registering a newborn at each local Demographic Registry Office. The booklet informs about children's growth and physical, socio-emotional, communication, and cognitive development, and about warning signs for developmental delays of children ages 0-5. It is a tool for parents to register their child's health information, monitor development and keep track of screenings and immunizations.

The Autism Registry continues to be promoted among health professionals.

Pasaporte a la Salud de:

.....

Información de tu Bebé

Nombre	
Padres o Encargados	
Dirección Postal	
Teléfonos contacto	Correo electrónico

Historial del Nacimiento

Persona/s que atendieron el parto				Fecha de nacimiento
Complicaciones en el embarazo				Semanas de gestación
Complicaciones en el parto				Parto ○ Vaginal ○ Cesárea
Peso	Largo	Medida de cabeza	Nivel de bilirubina	APGAR 1- /10 2- /10

Cernimiento condiciones hereditarias ○ Negativo ○ Positivo:	Cernimiento Auditivo (antes de 1 mes) ○ Pasó ○ No Pasó: Antes de los 3 meses hacer una Evaluación audiológica
Cernimiento Oximetría del pulso: ○ Pasó ○ No Pasó	Si en la evaluación audiológica resulta con pérdida auditiva, contacte al Programa Niños con Necesidades Especiales de Salud y a Avanzando Juntos de la región del Departamento de Salud que le corresponda antes de los 6 meses.

Pediatra/Médico Primario

La primera visita debe ser de 3 a 5 días de nacido — Teléfono

Fecha visita	Comentario	Fecha visita	Comentario

Dentista — Teléfono

Fecha visita	Comentario	Fecha visita	Comentario

Oftalmólogo — Teléfono

Fecha examen	Comentarios

4

Historial Médico

Diagnósticos		Fecha

Medicamentos	Dosis	Fecha de inicio

Hospitalización/Razón	Fecha	Hospital

Alergias ☐ Medicamentos ☐ Comidas ☐ Otras
Explique:

Cirugías	Fecha	Médico

Transfusiones/Razón	Fecha	Tipo Sangre

5

The promotion of folic acid consumption to prevent neural tube defects (NTD) included presentations to students at universities and schools where women at reproductive age frequent, and dissemination of educational materials in health fairs. In total, 2,773 persons were reached and over 5,000 of educational materials were distributed.

The implementation of the Health Electronic Record and Tele-Medicine continues advancing at the RPCs and Autism Centers. It is expected that all the clinical and financial modules will be running ‘live” by 2020.

CSHCNP efforts will be continued to better serve CSHCN families through service coordination, community education, public policy, partnerships and quality improvement.

III.A.2. How Federal Title V Funds Support State MCH Efforts

Title V funds are essential for the implementation of strategies of the CSHCN domain. Coordination with other federal funds has also helped support MCH essential services for CSHCN and their families. Addressing unmet workforce needs and needed equipment and supplies for the RPCs have been possible through the HRSA-Zika MCH Program, including the current in-process implementation of EHR system and Tele-health. Other services that HRSA and CMS funding provide are educational activities, technical assistance and family support. The Program's surveillance capacity to successfully track and monitor target populations has been possible with CDC funds.

Medical and clinical care for the MCA population is mainly directed through the Government Health Plan (GHP). Since the GHP does not include service coordination, health promotion and disease prevention, Title V funds are used to support these activities carried out by the MCAHP staff: HVNs, PNs, CHWs, HEs and CAHPCs. The HVNs of the Home Visiting Program identify participants' needs, develop plans and offer education, support and referrals. The CHWs and HEs use education and outreach strategies to inform the population and link them with needed services through referrals. The prenatal and parenting courses educate pregnant women and families to make the best decisions about health and wellbeing. The CAHPCs train and support the Youth Health Promoters peer-to-peer health efforts in schools.

III.A.3. MCH Success Story

The MCAHP has an important story to tell. We call this story "From Beneficiary to MCAHP Staff". The story is about how our efforts to include families as paid staff have proven to have a positive effect on the Program and the work we do in communities. At the present time, there are six full-time employees that once were participants of the Home Visiting Program (HVP): five Home Visiting Nurses and one Community Health Worker. What these paid staff have in common is the support they received while participating in the HVP, the skills they developed and their zest to help other families. They have direct expertise about the experiences, needs and challenges pregnant women, children and families go through in communities and the service system. As HVNs and CHW they are at the forefront of health promotion through direct contact with families at the individual and group levels. Their "lived" expertise makes them to be very understanding and sensitive to the needs and concerns of the families they now serve. These family professionals are an important part of our workforce that as former recipients bring the unique experience of having been at the receiving end of our services, and thus help other staff broaden their understanding, sensitivity and capacity to serve families. This direct expertise is highly valued and considered in the work we do in communities and homes to enhance the physical, mental and social health of the populations served by the MCAHP.

Please refer to supporting document 4 for CSHCN success story.

III.B. Overview of the State

The Puerto Rico Department of Health (PRDOH) is the state agency responsible for all matters related to public health including the administration of programs funded through the Title V Block Grant.

PR Title V consists of the Maternal, Child and Adolescent Health Program (MCAHP) housed in the Maternal, Child and Adolescent Division and the Children with Special Heath Care Needs Program (CSHCNP) located in the Children with Special Medical Needs Division. PR Title V provides services and implements initiatives in the seven PRDOH Health Regions.

To place Title V efforts in context one must first understand the general conditions of Puerto Rican society that play a crucial role in the health and wellbeing of populations.

Puerto Rico (PR), a territory of the US, is divided in 78 jurisdictions known as municipalities, each headed by a mayor. Vieques and Culebras are offshore municipalities whose residents travel to the Great Island (PR) in small planes and/or ferry for secondary and tertiary health care and other services.

Every four years, a governor, 28 senators, and 51 House members are elected to serve in the PR government. A non-voting delegate to the US House of Representatives is also elected. Puerto Ricans are US citizens, serve in the US military, and contribute to Social Security and Medicare, but since they do not pay federal taxes, are not eligible to receive the Earned Income Tax Credit that gives refunds to low-income workers. PR residents do qualify for the Child Tax Credit only if they have three or more children, whereas in the states it is applicable to working families with one or more children.

The governmental structure has three major branches: the executive (called Central government), the legislative and the judicial. Each major state agency is divided into a Central office and Regional offices distributed across PR.

Health Care System

In the 1990's public healthcare was transferred from the government to contracted private insurers to provide health care services on a capitated payment plan. The PR Health Insurance Administration (PRHIA) oversees and negotiates contracts with private insurers.

The Government Health Plan (GHP) integrates physical and mental health in one facility, expands preventive medicine and screening, and provides direct access to specialists without need for referral within a Preferred Provider Network. The GHP is financed by a combination of state, municipal and federal funds (Medicaid and SCHIP). Medicaid funding to PR is limited to a fixed amount regardless of the eligible population medical needs, unlike the states that are set based on per capita income. ACA funds (non-recurrent) were added to the GHP for Medicaid assigned funds. Through ACA a number of benefits such as family planning and contraception methods services were added to the GHP's coverage.

In FY 2017-2018 there were 1,238,042 persons covered by the GHP through five insurance companies. Vital Statistics 2018 data show that 67.1% of mothers' health insurance at the time of birth was the GHP which means that it pays for a majority of births in PR.

GHP has a Special Coverage Registry (SCR) for CSHCN. Enrollees have the option to choose the providers for services within the Preferred Provider Network of their PMG or their Health Plan's General Network. Medications, laboratory tests, diagnostic tests and other related procedures specified are part of this coverage. In 2018, there were 40,426 children enrolled in this SCR. The GHP also has a SCR for ASD. When ASD is suspected, children are enrolled in a temporary coverage for up to 6 months for the diagnostic interventions. If the diagnosis of ASD is certified by one of the following GHP providers: neurologist, psychiatrist, developmental pediatrician or clinical psychologist the child is included in the ASD Special Coverage Registry. In 2018, there were 1,279 children enrolled in the ASD-SCR.

Since there has been a large migration of physicians to the US, Puerto Rico passed Act No. 14- 2017 known as the "Incentives Act for the Retention and Return of Medical Professionals" aimed at retaining practicing physicians in PR as well as attracting those who already had left through tax incentives. This act establishes a 4% fixed rate of income contribution on all income generated by the medical provider by a term of fifteen years.

To address the problem of the use of opioids in Puerto Rico, the Prescription Monitoring Program for Controlled Substances (under Law 70 of 2017 for Monitoring the Prescription of Controlled Substances) opened for physician's registration on June 2018. This program aims at maintaining a system of electronic prescription monitoring of controlled substances dispensed in the island.

Population

Puerto Rico is an area of about 3,500 square miles and a population of 3.3 million (PRCS 2017 1YR) that tend to cluster in urban areas. The PRCS 2018 estimate places the population at 3.2 million.

Puerto Rico is mainly a Spanish speaking country where the majority of its residents are Puerto Ricans (95.4% in the 2010 Census) followed by other foreign Hispanic ethnic groups like Dominicans and Cubans. According to the 2017 PRCS 1-YR estimates, the Dominicans that make up 1.7% of the total population and Cubans (0.48%). As these groups come from the Caribbean they share certain sociocultural characteristics with Puerto Ricans. Dominicans, Cubans and any other group can access health and other types of services. Regarding racial composition, 75.8% of people in PR identified themselves as white, 12.4% as black, 7% as some other race, and 3.3% as two or more races in the 2010 Census.

It must be noted that race is a historically and culturally grounded concept that varies from one society to another. Race taxonomies in PR are constructed on the basis of phenotype traits such as texture of hair, skin tone, and lip and mouth shape and intermediate categories exist between white and black that are not represented in the US Census. Some examples are: "indio'' (literally Indian, light brown and brown skinned with straight hair), "jabao'' (fair skinned with kinky hair), and "trigueño'' (light to dark brown skinned). According to PR cultural standards, a person is white if he/she has light skin color (fair and light brown) and straight and/or curly hair, regardless of ancestry.

People in PR may opt to report their race as white (despite skin tone) due to an unstated contempt for everything associated with being dark or black skinned. For example, in PR people make a distinction between "bad hair'' (kinky hair linked to being black) and "good hair'' (straight hair linked to white and Indio). Although new generations are identifying themselves as black, the euphemism "de color'' (literally of color) is commonly used as the word black is seldom used as a direct term of reference, There is also a generalized denial of racial prejudice and discrimination in the island. While it is not possible to explain in depth the manifestation of racism in PR, suffice is to say that it takes a covert form exemplified by sly comments and racial jokes (often seen as harmless) in day-to- day interactions. On an institutional level, dark/black skinned people are underrepresented in the main media outlets and high status positions in both the corporate world and government, according to the PR Civil Rights Commission.

The population in PR fell from 3.7 million in 2010 to 3.2 million in 2018, a decrease of 14%, according to an analysis of the PR Institute of Statistics.

Two main factors are linked with population decline. First, the natural population growth continues to decrease due to declining natality and fecundity rates. Second, the migration of people to US mainland in search of better job opportunities and living conditions. From 2005 to 2016 about 525,769 people left PR, equivalent to 14% of its population. This trend continued and 69,343 people migrated between July 2016 and July 2017. The migration from PR to the US intensified after Hurricane María and approximately 130,000 people left the island between 2017 and 2018, according to Census estimates.

The MCA population constituted 45% of the total 3.3 million population in 2017. The MCA population composition was as follows: 0.8% infants; 8.9% children 1-9 years of age; 12.6% adolescents aged 10-19 (6.5% males and 6.2% females) and; 19.8 % reproductive age women between the ages 20-49.

Education

The 2017 PRCS (1YR estimate) reports that people 25 years and over with less than 9th grade was 15.8 % and those with a high school diploma was 27.9%. Of those 25 years and over with post-secondary education, 22.6% had some college or associate's degree; 18.3% a bachelor's degree and; 7.4% a graduate or professional degree.

Student enrollment in the public system diminished greatly from 544,076 in 2006 to 319,422 in 2017, a decline of 41%. The decline of students led to the closing of public schools. Between 2006 and 2017 a total of 243 public schools were closed, a number that increased in 2018. A total of 265 (24%) public schools closed while 855 remain open in the 2018-2019 academic year. According to the report "Population Decline and School Closure in Puerto Rico" (Center for PR Studies, May 2019), 65% of public schools in the rural areas closed down compared to 35% in the urban areas, meaning that rural areas were the most impacted by the closures.

Socioeconomic Conditions

In the last decade, PR has experienced a reduction in employment in the private and public sectors. Between 2006 and 2016 employment fell by 28.6% according to the Bureau of Labor Statistics (BLS). Concomitantly, the labor force participation rate declined from 47% in 2007 to 41.6% in 2017.

Lack of employment is accompanied by income levels that in PR are still far behind from the states. The per capita income for PR in the 1YR 2017 PRCS was $12,279 compared with the US $32,397. The 1YR 2017 PRCS median household income was $19,343, less than half of Mississippi ($43,529), the state with the lowest US median household income.

There is also an alarming number of families facing the possibility of losing their homes. According to the non-profit organization "Ayuda Legal de Puerto Rico" (Legal Help of Puerto Rico) more than 250,000 homes are at risk of foreclosure this year. A problem with being at risk of foreclosure is that people tend to face the process alone due to inadequate orientation from banks, lack of education on their rights, and insufficient family economic resources for legal representation.

Poverty is a significant problem in PR affecting women, children and families. In 2017, the poverty rate in PR (44.4%) was higher than the US (12.3%) and higher than the poverty rate in Mississippi (19.8%). Children under 18 years of age living in poverty in PR were 58.7% in 2017. Family structure influences poverty rates as single female-headed families tend to be poorer than married-couple families. While the percent below poverty level in 2017 PRCS in married-couple families with children was 28.1%, the percent of families with children headed by a female with no husband present was 59.2%.

High poverty rates and low-income levels leads families to rely on public assistance programs for survival. The 1YR 2017 PRCS reports that 37.9% of households in PR received nutritional assistance (food stamps) benefits compared to 11.7% in the US.

In many municipalities, mass transportation is unavailable and people rely on private transportation services (12 passenger vehicles) called "carros públicos'' (public cars) that may not be available after 2 PM or even earlier. Those who have their own private cars, may have to drive a long distance from and to their homes to work, study and receive services. To cover gaps in transport, there are municipalities that provide transportation mainly to the Greater Metropolitan Area to people in need of specialized health services. While mass transportation in San Juan municipality, - capital of PR - is available, there are limitations as the waiting time in some routes can be anywhere between one to two hours. The Urban Train only covers San Juan and Bayamón municipalities and lacks sufficient connecting buses to and from its 16 stations.

Like families, the PR government has been experiencing severe economic difficulties for almost a decade: a public debt of more than $70 billion, revenue loss, high GHP expenditure, depletion of pension funds, and insufficient liquidity to operate and meets its obligations.

To face the crisis, the PR government has taken measures to reduce costs and increase revenues over the past

years. Some of the measures are: budget cuts to state agencies, school closings, reduction in subsidies to municipalities and NGO's, and tax increases. Measures related to government employees include lay-off of public workers (Law 7, 2009), increases in employees' contributions and retirement age (Law 2013) and fringe benefit reductions and mobilization across agencies (Fiscal Compliance Act of 2017).

In 2016 the US Congress enacted the PR Oversight, Management and Economic Stability Act (PROMESA), installing the Financial Management and Oversight Board (FMOB) with decision-making power on all fiscal matters. In May 2017, the Oversight Board filed in the federal district court for debt relief under Title III of PROMESA, a form of bankruptcy to restructure PR fiscal liabilities. Presently, the court proceedings are underway while the FMOB is mandating a reduced government budget, a 10 percent cut in pensions for retired public workers, reduced fringe benefits for public workers, and drastic changes to PR labor laws that will affect workers in the private sector. In May 2018, the FMOB approved to include Puerto Rico 78 municipalities under its jurisdiction, a process that will be initiated with a pilot of ten municipalities. The FMOB also filed more than 200 lawsuits against government suppliers, most of which are local small businesses, claiming that suppliers were either paid without a written contract or received payments in excess of the value of the goods and services provided to the government. According to experts, the financial burden of the lawsuits on small businesses, that may have not the resources needed for legal representation, could lead to the closure of operations and thus, more people could be out of work.

In the midst of the fiscal crisis, Hurricane Maria, with 155 mph winds struck PR on September 20, 2017. The hurricane caused billions of dollars in damages leaving behind widespread destruction to homes, businesses, energy grid, roads, highways, and public and private institutional facilities. Research on the deaths related to the hurricane place the death toll at approximately 3,000 people. Presently, there are many damaged roads in the rural areas, a significant number of damaged traffic lights in the Metro Area, and many closed small businesses all over PR. As it was mentioned above, the hurricane also pushed people out of PR to the US mainland. The recovery from the devastation caused by the hurricane will take years according to experts.

Beyond economic costs, the hurricane caused sadness, distress, anguish, uncertainty and frustration as people's lives were completely disrupted. Almost two years after the hurricane, people in Puerto Rico still speak of "before María" and "after María" referring to how life was before the hurricane struck the island and how life has been afterwards. Through these phrases people mean how the society they once knew changed drastically overnight.

PR society strengths

The people of PR despite economic hardships and stressful social conditions have strengths and resiliency seldom publicly recognized.

Culturally, great value is placed on seeking a post-secondary education to better one's life which accounts for the skilled or semi-skilled labor force that has been and still is sought after in the US for its capacity to work.

There is a wide variety of informal and formal organizations (about 11,000 formal non-profits) geared to improve life through cultural promotion (arts, music, dance), neighborhood revitalization, environmental protection, youth development, and community development (may include micro enterprises, health promotion and community/home vegetable gardens). There are NGO's that has been successful – such as Nuestra Escuela and Sor Isolina - in providing alternative education to school drop outs to attain a high school diploma. A strong and economically sound cooperative movement is another important asset in PR society. There is also an ecological movement to protect the environment and the health of people.

In PR, most of the activities of women and families revolve around kinship and neighborhood networks. In general, relations among neighbors in low-income communities are highly personal and reciprocal despite any internal conflicts. This is most evident in times of crisis, deaths, fires and other emergencies. Kinship ties provide emotional and financial support (may include housing) to women and children as resources are pooled, borrowed and shared. Grandparents (as well as other kin) are very influential in parent's and children's lives. It is common for grandparents to provide unpaid childcare to working mothers and/or at times of need. Grandparents also enjoy

taking their grandchildren out and having them stay in their homes overnight.

The strengths and resiliency in PR became most evident in the aftermath of Hurricane María. NGO's were highly instrumental in helping people as they distributed food, water, water filters, solar lights and other supplies in shelters and communities. Very importantly, people themselves displayed generosity and resourcefulness. Neighbors shared food, (in some places cooked together and established community kitchens), water, ice and even power from generators through extension cords. Neighbors also organized where and how to put damaged items in communities and in many instances took them to the landfill. In some communities, neighbors shared their own money to pay private electricians to restore energy while in others its members joined retired workers of the PR Electric Power Authority to raise power poles and cables.

All over the island, people turned to cultural practices like music, songs, phrases (like "Puerto Rico se Levanta" - Puerto Rico Rises) and the Puerto Rican flag as symbols of strength and resolve to help overcome the pain and desolation caused by the hurricane.

PR Title V Roles, Challenges and Strengths

Understanding the devastation and suffering due to Hurricane María in the midst of the socioeconomic crisis is crucial for public health. First, the storm exacerbated certain conditions like job loss, income, poverty and housing conditions. Second, low-income people in rural areas face geographic disparities in accessing health care due to very limited transportation and shortage of specialists and facilities. Indeed, HRSA categorized 72 out of 78 municipalities as medically underserved areas. Last, the distress endured by residents brought about and/or exacerbated mental health conditions in populations.

Given these conditions, a challenge of PR Title V is to balance the needs of populations with existing internal and external resources amidst an unprecedented economic crisis and shrinking public resources. In decision-making strategies, PR Title V uses the following overreaching principles to assess the importance, value and priority of competing factors:

- Community health promotion
- Health literacy and empowerment
- Family and youth inclusion
- Collaborative networks
- Understanding the impact of the Social Determinants of Health (SDH) on populations

PR Title V has played a lead role in several important health related initiatives and public policies propounded by the DOH and the state. Examples include:

- Law 186 (2016): PR Maternal Mortality Epidemiologic Surveillance System (PRMMESS). The MCAH Program is responsible for its implementation as well as providing leadership to the Maternal Mortality Review Committee.
- Administrative Order 336 (2015): Compels all hospitals to establish a Breastfeeding Support Program as requirement for hospital operation licensed by SARAFS. This policy facilitates compliance with the 10 steps for a Baby Friendly hospital that supports breastfeeding initiation post-partum and mother- newborn bonding.
- Administrative Order 357 (2016): Requires all hospitals to change their measurements for pediatric patients to the metric system and to change their weighing equipment so to only measure grams and kilograms. MCAH worked jointly with the CSHCN and the Medical Pediatric Emergency services to develop this policy to improve pediatric medication dose security.

- Administrative Order 359 (2016): Establishes Positive Youth Development as the main approach for adolescent health and creates the Youth Advisory Council (YAC) that integrates youth as advisors and allies of health initiatives and policies within the DOH.
- Administrative Order 366 (2017): Requires all birthing hospitals in PR to establish a Hard Stop Policy for non-medically indicated labor inductions before 39 weeks - consistent with the recommendations of the American College of Obstetricians and Gynecologists - to reduce neonatal morbidities and mortality.
- Administrative Order 369 (2017): establish the policy for testing symptomatic and asymptomatic pregnant women for ZIKA, including the PRDH Guidelines for the Evaluation and Management of Pregnant Women with Laboratory Evidence of Possible Zika Virus Infection.
- Administrative Order 388 (2018): PRDH Guidelines for the Evaluation and Management of Infants Born to Mothers with Laboratory Evidence of Possible Zika Virus Infection During Pregnancy.

An important asset of the MCAH Program (MCAHP) is leadership through committees and coalitions such as the PR Breastfeeding Promotion Collaborative Group, the Fetal and Infant Mortality Review Committee, the Maternal Mortality Review Committee, the Perinatal Care Guidelines Review Committee, the Youth Advisory Council and the Regional Boards. The Regional Boards are MCAHP sponsored committees – located in each of the 7 DOH Health Regions - composed of representatives from government and non-government entities that meet regularly to address maternal, child and adolescent health issues. The Regional Boards are fully involved the development of the PR Title V State Action Plan and its implementation throughout the Island.

Having a broad and strong network of partners within and outside the health field is also an asset of the MCAH program that is crucial for the on-going needs assessment and health promotion efforts in communities. The MCAHP supports the efforts of partners through staff participation in task forces, committees and alliances. For example, the Pediatric Consultant was appointed to the PR Children's Justice Act (CJA) Committee that aims at improving the investigative, administrative, and judicial handling of child maltreatment.

The MCAH program has a well-established health promotion component on maternal, infant, child and adolescent health. The health promotion component includes the following strategies: a) a prenatal course that provides pregnant women with tools to maintain a healthy pregnancy and prevent risk factors; b) parenting courses targeted at parents of children 0-5 years old and parents of children aged 6-11 years on healthy eating, physical activity, preventive/routine medical visits, personal safety, home safety and positive childrearing; c) massive media campaigns promoting healthy pregnancy, breastfeeding and adolescent well-visits; d) dissemination of information through presentations and written educational materials to the general public and interest groups and; e) training and information to health professionals on a variety of health topics including laws and administrative orders.

Another MCAHP asset is a highly committed multidisciplinary staff from the health and social sciences fields. Included in the staff are former participants of the Home Visiting Program that were hired as nurse home visitors and community health promoters. Almost two years after being struck by Hurricane María, the MCAH Program staff at the Central Level are still housed in a temporary facility having to work under duress in cramped spaces with limited lightning. In spite of this, the staff with resolve and high compromise have continued their health efforts to benefit MCA populations across the island.

One of the CSMND strengths is the staff commitment to serve the CSHCN population and their families. Although staff recruitment is challenging, the CSMND has minimal staff turnover. The majority of the recruited staff is retained as a result of the competitive compensation, a healthy teamwork environment, and ongoing effective skills development and educational activities.

Since 2016 the CSHCNP has been actively working to enhance its coordinated and family centered care services. This initiative began with the creation of a Quality Improvement Committee (QIC) composed of key staff at the State Level and key personnel from each RPC including families. Participation of families at all levels has enhanced

family-centered care and family-professional partnerships.

A strong network of collaborating partners within and outside the DOH is also an asset that has strengthened the family-centered care services and support to children and youth with special care needs and their families.

PR Title V will definitively tap its internal strengths as well as those of Puerto Rican society to face the challenge of improving health and wellbeing in the context of a very slow recovery process after a catastrophic event and a myriad of social and economic adverse conditions at the individual, familial, community and institutional levels.

III.C. Needs Assessment

FY 2020 Application/FY 2018 Annual Report Update

PR Title V Health Needs Assessment (HNA) 2019 focused on identifying the conditions/needs that affect the MCAH population and on the pediatric primary and specialty health care capacity available for CSHCN.

HNA DATA GATHERING METHOD HNA 2019

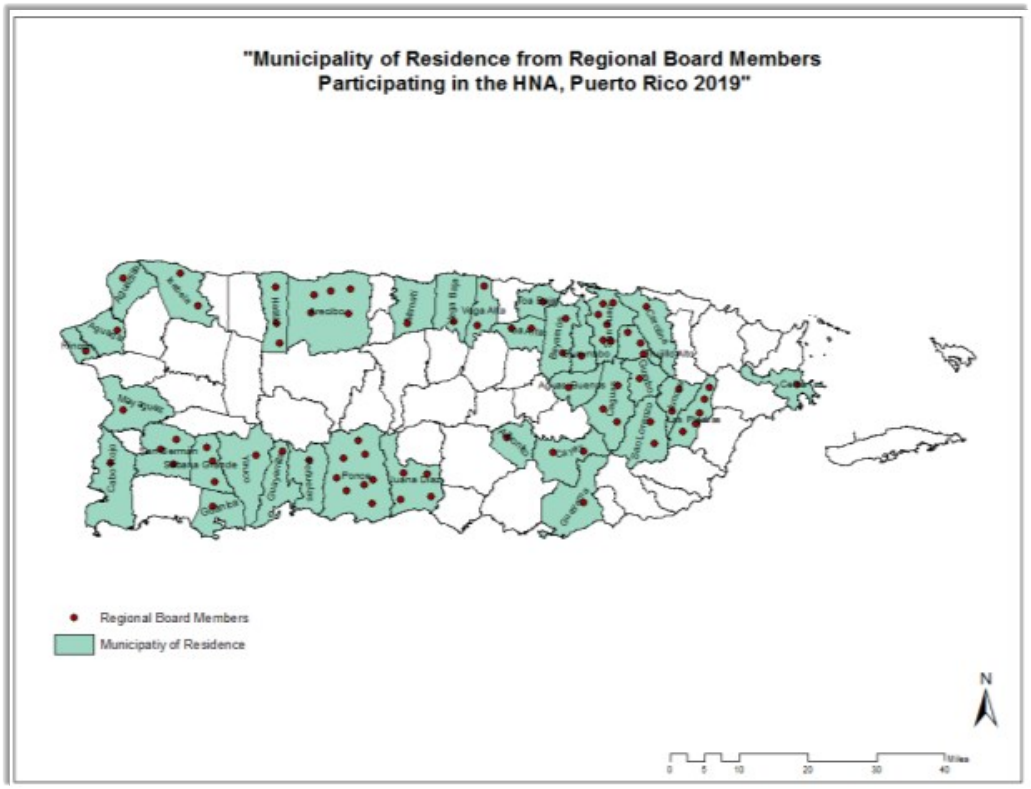
The **MCAH Program** received input from the Regional Board Members (RBMs) thru a self-administered questionnaire (adapted 2016 Needs Prioritization Methods Survey) organized into five main parts. The 1rst part was an open-ended question (respondent answers using his/her own words) that inquired about the two general conditions or situations RBMs felt mostly affected the health of each MCA population. A condition or situation was defined by living conditions related to health, housing, food, employment, interpersonal and community relations and access to services that could lead a population to have a need. The 2nd part (open-ended question) asked about the main health related general need for each MCA population. Need was defined as a problem that populations have or face that could affect their optimal health. The 3rd part was an open-ended question that asked respondents to identify the strategies to address the needs for each MCA population. The 4th part was a close-ended question that asked the RBMs to choose from a list of options four specific conditions or situations they believed affected each MCA population. The 5th part was a close-ended question asking respondents to identify the necessary services that each MCA population may not receive because these services are not accessible or are of difficult access.

From December 2018 to February 2019, 76 RBMs were surveyed, with a response rate of 72%.

More than 50% of the RBMs were 50 years or older, whereas 32% were between 35 to 29 years old and 15% were between 20 to 34 years, being the majority females (96%). Around 58% of the RBMs have been participating in the RB meetings for 5 years or less, while 38% have been members for more than 5 years (range: 1 day to 24 years).

For a detailed description of the Regional Boards, see Section III.B Overview of the State.

The **CSHCN Programs** estimated the numbers of physicians based on data from the PR Department of Health Licensing Board Office of Regulation and Certification of Health Professionals (ORCPS Spanish acronym). Because the ORCPS maintains a register of issued licenses and license renovation processes every three years, data is categorized by periods of three years each. Three-year periods analyzed are: 2010 to 2012; 2013 to 2015; 2016 to 2018. Data before year 2010 was not provided by the ORCPS, as they understand is not comparable due to a different methodology of discipline categorization. Data presented below does not necessarily represents the real number of health professionals. The ORCPS depends on the information that each professional provides, including when they move outside the island. Nevertheless, this data illustrates the reality. The data of the last period (2016-2018) is preliminary.



Findings

Based on the findings we assessed the priority needs, strategies, resources and measures (NPMs, SPMs, ESMs) of the action plan. Since the HNA 2019 findings are similar to the HNA 2015 the priorities remained unchanged.

MCAH

The discussion of findings in each domain starts with a description of the main general conditions or situations and needs brought up by the RBMs in the open-ended questions, followed by their responses to the close-ended questions (in table form) on specific issues and service needs, and ends with their recommendations on strategies to address the identified needs for the specific population.

Women/Maternal Health

The conditions and/or needs that affect WRA health as reported by the RBMs were domestic violence, unhealthy eating, limited access to housing, lack of employment, and limited access to health services (e.g. medical and mental health). The RBMs also reported mental health (depression, self-esteem, emotional) and support as main WRA needs. They also pointed out that WRA need information and education to make informed decisions about their health and wellbeing.

Table 1: Main specific issues and services WRA need but not receive because such services are inaccessible or of difficult access as identified by the RBMs.

WRA Health	
Specific Issues	**%**
Depression and other mental health conditions	67.0
Sexual, physical and emotional violence	55.0
Not attending to their annual preventive visits	51.0
Alcohol use and abuse, including tobacco and drugs	50.0
Needed Services	**%**
Medical services/medical appointments	26.0
Mental health services	21.0

Close-ended questions part 4 and 5 from questionnaire

Concerning pregnant women, the RBMs mentioned absence of specialized services for high-risk pregnancies, transportation problems to access healthcare and lack of education on prenatal care as the main conditions and/or needs that hamper health care during pregnancy. They also identified unhealthy eating that leads to obesity/overweight as a need faced by pregnant women.

Table 2: Main specific issues and services Pregnant Women need but not receive because such services are inaccessible or of difficult access as identified by the RBMs.

Pregnant Women Health	
Specific Issues	**%**
Inadequate nutrition	74.0
sexual, physical and emotional violence	48.7
depression and other mental health conditions	45.0
not receiving prenatal care education	37.0
Needed Services	**%**
Medical services/medical appointments	21.0
Nutritionist services	21.0

Close-ended questions part 4 and 5 from questionnaire

Taken together, the RBMs responses (open and close ended questions) on the conditions or situations in the women/maternal health domain can be clustered into the following categories:

∂Violence: domestic violence, sexual, physical and emotional
∂Access to health services: availability of medical, mental and prenatal
∂Nutrition: unhealthy eating
∂Lack of preventive visits (annual routine visits) among WRA
∂Lack of prenatal care education for pregnant women
∂Transportation problems as a barrier to health services
∂Housing conditions and access
∂Mental health issues and support: depression, emotional, self-esteem
∂Substance abuse among WRA
∂Lack of employment among WRA

Overall, the needs identified (Questionnaire 2nd and 5th parts) can be grouped as follows:

Health Service Needs: medical, mental health, annual routine visits, prenatal care, nutritional
Health Education Needs: healthy eating, prenatal care, routine medical visits
Other Needs: employment opportunities, affordable housing

The RBMs recommended education (information, orientations, skill building) as a major strategy to address the needs of WRA and pregnant women. The focus of education should be on the importance of routine medical visits, prenatal care and healthy eating.

Perinatal/Infant Health

In this domain, RBMs mentioned child maltreatment, inadequate feeding, parents' negligence to immunize infants, preventive/routine checkups, and limited access to health services and vaccines as the main conditions and/or needs affecting infants. Education to parents on infant health and responsible parenting was also raised as one of the main needs in this domain.

Table 3: Main specific issues and services Infants need but not receive because such services are inaccessible or of difficult access as identified by the RBMs.

Perinatal/Infant Health	
Specific Issues	**%**
Neglect and infant abuse	62.0
Difficulty finding health specialists	59.0
Asthma, allergies and other respiratory conditions	40.0
Intolerance to milk or food	38.0
Needed Services	**%**
Medical services/medical appointments	17.1
Immunization services	17.1

Close-ended questions part 4 and 5 from questionnaire

Taken together, the RBMs responses (open and close ended questions) on the conditions or situations in the perinatal/infant health domain can be clustered into the following categories

∂Child maltreatment: neglect, sexual, physical and emotional
∂Nutrition: unhealthy feeding, intolerance to milk or food
∂Access to health services including vaccines
∂Parents' negligence to immunize infants
∂Respiratory conditions like asthma and allergies

Overall, the needs identified (Questionnaire 2nd and 5th parts) can be grouped as follows:

Health Service Needs: medical, immunization
Health Education Needs (parents): infant health, immunization, responsible parenting, healthy feeding

The RBMs recommended education (information, orientations, skill building) to parents to enable them to make informed decisions about their infant's health. Topics such as responsible parenting skills, immunization and infant growth development should be included in health education.

Child Health

According to the RBMs the main conditions and/or needs affecting children were violence (e.g. child maltreatment, exposure to family/community/school violence, bullying), unhealthy eating, and parent's lack of child health information and parenting skills. The RBMs also brought up limited access to health care services (e.g. specialized pediatric services, general pediatric services and mental health) as a main need that impinge on children's health.

Table 4: Main specific issues and services Children need but not receive because such services are inaccessible or of difficult access as identified by the RBMs.

Child Health	
Specific Issues	**%**
Lack of recreational areas	58.0
Inadequate nutrition	57.0
Neglect and child abuse	53.0
School and community violence	47.0
Needed Services	**%**
Dental services	25.0
Medical services/medical appointments	17.1

Close-ended questions part 4 and 5 from questionnaire

Taken together, the RBMs responses (open and close ended questions) on the conditions or situations in the child health domain can be clustered into the following categories:

- Violence: child maltreatment, family/community/school violence, bullying
- Nutrition: unhealthy eating
- Access to health services: specialized services, general pediatric and mental health services
- Parents' lack of child health information and parenting skills
- Lack or recreational areas

Overall, the needs identified (Questionnaire 2nd and 5th parts) can be grouped as follows:

Health Service Needs: medical/preventive, mental health, dental
Health Education Needs: Responsible parenting (parents), healthy eating, routine medical visits

As in the other domains, RBMs recommended education (information, orientations, skill building) to parents for making informed decisions on their children's health as a major strategy to address needs. Educational topics should include healthy foods, responsible parenting skills (childrearing practices) and the importance of routine checkups.

Adolescent Health

The main conditions and/or needs reported by the RBMs affecting adolescents were unhealthy eating, lack of preventive check-ups, sexual activity, and limited access to health care services including mental health. They also mentioned violence (e.g. school/community violence, dating/courtship violence) and substance abuse as main need in this domain. Information and education on youth health including sexual education, access to healthcare services (medical and mental health) and support to handle life stressful situations were also identified as main needs.

Table 5: Main specific issues and services Adolescents need but not receive because such services are inaccessible or of difficult access as identified by the RBMs.

Adolescents Health	
Specific Issues	**%**
sexual activity at an early age	72.0
school/community violence	43.0
alcohol use and abuse, including tobacco and drugs	41.0
teen pregnancy	38.0
Needed Services	**%**
Mental health services	50.0
medical services/medical appointment	13.2

Close-ended questions part 4 and 5 from questionnaire

Taken together, the RBMs responses (open and close ended questions) on the conditions or situations in the adolescent health domain can be clustered into the following categories:

∂Nutrition: unhealthy eating
∂Lack of preventive visits (annual health visits)
∂Violence: school/community violence, dating/courtship violence
∂Sexual activity
∂Substance abuse
∂Access to health services: medical/preventive, mental health
∂Teen pregnancy

Overall, the needs identified (Questionnaire 2nd and 5th parts) can be grouped as follows:

Health Service Needs: medical/preventive, mental health, substance abuse
Health Education Needs: sexual education, handling stressful situations, routine medical visits, adolescent health, healthy eating

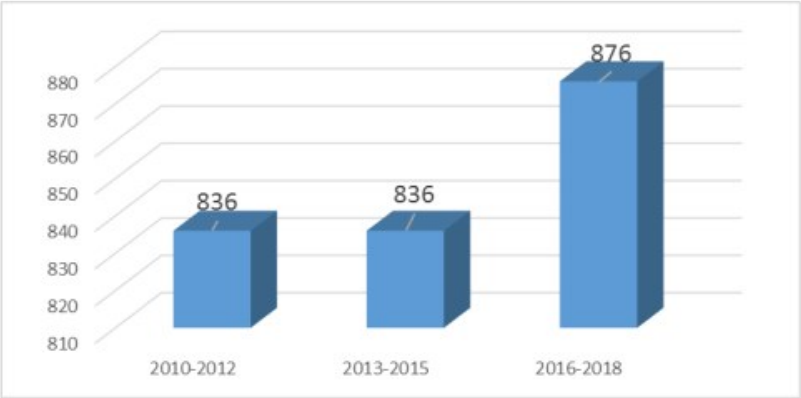
The RBMs recommended education (information, orientations and skill building) as the main strategy to address the identified needs in the adolescent health domain. It became clear from RBMs comments that they felt that adolescents need educational services to develop the capacity to make well-informed decisions and thus, become empower over their health and wellbeing.

Children with Special Health Care Needs

For several years there has been a general concern about Puerto Rican physicians leaving the island seeking for better job opportunities. Stakeholder's participants in the 2015 Puerto Rico Primary Care Needs Assessment (PR-PCO, 2016), a study carried out by the Puerto Rico Primary Care Office of the Auxiliary Secretariat of Planning and Development, Department of Health, referred that the main cause for the exodus is the "unfair economic compensation". There were other reasons reported, for example, many graduate students from the University of Puerto Rico Medical Science Campus moved to the mainland seeking medical specialties. After graduating, those who choose to come back to PR may find that health insurances deny access claiming that their networks are already completed, or they are offered rates below cost. On the other hand, many physicians are retiring or are working part time or less. Study results also suggest that Puerto Ricans usually wait over a week between the day they request an appointment with a physician and the date they finally get it (PR-PCO, 2016). This concurs with PR-Title V 2015 NA, where one of the principal needs reported by CSHCN families was "the delays in getting appointments for pediatric specialists". In this case, waits can surpass the three (3) of even four (4) months. This has a direct impact on the access to care for the CSHCN population. Below is a description of the pediatric specialties and pediatric primary health care capacity.

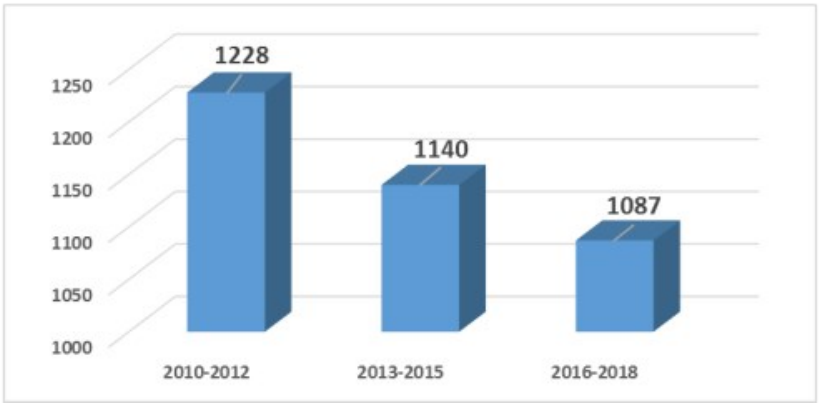
Contrary to the general observations about physicians leaving the island, the number of pediatricians show an increase of 40 pediatricians 2010 through 2018. (See graphic below).

Number of licensed pediatricians per each ORCPS three-year period



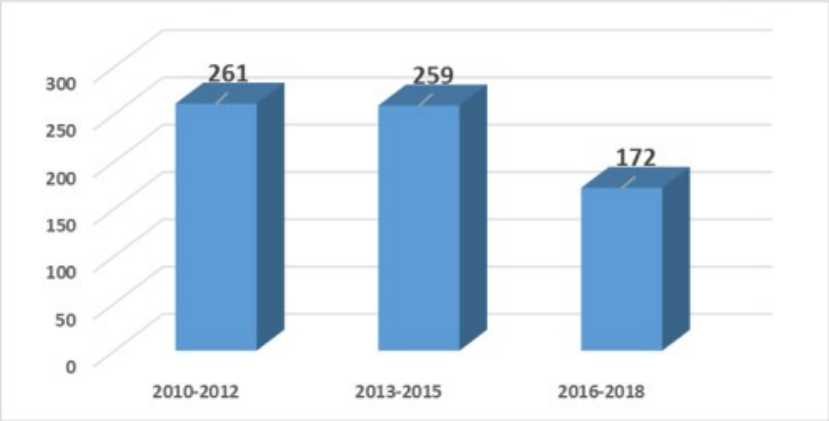
Many pediatricians have their primary practice at the main cities and have secondary practices in other areas of the island. This helps increase access to care in remote areas and areas of unmet needs. The graphic below shows the number of pediatric practices owned by pediatricians represented in the previous graphic through the ORCPS three-year period. The numbers show a loss of 141 pediatric practices.

Number of Pediatric Practices per each ORCPS three-year period

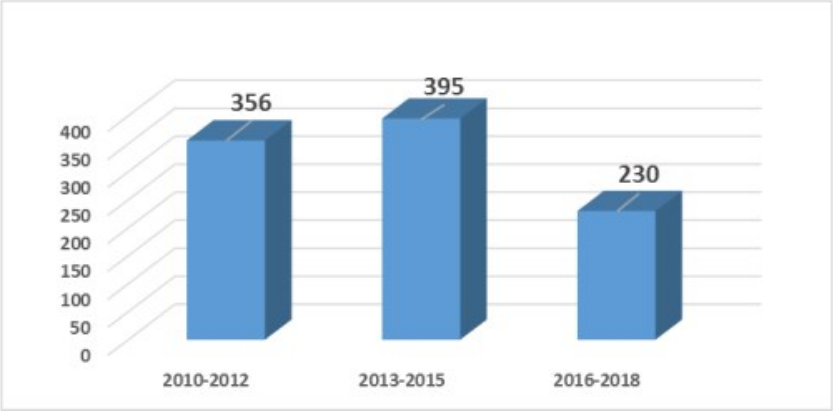


Data shows a decrease of pediatric specialists and pediatric specialty practices in the island as shown in the two graphics below.

Number of Pediatric Specialists in PR per each ORCPS three-year period



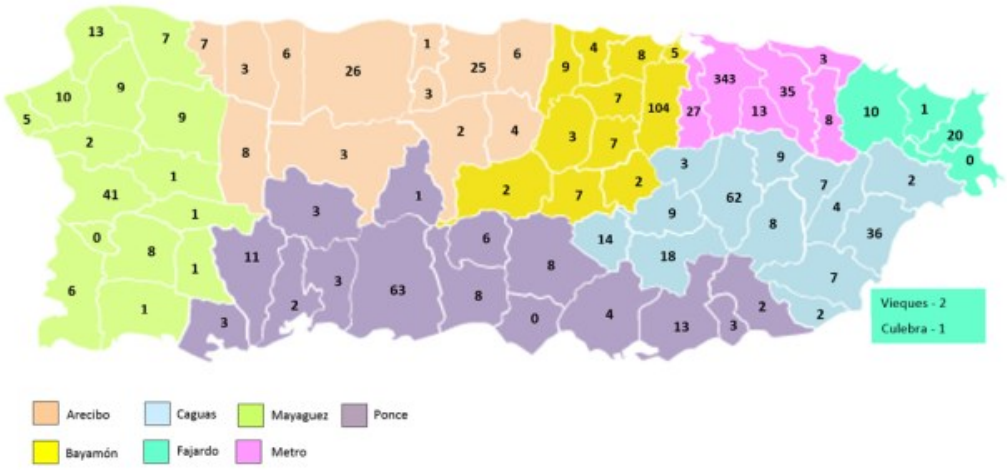
Number of Pediatric Specialty Practices per each ORCPS three-year period



Pediatricians and pediatric specialists' distribution

Physicians are usually distributed unevenly in many countries (OECD, 2016). Frequently, populations with the lowest health needs have the higher numbers of physicians in comparison to populations in areas with unmet needs and poor or rural communities. Puerto Rico is not an exception. The map below shows the distribution of the number of pediatric practices per municipality during the 2013-2015 three-year period, based on the ORCPS. The total of pediatricians for this period was 836, and the total of pediatric practices was 1,140.

Distribution of pediatric practices in PR during 2013-2015



The PR-CSHCN Survey (2015) estimated the number of CSHCN 0-18 years old per health region in Puerto Rico. When we compare the number of pediatric practices per health region with the number of CSHCN per health region, results imply that the CSHCN population has less available pediatric practices at the Mayagüez region, followed by Ponce and Bayamón. The table below shows the estimates of pediatric practices per 1,000 CSHCN.

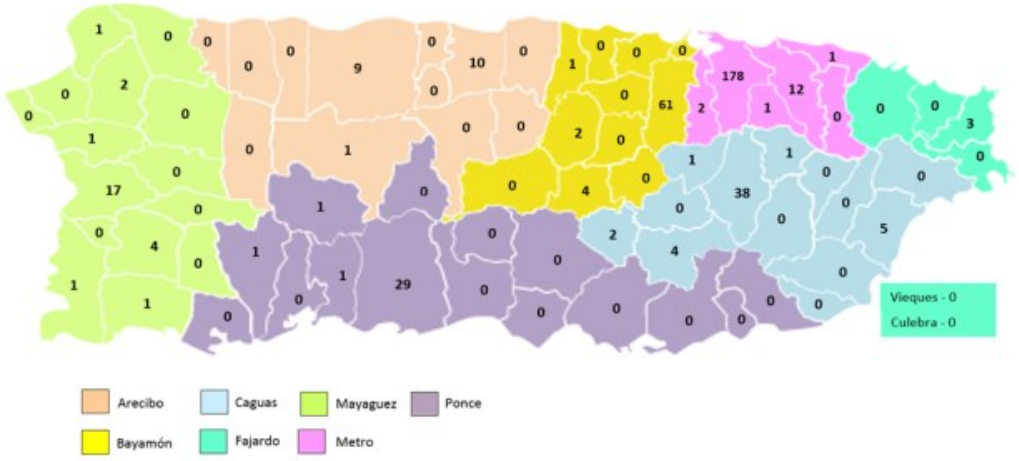
Estimate of pediatric practices per 1000 CSHCN during 2015

Health Region	Estimate of CSHCN	Number of pediatric clinics (ORCPS)	Pediatric practices per 1000 CSHCN
Arecibo	16,355	94	5.7
Bayamón	32,345	158	4.9
Caguas	22,838	181	7.9
Fajardo	6,417	34	5.3
Mayagüez	28,548	114	4.0
Metro	28,152	429	15.2
Ponce	27,109	130	4.8

There is no clear information in the literature regarding a recommended number of health care providers based on the population size. However, the number of health care providers will certainly have an impact on the accessibility to health care, especially for the CSHCN population. There are other factors that may impact accessibility but were not considered in this analysis. Some of these factors are: work hours a provider invests in his/her patients, patient load, and providers' age among others.

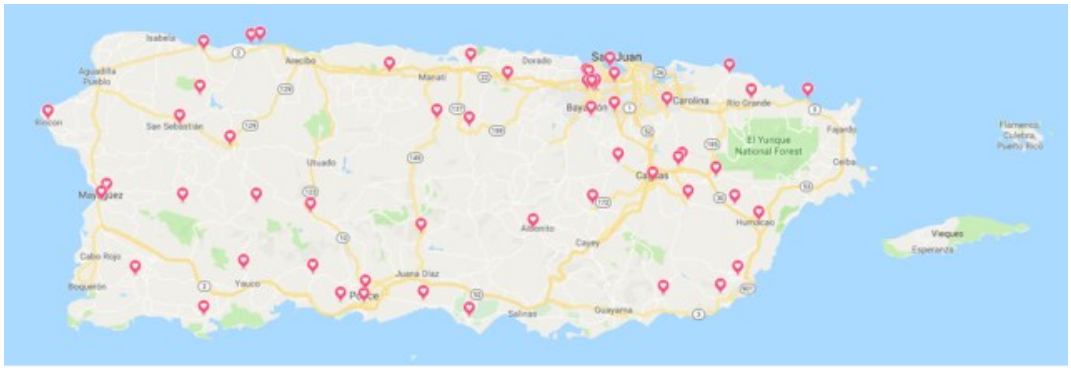
Based on the ORCPS database, the total number of pediatric specialists for the three-year period 2013-2015 was 259, and the total number of pediatric specialty practices was 395. The map below shows the distribution of pediatric specialists during that period.

Distribution of pediatric specialty practices in PR during 2013-2015



Medical homes

The 2015 PR-CSHCN Survey results showed that 30.8% of families referred are being served at a medical home. The Medical home is a multi-factorial model, and PCP's are the key health care providers to implement and strengthen the model. As of May 2019, the NCQA has recognized 41 primary care practices in PR of which 27 are FQHCs. The Joint Commission has certified 17, all of which are FQHC. Currently, there are 75 FQHCs in PR. Not all FQHCs are recognized as medical homes. Below is a map with the distribution of recognized medical homes in PR.



Data from the NCQA and Joint Commission web pages: https://reportcards.ncqa.org/#/practices/list?p=267&recognition=Patient-Centered%20Medical%20Home ; https://www.jointcommission.org/assets/1/18/PCMH_list_042718.pdf

The 2015 Puerto Rico Primary Care Needs Assessment identified the following municipalities as the ones with the greatest socio-demographic needs: Las Marías, Guánica, Lajas, San Sebastián and Adjuntas. Results for the municipalities with the less socio-demographic needs were: Guaynabo, Toa Alta, Trujillo Alto, Gurabo and Carolina. Results were based on the following indicators: population under five (5) years old, population over 64 years old, annual median household income, unemployment rate, and population over 24 years old with no high school diploma. When analyzing the indicators for the following three components: socio-demographic characteristics, health status and health access, the municipalities with the greatest needs' score were: Culebra, Guánica, Maunabo, Yauco, Santa Isabel, Salinas, Arroyo and Guayanilla (PR-PCO, 2016). The map below identifies these municipalities in red.

Municipalities with the greatest needs score (PR-PCO, 2016)

Program Capacity

The PR Title V will share the 2019 HNA results with state agencies mandated to take action on certain issues and

needs (e.g. violence, mental health, nutrition, immunization, well-visits) that emerged this year that must be addressed to enhance health and wellbeing.

STATE AGENCIES MANDATED TO ADDRESS SOME OF THE ISSUES AND NEEDS IDENTIFIED IN THE HNA 2019

Department of Family:

Administration for Socioeconomic Development. Operates the NAP Program in PR. Promotes the Agricultural Produce Markets among NAP beneficiaries.

Administration of Families and Children. Addresses child maltreatment through interventions and prevention.

Administration for the Integral Development of Children. It has a Policy Council composed of parents' leaders representing its head start and early head start programs island-wide.

Department of Health:

WIC: Provides supplemental nutritious foods to pregnant women, breastfeeding women, infants and children up to 5 years of age and nutritional services and education.

Immunization Program. Responsible for supplying vaccines to the GHP providers, establishing immunization policies and educating the public on the importance and safety of vaccines.

Rape Victim Center. Addresses violence against women (sexual assault and domestic violence) through psychological and other services to survivors and public education.

The PR Food and Nutrition Commission. Promotes healthy eating through the coordination of resources (public and private) and creation of educational materials.

PR Health Insurance Administration:

Oversees the GHP managed care and negotiates contracts with the private insurers. All private insurers provide educational services to GPH beneficiaries on all aspects of health.

PR Agricultural Extension Program:

Promotes vegetable home gardens and provides educational services on healthy eating, nutrition and healthy preparation of meals.

Administration of Mental Health and Anti-Addiction Services:

Responsible for policies, intervention and prevention of mental health and substance addiction in PR. MCAH is presently involved in the process of signing a MOU with ASSMCA (Spanish acronym) to facilitate the referral of participants from different MCAHD programs that exhibit psychosocial risk factors.

The PR Title V addresses the identified needs through its programs and services. See the Narrative of each domain for further details.

The Home Visiting Program (HVP), staffed by Home Visiting Nurses (HVNs), serves pregnant women and their children up to 24 months after delivery in 73 municipalities. The HVP performs screenings for maternal depression, intimate partner violence, substance use (drug, alcohol, and tobacco), child development and oral health. Health

education is also offered that include nutrition during and after pregnancy, infant nutrition, and healthy child rearing. The HVN's make referrals to appropriate services as needed. A Mental Health Consultant (PHD in Psychology) provides training and support to the HVP staff to effectively manage the emotional, behavioral and mental health problems of participants.

Health Promotion is overseen by the Health Educators (HEs) – one in each MCAH Region – that are in charge of offering education to communities including parenting courses. They also provide technical assistance to the community outreach program.

A key component of health promotion are media/internet campaigns, dissemination of educational materials and tools, and training and information to health professionals. An example of an educational tool is the WRA Health Log that is based on the Preventive Health Services Guidelines for Women in Reproductive Age (PHSGWRA).

WRA Health Log Based on the Preventive Health Services Guidelines for Women in Reproductive Age

Recomendaciones Preventivas de Salud para la Mujer

Propuesta para todas las edades

- Comer saludable.
- Hacer al menos 30 minutos de actividad física (mujeres de 60 años en adelante hable con su médico de cualquier afección crónica restrictiva).
- Dormir al menos 7 u 8 horas al día.
- Lograr un peso saludable y mantenerlo.
- No fumar o recibir ayuda para dejar de fumar.
- No consuma alcohol.
- No consuma drogas ilegales ni use indebidamente los medicamentos recetados.
- Usar cinturón de seguridad en autos y no leer o escribir mensajes de texto mientras conduzca.
- Tomar entre 400 y 800 microgramos de ácido fólico diariamente.
- Usar equipo de protección personal al hacer algún deporte.
- Utilizar protección solar.
- Oriéntese sobre los métodos contraceptivos si está activa sexualmente.

Recomendaciones basadas en las guías de www.womenhealth.gov

Programa Madres, Niños y Adolescentes Región de Ponce 787-765-2929 X-5675, 4817

Preguntaré si necesito estas pruebas, análisis, medicinas o vacunas este año	Fecha Realizada: __/__/__	__/__/__	__/__/__	__/__/__
Examen físico				
CBC				
Glucosa				
Colesterol				
TSH (Tiroides)				
Presión arterial				
Mamografía				
Densitometría Ósea				
Papanicolau (PAP)				
Colonoscopia				
Endoscopia				
Tuberculina				
Salud Oral				
Cernimientos				
Depresión				

Preguntaré si necesito estas pruebas, análisis, medicinas o vacunas este año	Fecha Realizada __/__/__	__/__/__	—/—/—	—/—/—
Alcohol				
Violencia Interpersonal				
Obesidad				
Tabaco				
Pruebas				
Hepatitis B				
Hepatitis C				
VPH (Virus del Papiloma Humano)				
ITS (Infecciones de Transmisión Sexual)				
VIH				
Vacunas				
Tétano, difteria o tosferina				
Culebrilla				
Sarampión, Paperas y Rubeola				
VPH				
Influenza				

The Community Outreach Program (COP) is staffed by 46 Community Health Workers (CHWs) that provide health education in communities. The CHWs also offer the following courses: a) Prenatal Course that provides pregnant women with tools to maintain a healthy pregnancy and prevent risk factors; b) Parenting Courses targeted at parents of children 0-5 years old and parents of children aged 6-11 years old on healthy eating, physical activity, preventive medical visits, personal safety (violence prevention), home safety and positive childrearing.

The Perinatal Services are provided by the Perinatal Nurses (PNs) that visit birthing hospitals to offer pregnancy and breastfeeding support and post-partum and infant health education. They also promote the HVP and the Prenatal and Responsible Parenting Courses among women.

The Comprehensive Adolescent Health Program (CAHP) promotes adolescence health and wellbeing based on the Positive Youth Development Model (PYDM). The CAHP is staffed by an Associate Director and Healthy Youth Development System Coordinator (HYDS-C) at the central level and 7 Regional Coordinators - one in each Health Region (CAHP-C).

The CAHP-Cs coordinate the Youth Health Promoters Project (YHPP) implemented in selected middle schools. The YHPPs are voluntary students 1,159 in 52 schools) that promote healthy lifestyles among their peers.

The Youth Advisory Council (YAC), led by the HYDS-C, is composed of adolescents that help the DOH identify and implement strategies to improve youth health and wellbeing such as the mass media campaign on adolescent annual health visits titled “Nivel Máximo” (Maximum Level).

Pediatric and Autism Centers: Provide comprehensive, quality and family-centered health, social and support services to CSHCN and their families at the seven RPCs and two Autism Centers with a complete health workforce that comprises Pediatricians, Nurses, Physical and Occupational Therapists, Speech Pathologists and Speech Therapists, Psychologists, Social Workers and Service Coordinators. Specialized Pediatric Clinics are also provided; distributed as follows:

RPC	Specialized Pediatric Clinics	Zika Health Care Services Program Specialized Clinics
Metropolitan	Urology, orthopedics, plastic surgery and orthodontics, neurosurgery, physical medicine and rehabilitation, ophthalmology	Four to six monthly clinics in general pediatrics, neurology and infectology. Note: two more clinics will be added to Mayaguez and Ponce under this contract.
Mayaguez	Orthopedics	
Ponce	Pediatric Dentist	

Under the DSSCP there are 34 Service Coordinators and 13 FESAs who work in close collaboration with ZAPSS.

Partnerships, Collaboration, and Coordination

PR Title V enhances health promotion and leadership through formal agreements - committees, task forces, and alliances, coalitions, cross coordination, resource and data sharing – with other federal, state and local agencies.

A major focus of MCAH/CSHCN Programs is to strengthen family partnerships. For details see Section III.E.2.b.ii.

MCAH/CSHCN Programs continue partnering with agencies described in the 5YR HNA. Following is an updated list.

Partners
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3. Other HRSA Programs
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Ryan White HIV/STD Program
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Auxiliary Secretariat for Health Promotion / Asthma Program
Administration of Mental Health and Anti-Addiction Services
Office of Informatics and Advanced Technology
Demographic Registry Office
Medicaid Program
Pediatric Emergency Medicine
PAHO
PRDH Epidemiology and Research Office
PR – Administration of Medical Services
5. Other governmental agencies
Insurance Commissioner Office
Puerto Rico Health Insurance Administration
Education Department
Family Department and Head Start/Early Head Start Programs
PR Institute of Statistics
6. PR has no tribes, Tribal Organizations or Urban Indian Organizations
7. Public health and health professional educational programs and universities
UPR Mayaguez, Agricultural Extension Services
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Institute on Developmental Disabilities
Metropolitan University
8. Family/consumer partnership and leadership programs
MCAH Youth Health Promoters
MCAH Youth Advisory Council
Naranjito Family and Community Alliance
Breastfeeding Collaborative Group
MCAH Regional Boards
Policy Council of the Administration of the Integral Development of Children
PR Parent Information and Training Center
9. Other state and local public and private organizations
United Way
March of Dimes
Hospital Association
AAP PR Chapter, PR Pediatric Society
La Leche League PR / Proyecto Lacta
Institute for Youth Development
PR Boys and Girls Club
VOCES
Pro Familia (Planned Parenthood)
PR ACOG
PR Society of Pediatric Dentistry
Proyecto Nacer
Maternal Fetal Medicine Specialists
Alliance for the Control of Chronic Diseases

FY 2019 Application/FY 2017 Annual Report Update

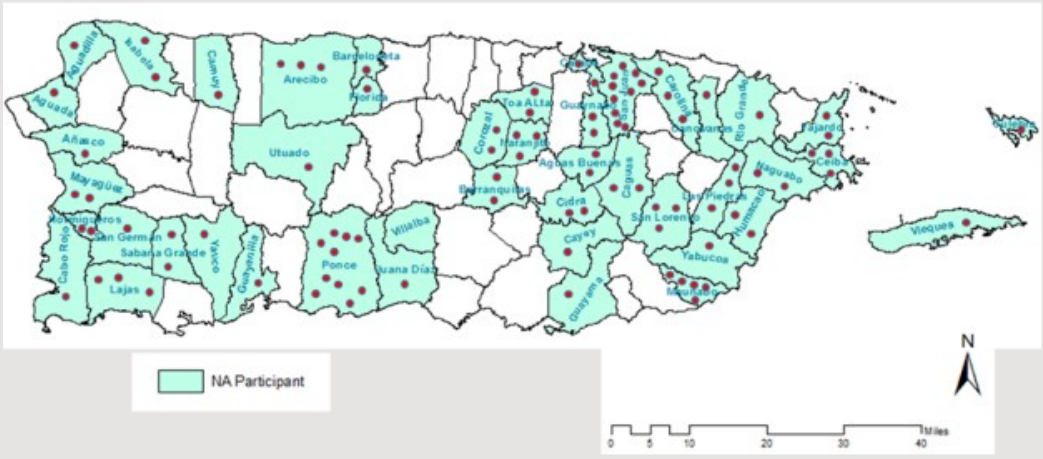
Process

PR Title V Health Needs Assessment (HNA) 2018 obtained information from stakeholders through quantitative and qualitative methods.

The MCAH Program got input from community leaders (CL) in each health region who were key in identifying and managing storm related emergent needs. A community leader is defined as someone able to communicate effectively with community members and external agencies and mobilize the community.

The 2016 Needs Prioritization Method Survey (NPMS) was adapted to include health issues related to natural disasters. From December 2017 to February 2018 we surveyed 71 leaders (non-probabilistic sample) with a 100% response.

Communities reached by the 71 Community Leaders
participating in the HNA
Puerto Rico, 2018



The MCAHP also conducted three Dialogues with key persons (physician, union leader, health organization representative) that provided aid in communities across PR in the aftermath of Hurricane María. This data highlight storm-related needs.

The CSHCNP focused on family and pediatricians' perception about the CSHCNP and on the following emergent health issues: long-term neurological sequelae possibly associated to congenital Zika virus infection and technology-dependent children at their homes. The CSHCNP Family Survey was adapted from a New York Cayuga County CSHCN family survey and collected information on: 1) CSHCNP family centered care, 2) access to CSHCNP services and 3) family satisfaction. Survey to local pediatricians gathered information on their inputs about CSHCNP. Secondary data on age at which children at risk for ASD receive their first diagnostic evaluation was also analyzed.

Findings

Based on the findings we assessed the priority needs, strategies, resources and measures (NPMs, SPMs, ESMs) of the action plan. Since the HNA 2018 findings are similar to the HNA 2015 the priorities remain unchanged.

There are needs described in the Dialogues that cross MCAH domains. A main need was potable water and food.

"Many people were worried about the situation of not having water. It was what worried them most. It was the Holy Grail. Water to drink, to eat, to bath." (Union Leader)

"I saw mothers crying…they told me: 'we can't find food. The family card [NAP] can't buy [food], even if supermarkets are opened they are limited of foodstuffs. We can't use the card to get food.' (Physician)

They also noted the hardships to get help.

"There was only a water [potable] tank in a place far away from town. People had to walk, because not all have cars, with strollers, with bottles to get water." (Physician)

"We also saw many young persons with small children… and they had to be in those huge lines. I felt sorry. It was a difficult line to be in." (Union Leader)

All pointed to closed health services and shortages of vaccines and medications as a big health issue. For people in the mountains, heavy rain and mudslides were a constant concern to seek medications and other supplies.

"The problem is that they had no access to medications because they live high up there and they worried [saying]: 'If I come down under [heavy] rain I would stay out since I can't go up again.' That was their main concern." (Union Leader)

Main health problems identified were: scabies, conjunctivitis, high blood pressure, respiratory ailments, diabetes and cuts and bruises due to falls. A major health risk identified was the use of water from streams that could be contaminated.

All key persons spoke of sadness, despair and uncertainty among people. "I don't know what is going to happen tomorrow" and "I don't know what I'm going to do" were expressions they often heard in the places they visited.

"Many teachers [head start and early head start] cried whenever they spoke because they were burdened by their losses and because they were working with families. Although the centers were closed, the families came and told them: 'Can we stay for a while? Because we are exhausted and so our child and here at least you help us while we talk to you and the child can jump and play. And we feel relieved." (Physician)

They also spoke of solidarity among people.

"When I arrived at one community, people were so kind and told me: Look they came here last week and brought us everything. We don't need it [aid]. But over there is an area [community] that had not been visited. There is what is most needed. (Physician)

"People from the community when they saw you walking and working, they would join you and ask: What do you need? How can I help you?" (Health Organization Representative)

Women/Maternal Health

According to the CL, depression and other mental health conditions (14.8%) was the main problem that affect the health of WRA in their communities. Experts on this field have noted that Hurricane María may have exacerbated mental health problems in the population. Others health issues mentioned were alcohol, tobacco and drug use and abuse (12.3%); job loss (11.3%); sexual, physical and emotional violence (9.4 %) and inadequate nutrition (8.7%).

The main issues affecting pregnant women's health according to the CL were: nutrition (15.2%); depression and other mental health conditions (13.5%); sexual, physical and emotional violence (11.3 %); and alcohol, tobacco and drug use and abuse (7%). They also noted "lack of transportation for prenatal appointments or laboratory tests, X-rays or emergency rooms" (8.7%).

Access to health care is critical for pregnant women as they may have complications with adverse effects on babies. In a dialogue it was noted that shelters were unprepared to meet their needs.

… I asked, do you have pregnant women? No one had asked about pregnant women. We identified a woman of about 32-35 weeks gestation. She did not know where she was going to receive care or where she was going to give birth…this served [us] to evaluate needs seldom identified, like for example, if she knew how she was going to be transported when in labor. If the shelter had access to an ambulance" (Physician)

Perinatal/Infant Health

Asthma, allergies and other respiratory conditions (12.0%) were raised as relevant issues for infant health by the CL. Neglect and infant abuse (11.2%) were also mentioned as issues that affect infants. Other issues mentioned were and frequently seen after natural disasters were difficulties to get baby milk formulas (9.3%), vaccines (8.5%) and hygiene equipment - diapers, baby wipes, diaper rash cream - (8.1%).

Like the CL, key persons identified shortage of diapers, formula and baby wipes. The physician noted that mothers were putting water in the formulas, a nutritional risk for infants. She also raised the issue of the lack of breastfeeding support in some hospitals and shelters.

"…There was little support to inform mothers about breastfeeding…I did not see a disposition in nurses. That worried me. Equally, it worried me the indiscriminate distribution of formula…I know that the intention was to give food but in a crisis, it is very important to foster breastfeeding…I found [in shelters] women who had recently given birth that had not been informed and were not breastfeeding. They were looking for formula." (Physician)

Infant safety in shelters was also brought up.

"What I found…babies sleeping in unsafe conditions. There were no special cribs. Some were sleeping in car seats. Or were placed horizontally between the mother and the father. (Physician)

Child Health

The most relevant health issues identified by the CL were: Neglect and child abuse (14.8%), asthma, allergies and other respiratory conditions (14.4%), school / community violence (13.3%), inadequate nutrition (12.5%) and depression, stress, anxiety, sleeping disorders and other mental illnesses (9.5).

Fractures, head trauma, infections, and burns in children were identified in the Dialogues.

"We saw many children with trauma because they were playing outside, in bicycles but not with the necessary precautions, and they came with fractures and many head traumas. Burn children, not because they were playing with fire but due to spilled water from [portable] burners" (Physician)

Children's need for play, hardly thought of in the aftermath of a disaster was brought up.

"We became conscious that children were very bored. And this lady gave us lots of educational toys and whenever we saw children we left them the toys. That made them happy because they were desperate." (Union Leader)

In the Dialogues, fumes from fuel generators were seen as health risks to children.

"The noise [generators] and the fumes created very difficult conditions for families. I am greatly concerned about the long term consequences. Pulmonary problems due to the fumes of all the plants [generators] that had been operating." (Physician)

Adolescent Health

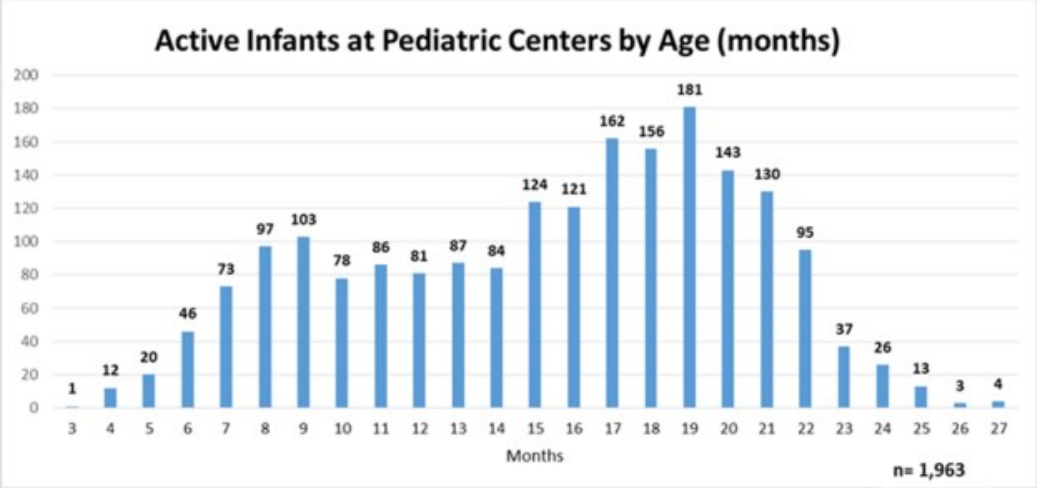
According to the CL, the issues that mostly affect adolescent health in communities were: 1) sexual activity at an early age (18.8%); 2) lack of areas for entertainment (14.8%); 3) adolescent pregnancy (9.7%); alcohol use and abuse, including tobacco and drugs (9.7%); and 5) inadequate nutrition (7.2%).

CSHCN

As of May 16, 2018, a total of 365 families had participated in the CSHCNP Family Survey. More than 90% of families reported they are receiving information regarding health services for their child, and how to access services, including pediatric specialists at the CSHCNP RPCs. Regarding community support, and health insurance or other financial support, a smaller percent of families, 76.5% and 78.4% respectively, reported they are provided the needed information. Eighty seven percent of families (87.6%) reported easily or very easily obtaining information and support from CSHCNP staff, 88.1% reported being satisfied or very satisfied with the support received, and 94.5% agreed that they feel more skilled and confident to manage their child's condition after CSHCNP intervention. Ninety six percent (96%) agreed that Program staff make them feel as part of the team and decision making, 96.1% reported they are carefully heard by staff, and 92.1% agree that Program staff consider their difficulties and try to facilitate access to services. Most frequently reported barriers were: parking fees and food costs (24% and 22%), having to miss work (20.4%) and time in the waiting room (16.2%). Barriers differ greatly within RPCs so this will be addressed locally.

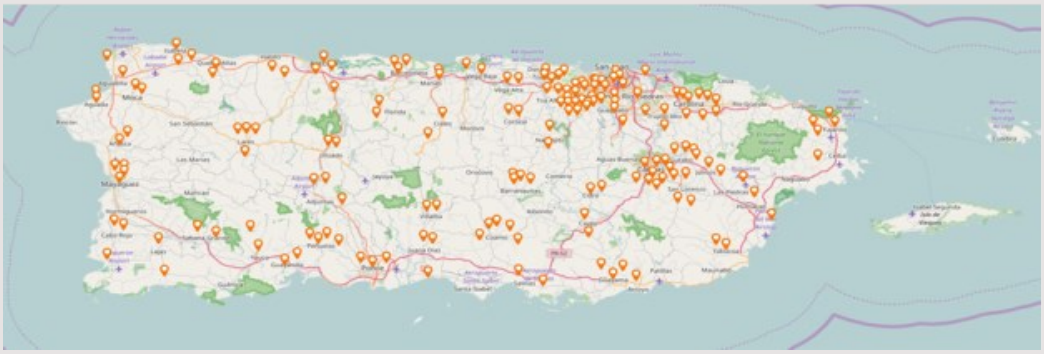
As to the pediatricians' survey, 87 pediatricians with clinical practices in Puerto Rico participated. Results showed that 68% of participants know about the CSHCNP. Nevertheless, an undetermined number of pediatricians may be confusing the CSHCNP with the Part C Early Intervention Program since some asked about this during their participation. The survey also revealed that pediatricians wish for greater communication with CSHCNP health providers and to be informed about the Program's services. For more details refer to Section III.E.2.c (medical home state priority).

In relation to the long-term neurological sequelae possibly associated to congenital Zika virus infection, although Zika is a recognized cause of certain birth defects it does not mean that every pregnant woman infected with Zika will have a baby with a birth defect. Studies on how the Zika virus affects mothers and their children continue to shed better understanding on the full range of potential health problems that the Zika virus infection during pregnancy may cause. Because some healthy infants born following pregnancies complicated by Zika may have developmental problems that later become evident, developmental milestones should be closely monitored throughout the child's first years of life. As of July 5, 2018, the CSHCNP is following 1,963 infants born to mothers with laboratory evidence of possible Zika virus infection during pregnancy to identify long-term neurological sequelae possibly associated with congenital Zika virus infection.

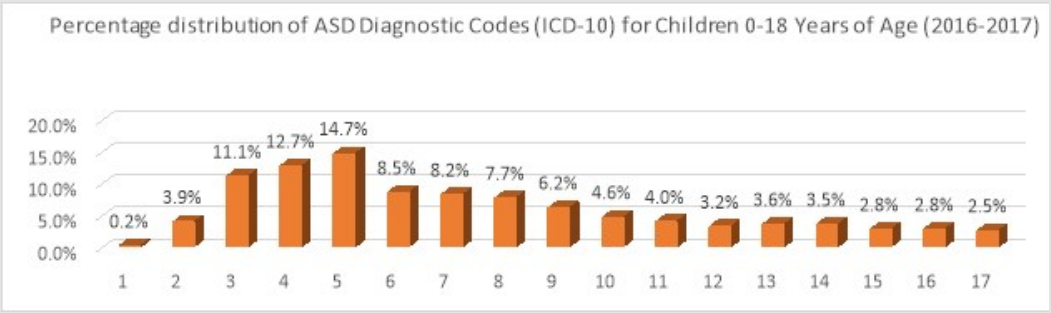


Technology-dependent children at their homes were impacted by Hurricane Maria's aftermath. By March 2018, one hundred thirty (130) technology-dependent individuals were identified by the CSHCNP, of which 121 are children 0 to 21 years old. Twenty-one (21) of these have moved, or were planning to move to the continental USA at the time. To identify these children's needs, CSHCNP staff visited 62 families, and contacted 34 by phone. A Children's Technology-Dependent Registry for this population was initiated and a Registry Coordinator was designated. As of June 26, 2018, there were 150 technologic-dependent children registered. Below is a map with their distribution based on their home geographical coordinates. Although important for emergency and disaster planning, this small but growing population raises new challenges for the health care system. Although most technology-dependent children receive Medicaid coverage in the hospital; coverage for home care is more limited. The impact of discharging these children into the community involves a number of unprecedented health and social implications that warrant policy consideration.

Geographical Coordinates of Addresses of Technology Dependent Children



On the other hand, according to the PR Health Insurance Administration (PRHIA), a total of 52,211 of ASD Diagnostic Codes (ICD-10) were submitted to Medicaid for children between 0-18 years of age during years 2016-2017. Analysis revealed that 15.2% of ASD diagnostic codes were for children 36 months of age or less, while the largest percent of codes (27.4%) were for children between 3 to 5 years of age. These findings represent only GHP population. Ongoing meetings with PRHIA are in progress to share single patient data.



Program Capacity

The issues raised in the HNA underscore the importance of continuing our public health efforts with the added dimension of the impact of natural disasters on MCAH populations along the life course. More than ever support, health literacy and empowerment are crucial in times of great distress and rapid changes.

Since MCAH does not provide mental health intervention services for the population, in 2016, a Ph.D. Mental Health Consultant joined MCAH Program (Central Level) to support staff to manage more effectively the emotional and social processes and behavior/mental health problems of participants of the Home Visiting Program (HVP) and other populations. This led to an increase of screening tests for HVP participants and protocols developed to ensure an effective management and monitoring of women at risk. Also staff trainings on emotional well-being and mental health techniques were developed.

The MCAH Program continues promoting health mainly through these services:

The Home Visiting Program (HVP), staffed by the Home Visiting Nurses (HVNs) operates in 73 municipalities serving primigravid pregnant women aged up to 21 or 35 + years and primigravid between 22-34 years of age with chronic health conditions, ZIKA virus infection and those with a previous loss and non-living child. Women and their infants participate in the HVP up to 24 months after delivery. Families receive health and psychosocial support that include case management, coordination of services, individual education, screenings (maternal depression, ASQ, PPHCSG, drug, alcohol and tobacco use and abuse), referrals and follow ups.

The Community Outreach Program (COP) staffed by 46 Community Health Workers (CHWs), that link MCA population to health services, identify pregnant women for enrollment in the HVP, coordinate interagency services, and provide health

education and the Responsible Parenting Courses (0-5 and 6-11 yrs.). The CHWs make referrals to Medicaid for GHP evaluation and recruit pregnant women and families for the Prenatal Course.

The Health Education/Promotion is oversee by the Health Educators (HEs) – one in each MCAH Region - who offer technical assistance to the CHWs on the Prenatal and Responsible Parenting Courses. They also manage special requests topics from communities. The HEs prepare and offer the educational program specific to special requests topics and train the CHWs in these topics.

The Perinatal Services are provided by the Perinatal Nurses (PNs) that visit birthing hospitals to offer pregnancy and breastfeeding support, family planning counseling, education related to post-partum, and infant health. The PN's identify pregnant women candidates for the HVP and/or the Prenatal and Responsible Parenting Courses. They make referrals and engage in research data collection.

The Comprehensive Adolescent Health Program (CAHP) promotes adolescence health and well-being on the basis of the Positive Youth Development Model (PYDM).

The CAHP has a physician as its Associate Director, a SW CAHP Coordinator and a Healthy Youth Development System Coordinator (HYDS-C) at central level, and one CAHP-C in each Health Region.

The CAHP-Cs coordinate the Youth Health Promoters Project (YHPP) implemented in selected middle schools. YHPP are voluntary students (1,278 in 68 schools) that hold peer to peer activities to promote healthy lifestyles and wellbeing. The CAHP-Cs also provide support to the HVP. They received trainings on awareness towards suicidal behaviors and suicide prevention, how to manage mental health after the Hurricane Maria and the use of Connor - Davidson Resilience Scale to assess posttraumatic stress disorder.

The Youth Advisory Council (YAC), led by the HYDS-C, is composed of adolescents that help the DOH identify and implement strategies to improve health services for youth.

The CSHCN Program provides comprehensive, quality and family-centered health, social and support services to CSHCN and their families. As part of the continuous HNA, the need for additional staff was identified to strengthen the protocol implemented for infants born to mothers with lab evidence of possible Zika virus infection during pregnancy. Additional staff was recruited through the HRSA Zika MCH Services Program: administrative staff (15.3 FTE), clinicians (99.32 FTE), and family engagement and support advocates (7.42 FTE) for family to family support services. Also, necessary equipment to provide screening, diagnosis and treatment was acquired, as well as EHR and tele-health technology and equipment.

Partnerships, Collaboration, and Coordination

MCAH/CSHCN Programs enhance health promotion and leadership through formal agreements - committees, task forces, and alliances, coalitions, cross coordination, resource and data sharing – with other federal, state and local agencies.

A major focus of MCAH/CSHCN Programs is to strengthen family partnerships. For details see Section III.E.2.b.ii.

MCAH/CSHCN Programs continue partnering with agencies described in the 5YR HNA. Following is an updated list.

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	PR ACOG
	PR Society of Pediatric Dentistry
	Proyecto Nacer
	Maternal Fetal Medicine Specialists
	Alliance for the Control of Chronic Diseases

FY 2018 Application/FY 2016 Annual Report Update

MCAH

Process

The Health Needs Assessment (HNA) 2017 obtained input from stakeholders through quantitative and qualitative methods. A survey (adapted from HNA 2015 Needs Prioritization Method Instrument) was conducted with DOH Youth Advisory Council (YAC). About 63% of the members (12 out of 19) answered the survey. A Health Dialogue was conducted with 12 members of the Family and Community Coalition (Naranjito Municipality, Bayamon Health Region).

Findings

The findings led to the evaluation of the priority needs and the strategies, resources and measures (NPMs, SPMs, ESMs) of the action plan. Since the HNA 2017 findings are similar to the HNA 2015 the priorities remain unchanged. As in previous years difficult access to services has been identified by stakeholders. The research performed through the Family and Community Coalition pointed out what challenges the population is facing the moment they looking for the preventive visits.

While the main issues identified by stakeholders are reported by population domain, the transportation barriers raised in the Health Dialogue crosses all domains. Cost of transportation, very limited routes and operating hours are barriers people face to access health and other services.

We probed stakeholders about community strengths that also cross domains. YAC members identified the following strengths: a) support from families, friends, teachers, caregivers and adults around them; b) communication among youth; c) youth positive characteristics - been motivated, cheerful, empathetic and supportive.

For Health Dialogue participants the main strengths are: a) strong and close extended family ties; b) family support in providing housing and financial help; and c) mutual help among neighbors. Looking at the infrastructure in their community, they mentioned a) existing facilities in the municipality for physical activity such as basketball courts, baseball and jogging fields.

Women/Maternal Health

The main issue identified by participants in the Health Dialogue was lack of preventive visits. They commented that women do not go for preventive visits for these reasons: a) “one goes to the doctor when one feels sick”; b) “the waiting time [doctor’s office] is too long”; c) “if one is healthy one can get sick by other patients”.

Participants also pointed out that preventive visits are not promoted among males aged 18-40. For them, preventive visits should be promoted among women and men alike.

Perinatal/Infant Health

Infant visits to pediatricians were raised as a major issue among Health Dialogue participants. The needs identified are: 1) lack of knowledge on infant growth and development; 2) prevailing idea that if the baby is not sick there is no need to visit the pediatrician and; 3) if the pediatrician is absent the day of appointment, no re-scheduling is done by the office.

Participants’ comments point out to the needs parents have for information about the importance of “follow-up” visits as well as problems within the healthcare system.

Child Health

A key issue raised in the Health Dialogue was related with physical activity. Participants observe “very little physical activity” among children in their municipality due mainly to the use of electronic games and cellular phones given to small children to play with.

Regarding physical activity, they expressed great concern about child safety. While the municipality has facilities for physical activity, parents are reluctant to use the facilities due to criminal activity (violence, robberies and others).

It was suggested that parents could get organized in their communities to look for the safety of their children in such facilities. This suggestion calls for empowerment of families in reclaiming public spaces for physical activity.

Adolescent Health

According to the survey conducted with the YAC members the issues mostly affecting adolescents in communities were: 1) stress (25.9%), specifically academic burden as the stress factor; 2) inadequate nutrition (11.1%); 3) drug, alcohol and tobacco abuse (11.1%) and; 4) sexual activity at an early age (11%).

All the issued identified by YAC members can be addressed in preventive medical visits.

Cross-Cutting/Life Course

Oral health is a protective factor that cuts across domains. Health Dialogue participants identified three oral health community needs: 1) family education about the use of bottles and pacifiers and their adverse effects on infants and small children; 2) information about infant mouth care and; 3) information about the importance of visiting a dentist during pregnancy.

Program Capacity

To operationalize the 10 essential public health services, MCAH established an infrastructure for the delivery of the services. The MCAH has 7 Health Regions with Medical Directors (4 of 7 DOH Regions), Community Health Workers (CHWs), Health Educators (HEs), Perinatal Nurses (PNs) and SW Comprehensive Adolescent Health Program Coordinators (CAHP-C), among others. The HVNs are the cornerstone of the MCAH and together with the PNs and the CHWs constitute our reach health professionals that are spreading island-wide the campaign to prevent Zika virus transmission as well as promoting healthy life - styles.

For MCAH Workforce Development and Capacity see section II.F.2.

Home Visiting Program

The HVN’s identify the health and social needs of participating families. They offer case management and coordination of services through individual education, screenings (including maternal depression, ASQ, alcohol and tobacco screenings and the PPHCSG), referrals and follow-ups.

HVP is voluntary and serves primigravid pregnant women aged up to 22 or 35 + years, primigravid between 23 and 34 years old with several chronic health conditions including those with Zika virus infection and/or pregnant women with a previous loss and non-living child. The women and their infants participate up to 24 months after delivery. About 84 nurses provide services to families in 72 municipalities. In FY 2016, 79 nurses served 4,193 families. The average caseload was of 41, ranging from 10 to 68 families.

Community Outreach Program

The Community Outreach Program (COP) pursues to link MCA population not only the MCAH services, but those health services needed for the population. COP is staffed by 47 CHWs within all the 78 municipalities. One of their major

responsibilities is to identify pregnant women to facilitate enrollment into the HVP. If they do not qualify for the HVP then the CHWs offer them the Prenatal Care Course. Once these women deliver the baby the CHWs contact them to provide the Responsible Parenting Course (0 to 5 years).

The CHWs make referrals to the Medicaid Program for the GHP eligibility evaluation and other health services, promote the PPHCSG, coordinate interagency services, provide the Responsible Parenting Course (6 to 11 years) and provide group health educations on MCAH topics. They also disseminate educational materials; participate in health fairs as well as giving support to the HNA process.

They gather information regarding private and public agencies and services available in communities, identify problems of access to health services and report it to the appropriate level. This serves to update the directory of services used by the HVP and other MCAH programs.

The HEs offer technical assistance to the CHWs for the Prenatal and Responsible Parenting Courses. This staff also manages those special requests of topics that are identified by entities in the community or by the analyses performed on MCAH statistics. The HEs perform the developmental process for these special requests. To maintain a qualified staff, the HEs train the CHWs in these topics. MCAH counts with one HE in each DOH Region.

Perinatal Services

The MCAH has 7 PNs that visit about 27 of approximately 36 birthing hospitals in PR (those that attend the greater quantity of deliveries). These PNs provide breastfeeding support, family planning counseling, education related to the post-partum and infant care and identify high risk pregnant women candidates for the HVP, or for the Prenatal and Responsible Parenting Courses. Also they make referrals as needed and participate in the researches data collection process.

Comprehensive Adolescent Health Program (CAHP): Youth Health Promoters Project (YHPP) and Youth Advisory Council (YAC)

The CAHP promote adolescence health and wellbeing and is responsible for promoting and implementing the Positive Youth Development Model (PYD) in PR.

The CAHP central level has a physician as its Associate Director, a SW CAHP Coordinator and a Healthy Youth Development System Coordinator (HYDS-C). At the regional level there is one CAHP-C in each of the 7 DOH Regions. The CAHP-Cs are responsible of YHPP implementation in selected middle schools and other initiatives as youth dialogues to collect information about their needs. YHPP are voluntary students that hold peer to peer activities to promote healthy lifestyles and wellbeing during the three-year duration of the program. The YHPP had 1,278 active youth promoters in 68 schools island wide. The CAHP-Cs also provides support to the HVP.

The YAC is an initiative led by the HYDS-C which has recruited a group of 19 adolescents to serve on this council and help the DOH identify and implement strategies to improve health services for this population.

Partnerships, Collaboration, and Coordination

Formal agreements - committees, task forces, alliances, coalitions, cross coordination, resource and data sharing –between other federal, state and local agencies enhance the capacity to promote health and expand the effectiveness of the MCAH.

MCAH continues its partnership and collaboration with entities mentioned in the Five-year HNA. Following is an updated list.

Partners
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Breastfeeding Collaborative Group
MCAH Regional Boards
Policy Council of the Administration of the Integral Development of Children
9. Other state and local public and private organizations
Association of Primary Health Care of PR
March of Dimes
Hospital Association
AAP PR Chapter, PR Pediatric Society
La Leche League PR
United Way
PR Boys and Girls Club
Pro Familia (Planned Parenthood)
PR ACOG
Proyecto Nacer

A major focus of MCAH is to strengthen Family/consumer partnership in all processes like the interim HNA. Detail description of the family/consumer partnership is included in the II.F.3 section.

CSHCN

Process

The CSHCNP NA update focused on: 1) the capacity of the PR public health system and infrastructure to ensure access to services for infants and children, birth to 3 years, born to mothers with possible ZIKV infection during pregnancy, including services to families; and 2) skills development needs of CSHCNP workforce. This process included the identification of: unmet workforce needs, necessary equipment and supplies to provide the recommended services, and health information technology needs (EHR and tele-health) to increase access to necessary health services and ensure consistent tracking and monitoring of children born to mothers with possible ZIKV infection during pregnancy, and their families. A Skills

Development Needs Survey (SDNS) was also administered consisting of close and open questions related to: 1) providing families needed information, 2) care coordination, 3) transition to adult health care and 4) staff perceptions on skills development needs. Ninety four percent (94%) of CSHCNP staff participated.

Findings

The SDNS found that 92.4% of the CSHCNP staff is aware of the importance of informing families; 60.6% feel they can identify information needs; 62.9% know where to refer families for needed information; 43% need to have more information at hand to better serve the population; and 53% perceives the Program has the capacity for care coordination; and 32.6% for transition to adulthood. Open questions identified the following needs: enhance transition to adulthood, accessibility to a network of health care providers skilled and willing to serve YSHCN, promote the CSHCNP at the community level, and knowledge on how to correctly assign ICD-10 diagnostic codes. These needs are currently being addressed. A limitation of the survey was that some of the participants' roles were not necessarily related to care coordination or transition services.

Program Capacity

Families of all surviving offspring of mothers with possible ZIKV infection during pregnancy across the island are given the option to be referred to the CSHCNP for developmental surveillance and coordination of specialized services, as needed, up to age 3 years, irrespective of the infants' ZIKV tests results. A protocol for the developmental surveillance of infants and toddlers was developed by the CSHCNP and is being implemented. These services are available through the seven (7) RPCs. Regarding early intervention services, infants born to mothers with laboratory evidence of possible ZIKV infection during pregnancy who are not experiencing a developmental delay are not eligible for Part C early intervention services. However, infants diagnosed with congenital or postnatal microcephaly, or other established risks for developmental delay, are eligible even when they are not experiencing a developmental delay. As of November 2016, a CSHCNP need for 143 FTE contractual direct services positions was documented. As part of the continuous needs assessment, the need for 19 FTE service coordinators, 1 FTE Lead Service Coordinator, 7.42 FTE Family Engagement and Support staff, 1 Tele-Health Program Coordinator and 10 FTE administrative support staff has been identified.

Partnerships, Collaboration, and Coordination

Under an agreement with the Carlos Albizu University, psychology doctoral candidates under clinical supervision are conducting developmental assessments of infants born to mothers with possible ZIKV infection during pregnancy at all RPCs. Collaborative relationships with the Puerto Rico Pediatric Society, the *Asociación de Médicos Pediatras Región Oeste*, the *Asociación de Médicos Pediatras Región Este* and the AAP-PR Chapter, facilitated presenting at their annual meetings and educational activities regarding the 2016 Zika epidemic in PR and how to appropriately assess infant and children born to a mother with possible ZIKV infection during pregnancy. The CSHCNP is also collaborating with the AAP ECHO Zika Clinics. Another strong collaboration with the *Asociación de Salud Primaria de PR* allows the provision of technical assistance, training and support to the HRSA-supported Primary Prevention and Primary Health Network in PR regarding the 2016 ZIKV epidemic in PR, and how to appropriately assess and monitor pregnant women with possible Zika virus infection, as well as, their infants and children. Another collaborative agreement with the Demographic Registry allows CSMND staff access to their data base to identify infants born to mothers with laboratory evidence of possible ZIKV infection during pregnancy not reported to ZAPSS or BDSPS. The CSHCNP is also collaborating with the two (2) HRSA projects approved under the Optimizing Family Support for Families of Children with or at-risk for Congenital Zika Virus Infection Opportunity. The BDSPS and ZAPSS have a working relationship with the Maternal Fetal Medicine specialists through which ultrasounds of birth defects affected pregnancies are shared with both surveillance systems.

FY 2017 Application/FY 2015 Annual Report Update

The DOH used a separate process for the HNA of the general MCAH and CSHCN population and system capacity analysis.

MCAH
This HNA 2016 continues the framework of the HNA 2015 to determine priority needs with stakeholders input. MCAH revised the priority needs and the national and state performance measures. The findings contributed to the evaluation and the establishment of strategies and resources that led to a workable action plan.

The MCAH has mechanisms and strategies to address the issues identified by the stakeholders included in this report. PR State priorities will remain unchanged this reporting year since the information gathered concurs with the findings from the HNA 2015.

Qualitative data collection methods used were dialogues and interviews with MCAH staff, participants and families from the HVP, parents serving on the Policy Council of the Administration for the Integral Development of Children, and Youth leaders. The issues brought up in dialogues and interviews relate to the SDH. These concerns include: a) limited access to health care services (e.g. gynecologists, pediatricians); c) limited transportation to access health and other services; d) decay of urban centers; e) unfair and disrespectful ways of treating low-income people in services; and; f) unsafe environments (e.g. street drug selling/buying, criminality, street shootings).

Quantitative data included statistical methods (percentages or rates) and an adapted Needs Prioritization Method Instrument used in the HNA 2015. The instrument was distributed to members of 7 MCAH RB that are composed of representatives from government and non-government entities that meet to address MCA health. Data from 77 MCAH RB members across PR was obtained and analyzed.

This report shows the principal problems that affected MCA population by domain. These issues coincide with the findings of HNA 2015. However, in the women/maternal health domain the depression and other mental conditions for pregnant women emerged. It is evident the necessity to promote the Preventive Health Services Guidelines for Women in Reproductive Age (PHSGWRA), specifically the preventive health visits for an adequate treatment including mental screenings. The emergence of Zika threat occurred after this HNA was concluded, therefore no mention of this threat in the assessment.

Women/Maternal Health
The survey conducted in the MCAH RB revealed issues mostly affecting WRA in communities were inadequate nutrition (61%), overweight and obesity (57%), depression and other mental conditions (51%) and lack of physical activity (45%).

These conditions inhibit normal development of the organism and an adequate course of pregnancy and labor. According to members of the MCAH RB, the principal problems that affected pregnant women were: inadequate nutrition (82%), not seeking education or guidance during pregnancy (66%), not visiting the health care provider once they knew of their pregnancy (65%) and depression and other mental conditions (47%). Only one issue (depression and other mental conditions) emerged in this interim HNA as new.

Perinatal/Infant Health
The principal problems affecting infants in their communities were: mother support for breastfeeding (81%), infant abuse/negligence (79%), lack of immunization (66%), finding vaccines that are needed (57%) and accidents (57%).

Child Health
To those surveyed in the MCAH RB, the most common problems affecting children in their communities were: finding appointments with specialists (71%), child abuse/neglect (56%), bullying (48%), learning problems (42%) and cavities and gum diseases (34%).

Adolescent Health
According to the findings, the top issues that affect adolescents in their communities were: sexual activity at early age (49%), not visiting health care providers for physical exams (47%), inadequate nutrition (42%), bullying (36%) and drug, alcohol and tobacco abuse (36%).

Cross-Cutting/Life Course
Although oral health was not the principal issues identified by the members of the MCAH RB (18%), MCAH acknowledged that oral health is a public health problem. Poor oral health in pregnant women increases the risk of prematurity. Pregnant women in PR are not receiving the necessary preventive oral health care. Poor oral health in children and adolescents can affect school performance, quality of life, and future success.

Title V Program Capacity

Several MCAH core and support programs facilitate and complement the health services offered at the health care system

primary level in PR. The services are divided in 7 Health Regions with a Medical Director, 6 Health Educators, and 7 Regional Adolescent Health Coordinators (SWs). For MCAH Workforce Development and Capacity see section II.F.2.

Home Visiting Program (HVP)
The HVNs are the cornerstone of the MCAH and together with the Perinatal nurses and the CHWs have been instrumental in the prevention of the Zika virus transmission campaign island wide. The HVP identifies health and social needs and offers case management and coordination services to participating families through individual education, screenings (including EPSDT and the PPHCSG), referrals and follow-ups. Interventions are offer according to the gestation trimester. HVP is voluntary; woman and their infant continue participating up to 24 months after delivery. It also serves families with high risk children up to 24 months. The HVP identifies high risk pregnant women not served by the program to make referrals to prenatal care services. Currently about 77 nurses provide services to families in 75 municipalities. During the reporting year average caseload is 45 families reaching about 3,402 families per year.

Community Outreach Program
The Community Outreach Program (COP) is staffed by 49 Community Health Workers (CHW) within the 78 municipalities. Their task is to identify MCA population, facilitate enrollment into the HVP, GHP and other health services, promote the PPHCSG, coordinate interagency services, support the HVP including referral follow-ups, provide community health education, disseminate educational materials, participate in health fairs and data collection. These professionals also provide the prenatal care and responsible parenting courses.

The CHWs also gather information regarding private and public agencies and services available in communities, identify problems of access to health services and report it to the appropriate level. This serves to update the directory of services used by the HVP and other MCAH programs.

Perinatal Services
The MCAH Program has 5 perinatal nurses that visit the birthing hospitals. These nurses are trained in breastfeeding techniques, provide family planning counseling, and identify high risk pregnant women candidates for the HVP. They provide individual and group education, make referrals, collect perinatal data and participate in MCAH surveys and are resources for the prenatal courses.

Comprehensive Adolescent Health Program: Youth Health Promoters Project (YHPP) and Youth Advisory Council (YAC)
The MCAH' Comprehensive Adolescent Health Program (CAHP) components integrate activities intended to promote adolescence health and wellbeing and reduce health risk factors. CAHP is responsible for promoting and implementing the Positive Youth Development Model (PYD) in PR and promote the adolescent annual health visit. The CAHP central level has a physician as its Associate Director, a CAHP SW Coordinator and a Healthy Youth Development System Coordinator. At the regional level there is one CAHP Regional Coordinator (CAHP-RC) in each of the 7 DOH Regions. The CAHP-RCs are social workers responsible of Youth Health Promoters Project (YHPP) implementation in selected middle schools and other initiatives as youth dialogues to collect information about their needs. YHPP is implemented with groups of middle school voluntary students during three years. YHP's create and hold peer to peer activities to promote healthy lifestyles and wellbeing. During 21015-2016 the HPP had 694 active youth promoters in 35 schools islandwide. The CAHP-RCs also provide support to the HVP. The YAC is an initiative led by the MCAH CAHP which has recruited a group of 25 adolescents to serve on this council and help the DOH identify and implement strategies to improve health services for this population.

MCAH Programs	Domains					
	Women/Maternal Health	Perinatal / Infant Health	Child Health	Adolescent Health	Cross – cutting / Life Course	CSHCN
Home Visiting Program	X	X	X	X	X	X
Community Outreach Program	X	X	X	X	X	X
Perinatal Services	X	X				
CAHP YHPP & YAC				X		

Partnerships, Collaboration, and Coordination

Approaches to building and expanding the effectiveness of the MCAH Program's partnerships and collaborations with other federal, state and local agencies that serve the MCA populations were strengthened. Formal agreements -including committees, task forces, alliances, coalitions, cross coordination, resource and data sharing -between MCAH, DOH and other agencies, academic institutions, FQHC and tertiary health care facilities enhance the capacity of the MCAH/CSHCN

programs to promote health. PR has no tribes, Tribal Organizations or Urban Indian Organizations.

Some of the close collaborators are: WIC, the Immunization Program, Early Intervention, Abstinence Education Program, Personal Responsibility Education Program, Ryan White HIV/AIDS Program, Administration of Health Services for Drug Addiction, Medicaid Program, PRHIA and ICO, Demographic Registry Office, Family Department, Head Start and Early Head Start Programs, Education Department (with MCAH Youth Health Promoters in their schools), Association of Primary Health Care of PR, Hospital Association, March of Dimes, AAP PR Chapter, PR Pediatric Society, Oral Health Alliance, Pediatric Obesity Prevention Alliance, Women's Health Society PR Chapter, United Way, Muralla de Vida, La Leche League PR, Proyecto Lacta, Lacta Vida, and Promani, Pro Familia (Planned parenthood), Proyecto Nacer (NGO Services to pregnant teens and parenting teens), 4H Extension Services, PR Boys and Girls Club, Crearte, Nuestra Escuela Inc.

CSHCN

2015 PR Survey – Children with Special Health Care Needs

Data from Phase II of the 2015 PRS-CSHCN, detailed interviews of 750 households with at least one CYSHCN between 0 to 18 years old, was received from the contractor in October 2015. The survey used a module similar to the one used by the SLAITS for CYSHCN. A probabilistic sample based on random digit dialing for residency telephones, stratified by the 7 health regions, was used. After piloting the questionnaire with 4,348 calls, data was collected using a computer assisted interviewing system. The "2009 NS-CSHCN Indicator and Outcome Variables SPSS Codebook", developed by CAHMI, was used to guide and adapt the statistical data analysis. The results were presented to a group of stakeholders on June 10, 2016. Data is reported in the Annual Report Section.

Zika Outbreak

In December 2015, PR became the first U.S. jurisdiction to report local transmission of Zika virus (ZIKV). In May 13, 2016, the first case of microcephaly with intracranial calcifications in a fetus with confirmed ZIKV infection was reported. From November 1, 2015 to July 7, 2016, there were 3,101 confirmed cases of ZIKV infection, more than any other location in the U.S. Of the 3,101 confirmed cases, 476 have been among pregnant women and 22 among infants 1 year of age or younger. As of July 10, 2016, 68 infants have been born to mothers with ZIKV positive tests. Forty (40) have been referred to CSHCN program for developmental follow up and coordination of services. One (1) family declined and nineteen (19) are in the process of being referred. It has not been possible to contact eight (8) families. It has been estimated that 5,400-10,000 pregnant women could be infected during the initial ZIKV outbreak. Of these maternal infections, 1,500-3,700 could result in fetal infections, and 90-260 could result in congenital microcephaly.

Title V Program Capacity

Autism

In December, 2015 a Collaborative Agreement was developed between the PRDOH, the Ponce Autonomous Municipality and the Ponce Autism Center (PAC). As part of the agreement, clinical and coordination of services at the PAC are now provided by the CSHCN Program in coordination with the CSHCN PR Autism Center and RPCs.

Zika Outbreak

The Zika Active Pregnancy Surveillance System (ZAPSS) was developed in collaboration with CDC. Pregnant women with laboratory evidence of ZIKV infection and prenatally or perinatally exposed infants born to these women are being actively monitored. ZAPSS collects information about ZIKV infection during pregnancy, delivery, and outcomes in children up to 3 years of age. Healthcare providers practicing in PR report information to ZAPSS rather than to the US Zika Pregnancy Registry. All surviving offspring of women with positive Zika test throughout the Island are being offered to be referred to the CSHCN Program for developmental surveillance and coordination of specialized services, as needed, up to age 3 years of age. A protocol for the developmental surveillance of these infants and toddlers was developed and was implemented. Enhancing the CSHCN Program capacity to rapidly identify cases of microcephaly and other defects potentially linked to ZIKV is key to ensure that all children born from Zika positive mothers are connected with comprehensive services, and that the families' needs are met. The ZAPSS operates under the Birth Defects and Developmental Disabilities Section of the CSMND since February 2016. The CSHCN Program Director is the PR-based ZAPSS Co-Principal Investigator. ZAPSS has a strong and close working relationship with the PRDH Epidemiology and Research Office.

Partnerships, Collaboration, and Coordination

The CSHCN Program leads the BDSPS/ZAPSS team, one of PR's Zika Response teams. The team has been actively participating in outreach sessions to OB/GYNS and birthing hospitals Island wide on: ZAPSS, the standardized use of accurate techniques for measuring head circumference (HC) and length at birth, Maternal Fetal Medicine specialists (MFMs) reporting to PR-BDSPS cases of fetuses with brain anomalies, birthing hospitals securing cord blood and placenta samples of babies born to women with positive Zika tests, and timely notification of deliveries to the PRDH, among others. The team

has also participated, as presenters and with exhibits, in medical conferences sponsored by the PR Pediatricians Society, the PR Academy of Family Medicine, the PR Chapter of the American College of Emergency Physicians, and the PR Chapter of the AAP, among others.

The CSHCN Program, the PR-BDSPS and the Vital Statistics and Registration Office are working closely on the revision of the Birth Certificate to include the head circumference (HC) measurement, ZVD and Microcephaly, following NCHS Guidelines. Reporting of the HC and length be in centimeters and weight be in grams will be required. Through a cooperative agreement, the BDSPS will receive the birth certificates' data on a monthly basis.

Five-Year Needs Assessment Summary
(as submitted with the FY 2016 Application/FY 2014 Annual Report)

II.B.1. Process

The PR Maternal, Child and Adolescent Health Division (MCAH) and the Children with Special Health Care Needs Program (CSHCN) are essential public health programs that provide and advocate for services for over 46% of the PR population. Given the particularities of CSHCN, PR used a separate process for the needs assessment of the general MCAH and CSHCN populations and system capacity analysis.

MCAH

The HNA 2015 goals were:

1. Determine PR priority health needs for the MCA populations.
2. Enhance stakeholders' participation in all aspects of the needs assessment.
3. Improve health outcomes for the MCA populations.
4. Strengthen partnerships with agencies and organizations working for the wellbeing of MCA populations and families.

A Workgroup - composed of the Evaluation, Monitoring, Research and System Development Section (EMRSDS) researchers (Demographer/SSDI Coordinator, Biostatistician, Reproductive Health Epidemiologist, Pediatric Epidemiologist, Health Program Evaluator, and Cultural Anthropologist), Pediatric Consultant, MCAH Director and other key staff - was set up to devise the framework, strategies, and methodologies.

MCAH used a four phase framework to determine priority needs, assess resources, and establish outcomes and performance measures.

1. MCA populations Needs Assessment. On-going data collection and analysis, research and MCAH document program review formed the basis for obtaining potential priorities.
2. System Capacity Assessment. Assessed the state/local actions, services and programs by pyramid levels for each domain and MCAH strengths and challenges related to the core functions.
3. Setting potential priorities. Narrowed potential needs priorities, matched them to capacity, set targets, identified actions and allocated resources. A Stakeholders Meeting was held to discuss and narrow 73 identified potential priorities. Using the Needs Prioritization Method Instrument, stakeholders came up with 10 priorities. Based on stakeholders' input, MCAH selected final priority needs, set national and state performance measures.
4. Development of the action plan. Identification of several measures and annual objectives, strategies and resources to establish a workable action plan.

Quantitative and qualitative methods were used to gather and analyze data on the needs, strengths and health status of populations.

The statistical methods included percentages and rates of health indicators, odd ratios and trend analysis. Trend analysis was performed for the indicators that represent the identified needs such as mortality rates by age group, birth rates, prenatal care, low birth weight (LBW) and very low birth weight and unintentional injuries, among others. For those needs that were not represented by a specific indicator, a trend analysis was made using indicators that were related to such identified needs.

Population-based data from PR Vital Statistics (VS) was collected. For 2011 to 2014 VS data was preliminary. Data from public and NGO agencies/programs providing services to MCA populations on morbidity, lifestyle, screening and risk factors was also sought. Research, surveillance systems and surveys used were: PR Community Survey, Monitoring the Future, ESMIPR (PRAMS-LIKE survey), Perinatal Period of Risk, 2007-2010 IIMIH by Municipality, Asthma Surveillance System, YRBSS, BRFSS, and PR STDs Surveillance System.

Data from a sample of 500 clients of the HRSA Funded Health Centers (FHC) across PR- through a Needs Assessment Questionnaire - was obtained and analyzed. We also surveyed MCAH Regional Board Members and physicians/pediatricians that participated in the PR Annual Convention Meeting of the PR College of Physicians and Surgeons.

Qualitative data collection methods and sources used were: 1) Dialogues with four types of stakeholders: MCAH staff, families from the Home Visiting Program (HVP) Consumer Committees, parents serving on the Policy Council of the Administration for the Integral Development of Children and youth leaders. 2) Dialogues with male youth on masculinity and parenthood and: 4) Interviews with staff and HVP participants that completed the program.

The input and suggested actions offered by stakeholders were critical to better grasp health issues, service needs, barriers and system capacity. Their input enabled us to set priorities, assess available resources and determine the best strategies to meet needs.

CSHCN

The goal of the Needs Assessment process focused on identifying, through a collaborative effort with families and other stakeholders, a set of specific priorities that will guide the work of the CSHCN Program and the use of Title V resources to meet these priorities through state/local partnerships and collaboration so that results are achievable and evident in the next five years. CSHCN outcome measures formed the basis for the assessment framework. This outcome approach allowed us to see their collective relevancy and utility in improving the health status of the CSHCN population in PR. The method used to assess the strengths and needs of the CSHCN population consisted of developing prioritization criteria, data analysis and presentation, identification of needs, and setting priorities among the identified needs.

Direct input from families and others stakeholders enriched and strengthened the content and validity of the CSHCN Five-Year Needs Assessment Process. Thirty-nine (39) families and 21 representatives of agencies, academy and community based organizations participated in the focus groups to collect qualitative data. The groups were carried out with the purpose of learning about the community opinions and perspectives on CSHCN health care needs, as well as the capacity of the health care system to address those needs. The groups were guided by 8 questions about CSHCN and their families' health needs, barriers, family participation in healthcare, care coordination, health plan coverage, transition to adult health care, and accessibility to resources in the community.

Data sources

Qualitative data was obtained through focus groups conducted during the months of January-May 2014. A total of eight (8) focus groups were carried out with participation of diverse stakeholders, including CSHCN families, youth with special health care needs and public, academic and community-based organizations. Three of the focus groups were carried out in Ponce, Mayagüez and Bayamón RPCs, respectively; one group in the Down Syndrome Foundation facilities, two groups in APNI (Parent training and Information Center), and two groups in the central offices of the PRDOH.

Data for PR is not available from the National Survey of Children with Special Health Care Needs (NSCSHCN) or the National Survey of Children's Health (NSCH). The PR Survey of Children with Special Health Care Needs (PRS-CSHCN) conducted in 2009 provided the first state-level data regarding prevalence estimates of CYSHCN, types of services they need and use, characteristics of the systems of care, health care coverage estimates and other data related to CYSHCN NPMs for PR. The PRS-CSHCN was conducted as a module similar to the SLAITS from April through June 2009. The study used a revised and adapted Spanish version of the questionnaire used in the 2005-2006 NSCSHCN. Data from the 2009 PRS-CSHCN was used to inform the 2015 Needs Assessment for the CSHCN domain as data from the 2015 PRS-CSHCN is not yet available. Other quantitative data sources included 2014 Part C and Part B IDEA Child Counts and the PR Birth Defects Surveillance and Prevention System 2014 Annual Report.

The 2015 PRS-CSHCN is currently in progress. A revised and adapted Spanish version of the questionnaire used in the 2009-2010 NSCSHCN is being used. The study uses a stratified probabilistic sample representative of the seven health regions and the Island of Puerto Rico and is divided in two phases. In Phase 1, a sample of 1,000 household telephones was selected to estimate CSHCN prevalence, obtain preliminary demographic and geographic characteristics and complete the questionnaire from households with children that qualified as with special needs according to the screening questions. Information from the number of households with children in PR was obtained from the 2010 Census. Phase I was completed on April 2015 and the data was used to inform the 2015 Needs Assessment. Phase II consists of 750 detailed interviews for CSHCN. All 750 interviews were completed in September, 2015. Data is currently being scrubbed by the contractor.

II.B.2. Findings

CSHCN

Access to health care services: There is a limitation in specialty services for the pediatric population. Services are fragmented which affects the continuity of care. Families identified delays in getting appointments for specialists and bureaucratic and slow administrative processes to get referrals and approvals. Most specialized services are located in the San Juan Metropolitan region and families that live in the West and South regions need to travel long distances to get the services. Office hours are usually limited, 8 AM- 4 PM, which creates a conflict for families that work during the day. Mothers need to quit their jobs to care for their children resulting in an economic hardship for the family. Families also expressed difficulties in obtaining assistive technology and orthopedic equipment. In many cases, they have to pay high deductibles or pay the total cost out of their pockets. They also shared that the process is tedious and slow and many times when the equipment arrived the child has outgrown it.

Health care providers' knowledge about special health conditions and services: Families expressed that physicians and allied health professionals lack of knowledge of specific health conditions and needs, as for example, inborn errors of metabolism. They link this issue to delays and errors in treatments. It is important for the families that physicians explain to them the child's diagnosis, management, treatment, and consequences of not following the treatment.

Care Coordination: Families and providers identified an urgent need to improve communication and coordination between government agencies so that they obtain needed services for their children. Most of the time, families need to arrange or coordinate services by themselves. Frequently, they need to file complaints in order to obtain the services, laboratories and medications for their children.

Psychological and emotional support for CSHCN and their families: Families reported that services are focused on the child without considering the family needs for psychological and emotional support to cope and manage their child with special needs. On the other hand, in some cases, children are referred to mental health clinics that only treat adults.

Health insurance coverage: Families are facing difficulties enrolling and maintaining their CSHCN in the Special Coverage Registry under Mi Salud. For some diagnoses they need to re-enroll every six months. Approval processes for specialized studies is a slow and bureaucratic process. Private health insurance limits the number of therapies covered. This issue was not reported by the beneficiaries of the Mi Salud Special Coverage. The health insurance case manager is a key person in obtaining needed services but families report having found that they often lack knowledge on special health conditions, needs and equipment. In some cases, the health insurance determines the medication without considering secondary effects. Therefore, physicians need to do extra work to document the need for a specific medication.

Family-centered care: Families feel they are considered in the health care process and decision making but in a limited manner. They call for more empathy and sensibility from the physicians, allied health professionals and agency employees that provide services for their children.

Transition to adult life: Youth and their families see the transition process as a change in routine care and interruptions in services. PCP usually does not prepare and plan with youth or their families for the transition. Mi Salud ends the Special Coverage once youth attain 21 years of age. The Vocational Rehabilitation Administration is the only government agency that provides transition (work study) services to youth with special needs that are eligible under their regulations.

Children with Special Health Care Needs Registry: Agency representatives proposed the development of a unique CSHCN data registry as an option to control duplicity of services and to facilitate coordination of services and follow-up of CSHCN families. The registry can also provide data about CSHCN conditions and needs.

II.B.2.a. MCH Population Needs

MCAH

Women/Maternal Health

Health and wellbeing before, during and after pregnancy is crucial to women and their families. The survey conducted in FHC revealed that issues mostly affecting WRA in communities were overweight and obesity (43.1%), lack of physical activity (33.5%), inadequate nutrition (23.2%), depression and other mental conditions (16.7%) and diabetes (14.7%).

Physical activity is a key aspect for the maintenance and enhancement of health across the lifespan. According to the BRFSS by 2011 around 58% of women 18 to 24 years and 52% of women 25 to 44 years did some kind of exercise in the last 30 days, a 9.6% and a 1.6% increase since 2004 (53.2% and 51%). Physical activity combined with an adequate nutrition can reduce the likelihood of adverse health conditions such as overweight and obesity. In PR for 2011, BRFSS reported that 26.7% of women 18 to 24 years and 32.9% of women 25 to 44 years were overweight, a 30.2% and 1.5% increase since 2004 (20.5% and 32.4%).

Obesity is an important contributing factor of two common medical risks: diabetes and hypertension. In 2011 BRFSS reported 2.6% of women 18 to 24 years and 3.9% of women 25 to 44 years were diagnosed with Diabetes Type II, a 30% and 39.3% increase since 2004 (2% and 2.8%).

These conditions inhibit the normal development of the organism and an adequate course of pregnancy and labor.

According to respondents of the FHC survey, the principal problems that affected pregnant women were: not visiting the health care provider once they knew of their pregnancy (42.1%), inadequate nutrition (39.3%), not seeking education or guidance during pregnancy (30.8%), cigarette consumption (20.4%) and alcohol consumption (12.9%).

In 2012 ESMIPR reported 83.6% of participants received education and/or guidance during their pregnancy, an 11.8% decrease since 2002 (94.8%). In addition, 90.1% of participants received nutrition orientation during pregnancy, a 1% decrease since 2002 (91%).

While shaped by socio-cultural factors, the conditions identified in the FHC survey require changes in attitudes and habits that can be addressed during preventive medical visits and PNC visits. In 2013 BRFSS reported around 73% of women had a past year preventive health care visit, a 1.2% increase since 2009 (72.4%). By 2014, VS data shows that about 86% of live births in PR, their mothers initiated PNC during the first trimester of pregnancy. Although, PNC in PR has improved over the years (Figure 1 in the Needs Assessment Attachment), an age-linked disparity is observed with 78% of women in the 10-19 age range versus 86.8% women 20 years or older initiating PNC during their first trimester of pregnancy.

The preventive visits as well as the PNC visits and other comprehensive set of preventive services will be included in the Preventive Health Services Guidelines for Women in Reproductive Age (PHSHWRA). MCAH will develop and promote the PHSHWRA for PR ensuring that women obtain the recommended preventive services including preconception and interconception care and other services necessary for prenatal care. The MCAH Program staff also offers a prenatal course that covers important health issues related to prenatal, postpartum and pre and interconceptional stages. In addition, to ensure obtaining the optimal birth outcomes, the identification of high risk pregnant women and the referrals to early prenatal care services by the HVP and PN outreach work are one of the MCAH strengths.

Good and early prenatal care (Figures 2-7) increases the chance of detecting and treating adverse birth outcomes such as prematurity and low birth weight (LBW) and reduces the chance to have a C-section procedure.

Prematurity has also improved significantly in PR since the last HNA. Overall, premature birth dropped to 15.1% by 2014, with a significant reduction of 1.6% since 2005 (17.9%). The more significant decrease (3.5%) can be observed during the late preterm period with 10.8% of births by 2014, reaching the PR HPO's that aim to reduce late premature births to 12.1% by 2020.

Low birth weight is almost always related to preterm delivery. By 2014, about 11% of births were low birth weight (LBW). AAPC shows a significant decrease of 1.8% since 2005 (12.8%). If LBW births are stratified by weight it is observed that very low birth weight births follow a stationary tendency (1.4%), while intermediate low birth weight births dropped significantly to 9.3% in 2014 when compared to 2005 (11.4%).

On the other hand, C-sections rates in PR have been higher than those in mainland. The exponential increase of the use of this method began in 1995, just when the Health Care Reform was established in PR. Since then C-section rates have kept rising (Figure 8). An aim of PR 2020 HPO's is to reduce cesarean births among low-risk women to 39.9%. AAPC trend analysis (Figure 9) shows a significant reduction of 1.1% from 2005 (46.6%) to 2014 (41.3%).

As part of CoIIN's strategies, the reevaluation of PNC guidelines for PR will be included in the PHSHWRA to be developed. These guidelines will enable Ob/Gyn's identify pregnant women with a previous premature birth and refer them for treatment with 17 P hydroxyprogesterone. These guides will empower pregnant women of what to expect and require in PNC. The MCAH Program will continue educating women about the signs and symptoms of premature birth and raising awareness

about the benefits of waiting until 39 weeks of gestation.

March of Dimes PR Prematurity Taskforce (PRPT) collected data on the implementation of the Hard Stop (HS) policy and the decrease of early elective deliveries (EED's) in PR. This should have an effect over elective inductions that end in a C-section. The MCAH actively participated with PRPT to identify those hospitals that successfully implemented the HS policy and decreased EED's. As this strategy was successful, the implementation of the HS policy as part of a requirement in all PR birthing facilities will be one of the CoIIN's strategies.

With the CoIIN's strategies, MCAH seeks to decrease the likelihood of infant as well as maternal mortality. In PR maternal mortality varies greatly between years (Figure 10). However an AAPC trend analysis shows that it is significantly decreasing. Nine women out of 100,000 livebirths who had a delivery during 2014 died due to pregnancy, childbirth and puerperium complications, a significant reduction of 27% since 2005 (9.9/100,000 live births). It is imperative to reactive the Maternal Mortality Review Committee (MMRC). As the MMCR needs a legal tool to evaluate data pertaining to maternal care in private Ob-Gyn offices for a complete case review, a proposed bill developed by MCAH for its legal establishment will be submitted to the Legislature.

Perinatal/Infant Health

According to respondents of the FHC survey, the principal problems that affected infants in their communities were: infant abuse/negligence (53.6%), lack of immunization (29%), finding vaccines that are needed (25%), accidents (22%) and mother support for breastfeeding (19%).

Although MCAH lacks statistics on abuse and neglect specifically for infants, risk factors usually present in cases of child abuse have intensified in recent years. In regard to immunization, PR faces problems related to the availability of vaccines. Many pediatricians are not immunizing due mainly to requirements for storing vaccines in their offices. There are also delays in infant immunization due to a lack of public awareness on its importance. Indeed, misinformation - that keeps parents from immunizing children - is one of the most important barriers to receive optimal health care services identified by physicians (55%) that attended the PR Annual Convention Meeting of the PR College of Physicians and Surgeons.

The needs identified by the FHC participants, adversely affect infant health and may even cause death. The number of infants who die before the first birthday is a sentinel indicator not only of health conditions but also of the socioeconomic conditions of a community or nation. That is why PR HPO's sets an infant mortality rate for PR of 7.2/1,000 per live births or less by 2020. While not statistically significant, infant mortality is falling in PR (Figure 11) and reached PR HPO.

Preterm-related causes (24.6%) were the first cause of infant mortality in 2014, followed by congenital anomalies (10.4%) and diseases of the circulatory system (2.9%). Most infant deaths occur during the neonatal period (Figure 12). For 2014, this rate is 4.8/1,000 per live births, this reflects a 27.3% reduction since 2005 (6.6/1,000 per live births). Sudden infant deaths and infant deaths due to accidents are very few in PR (Figures 13-14) thus they are not major contributors to infant deaths. For posneonatal mortality, the rate decreased to 2/1,000 per live births by 2014.

One factor that influences the infant health is breastfeeding, having multiple benefits for the mother and the infant. According to ESMIPR (2002 to 2012), immediate postpartum breastfeeding increased 33% since 2002 (54.3% vs. 72.3%), infants breastfed until six months rose 61.2% (20.4% vs. 32.9%) and infants breastfed until twelve months increased 164% (8.5% vs. 22.4%). Exclusive breastfeeding at 6 months reached 18%.

MCAH has several initiatives to enhance the perinatal and infant health. MCAH established the Fetal and Infant Mortality Review (FIMR) in 2006 beginning the case reviews in 2009 focusing the health regions with higher infant mortality rates (Mayagüez and Ponce). FIMR made recommendations regarding nutrition, prenatal care, preconceptive care, support system, hospitals services and education. MCAH will be maintaining active participation of members in the FIMR and the Regional Boards. Also, MCAH will be developing a bill for the legal establishment of the FIMR - a legal tool to evaluate data pertaining to maternal care in the private Ob-Gyn offices necessary for a complete review. Aiming at reducing infant mortality rates in PR, the FIMR recommendations are disseminated to relevant agencies and stakeholders.

MCAH established a Perinatal Care Guidelines Review Committee (PCGRC) in 2007 in order to classify the hospitals that offer perinatal services Island wide. Based on the 2012 PCGRC data, of the 35 birthing hospitals evaluated, 20% were identified as basic perinatal services, 42.9% as specialized and 37.1% as subspecialized (34.3% IIIA and 2.9% IIIB). When

compared to 2008 data (27.3%), subspecialized facilities increased 35.9%. Using this most recent classification, 2014 VS preliminary data reveals that 68.9% of all VLBW were born at facilities adequately prepared to manage high-risk deliveries and neonates. One of the challenges to decrease IM in PR, for which the MCAH is a strong advocate and collaborator, is the implementation of these guidelines as part of all birthing hospitals requirement for perinatal services as well as the perinatal regionalization.

MCAH and its collaborators developed a strategy that became an administrative order requiring hospitals a lactation support program and compliance with all the laws that protect and support breastfeeding in PR. Another strategy relates to educational workshops to hospitals on the administrative order and ways to comply with it. Also, posters and brochures on current laws about women's and infants breastfeeding rights were distributed in all birthing facilities. Breastfeeding is further promoted in communities by the HVN's. Collaboration of other agencies such as WIC in breastfeeding education has also been fruitful.

One challenge to foster breastfeeding is the non-existence of Baby Friendly (BFH) birthing hospitals in PR. To overcome this limitation, the BFPC led by MCAH will promote making changes in newborn feeding routine in hospitals and the adoption of the 10 steps leading to the establishment of Baby Friendly Hospitals.

Child Health

To those surveyed in the FHC, the most common problems affecting children in their communities were: child abuse/neglect (33.1%), bullying (30.2%), finding appointments with specialists (29.0%), learning problems (24.6%) and cavities and gum diseases (12.3%). Another issue mentioned was overweight children (9.2%). Some of these needs mirror the statistical findings of the common conditions prevailing in this population.

Mortality rates among children 1 to 9 years (VS) have decreased from 15.0 in 2005 to 11.1/100,000 in 2014, a drop of 26% (All mortality rates are per 100,000 habitants; Figure 15). During 2011-2012 about 59% of children 1 to 9 years had an updated and complete schedule of immunization (PRIP) (Figure 16). The obesity and overweight prevalence in children aged 2-5 (WIC Data) fell by 28% between 2005 (40.3%) and 2013 (32.3%) (Figure 17). Mortality rates due to unintentional injuries in children 1 to 9 years decreased 75%, from 2.4 in 2005 to 0.6 in 2014 (VS) (Figure 18). Hospitalization rates due to unintentional injuries in children 1 to 14 years decreased 53.5% from 548.1 in 2005 to 254.6 in 2013 (VS) (Figure 19). ER visits due to unintentional injuries in children 1 to 14 years rose to 69% from 8,998.7 in 2010 to 15,217.1 in 2013 (Figure 20).

In a survey among physicians who provide service to the pediatric population the following barriers to optimum pediatric health care for 0 to 12 year olds were identified: parents' misuse of emergency rooms for outpatient care (69%), limited access of sub-specialists to refer pediatric patients (65%), limited access to resources to refer patients with suspected abuse (60%), lack of parental knowledge of the need for preventive visits (58%). They also reported as barriers for 1 to 4 y/o misinformation that keep parents from immunizing their children (55%), and for 5 to 12 y/o limited access to resources for mental health service referral (64%).

Data from ICO related to the 10 most common diagnostic codes on health care bills (GHP and Private Insurance Plans) showed that only 44,023 (7.5%) visits at medical office were claimed during 2013 for preventive visits in children aged 1 to 9 years.

Data from Head Start Program shows that about 16% of children have conduct problems and attention deficit disorder, 2.3% are exposed to abuse and neglect, and 1.8% are exposed to domestic violence.

The main causes of death in infants (less than 1 y/o) are preterm related (24.6%) and congenital anomalies (10.4%), in children 1 to 5 y/o are congenital anomalies (19.7%) followed by septicemia (9.7%) and unintentional injuries (9.7%), in children from 6 to 14 y/o are unintentional injuries (13%), malignant neoplasms (16%) and congenital anomalies (10%).

To address these issues, the MCAH will continue promoting children's preventive care and the use of the PPHCSG. Further efforts will be made to evaluate medical child preventive care services and barriers.

Early identification and management of stress and trauma in early infancy impacts the optimum development and wellbeing of children. The MCAH will continue to develop and adopt evidence based strategies to identify and intervene in early childhood psychosocial status and identify early signs of developmental delays for early intervention and referral. The MCAH developed the curriculum "Positive Responsible Parenting'' to be given in communities. It covers developmental

stages, preventive services, unintentional injuries prevention, nurturing skills, pediatric healthcare and overall wellbeing.

Physical activity and adequate nutrition is another key aspect of children's wellbeing. Since there are no data available on children's physical activity in PR, the MCAH Program is working with BRFSS to include questions related to this topic in order to monitor this indicator over the next 5 years. MCAH staff will continue collaborating with organizations and agencies within and outside the PRDOH in educating and developing public policy to reduce the prevalence of childhood obesity in PR as well as promoting the PPHCSG.

Adolescent Health

According to respondents of the FHC survey, the top issues that affect adolescents in their communities were: drug, alcohol and tobacco abuse (23.6%), inadequate nutrition (22.6%), not visiting health care providers for physical exams (22.2%), sexual activity at early age (22.0%) and bullying (19.2%).

In terms of mortality, the mortality rates among adolescents 10 to 19 years (VS) fell from 39.3 per 100,000 habitants in 2005 to 29.9 in 2014, a drop of 23.9% (Figure 21). The death rate in adolescents 10-19 years due to unintentional injuries was 12.1 in 2005 and 5.6 in 2014, a decrease of about 54% (Figure 22). The mortality rate due to motor vehicle crashes represents the first cause of deaths due to unintentional injuries among adolescents 15-19 years. This rate decreased 51.6%, from 16.1 in 2005 to 7.8 in 2014 (Figure 23). The suicide rate among adolescents 15-19 years has shown a slight decrease from 2.0 in 2005 to 1.9 in 2014 (VS) (Figure 24). However, the rates of suicide attempts are higher. YRBSS data reported that 11.8% of adolescents 14 -17 year olds pondered suicide in 2008 compared to 14.3% in 2013 (Figure 25). (All mortality rates are per 100,000 habitants).

Alcohol, tobacco and marijuana are the most commonly used substances among the adolescent population in PR. However the use of these substances showed a decrease as YRBSS data shows. Alcohol use among adolescents between 14 to 17 years was 39.0% in 2005 and 25.5% in 2013, a decrease of 34.6%, tobacco use dropped from 10.5% in 2005 and 3.6% in 2013 and marihuana use rose from 6.8% in 2005 to 4.8% in 2013 (Figure 26).

Inadequate nutrition among adolescents was raised by FHC respondents. Adolescents who eat poorly are more likely to develop certain long-term health problems and complications. Although YRBSS data suggested that there was a 10.4% decrease in obesity and overweight prevalence in adolescents 14-17 years (26.9% in 2005 to 24.1% in 2013; Figure 27), this percent remains high.

Regarding sexually transmitted diseases, this issue becomes a serious health problem for adolescents. The chlamydia incidence rate for 2005 was 188.9 and 184.8 in 2014 among adolescents 10 to 19 years (Figure 28). (All rates are per 100,000 habitants). This rate shows a drop of 2.2%. However incidence rates of gonorrhea show an increase of 42%; this rate was 7.6 in 2005 and 10.8 in 2014 (Figure 29). The incidence rates of primary and secondary syphilis also rose in the period between 2005 and 2014; 2.2 and 4.2 in respectively (Figure 30). YRBSS data revealed that in 2008, 37.6% of adolescents 14-17 years were sexually active and in 2013 this percent was 29.8%.; a drop of 22.3% (Figure 31). The percent of adolescents sexually active before 13 years of age was 8.0% in 2008 and 4.8% in 2013 and the percent of adolescents that have sex with 4 or more sexual partner fell from 8.0% in 2008 to 4.8% in 2013 (Figures 32 and 33).

Because these health problems are preventable, primary care visits can be a great opportunity for improving the health of young adults through preventive screening and intervention. However, data from ICO showed that 25,160 (5.0%) medical office visits were claimed as preventive medical visit in adolescents 10-19 years during 2013. This low percent denotes lack of knowledge of the importance of preventive visits. In a survey with physicians who provide services to the pediatric and adolescent population, the following barriers to optimum pediatric health care in the age range 13-19 years old were mentioned: lack of parental knowledge of the need for preventive visits (68.5%), patients go for medical evaluations only in case of emergency (67.4%), limited access of sub-specialists to refer pediatric patients (62.9%), misuse of emergency rooms for outpatient care by parents (60.7%) and lack of time to make screenings and high risk behaviors tests during visits (59.6%). Regarding vaccines, during 2012 about 41% of adolescents 10 to 19 years had an updated and complete schedule of immunization (PRIP) compared to 49.4% in 2013 (Figure 34).

To adequately address these issues, the MCAH Program will continue to promote and disseminate the PPHCSG to health care providers, youth and parents. In order to design a system of care for the reliable delivery of preventive services for adolescent population, MCAH will also develop the PR Youth Friendly Health Services Guidelines.

Cross-Cutting/Life Course

Good oral health is an important protective factor across life course stages linked to the overall health of populations.

It has been found that pregnant women are not receiving the necessary preventive oral health so important for healthy birth outcomes. An analysis of claims (private and GHP) for 2013 from the Insurance Commissioner's Office (ICO) show that 16.2% of 36,580 women who had a live birth had a dental visit during pregnancy. The 2012 ESMIPR shows that 43.1% of women surveyed (1,728) had received oral health services during pregnancy. One possible contributing factor for these percentages could be the failure of health professionals to give due attention to oral health during pregnancy. For instance, the ESMIPR 2012 reveals that 30.6% of women reported they were advised - before they got pregnant - by a health professional about the importance of visiting a dentist and/or hygienist. Another factor could be dentists' reluctance to tend to pregnant women due to the risks involved and potential lawsuits. Perhaps, women themselves are unaware of the importance of oral health during pregnancy.

In relation to reproductive age women, BRFSS 2010 data by age group show that younger women age 24 and younger are more likely to visit a dentist and/or hygienist. The percent of women who visited a dentist, dental hygienist or dental clinic within the past year was higher for the 18-24 age groups (82.6%) than the 25-44 age group (76.8%). The data also shows that 82.6 % of the younger women (18-24 years) and 74.8% of the older group (25-44 years) had their teeth cleaned by dentist or dental hygienist within the past year.

The percentage of adolescents of both sexes who had a preventive dental visit has remained relatively the same between 2012 (47.3% of 521,058 youth) and 2013 (47.4% of 503,974 youth) according to data provided by ICO.

Dental caries is a major problem for children. The Head Start reported dental cavities as a top prevalent health condition among its participants: 13.4% in 2013 and 14.3% in 2014. According to Head Start representatives in Title V Boards, the problem with caries is due largely to children's intake of sugary foods and failure of parents to take their children to see a dentist. They also pointed out that parents need to become aware of the importance of sealants. In fact, data from ICO show that only 7.8% of children between 8-9 years of age received dental sealant in at least one molar in 2014.

While preventive oral health is a pressing need, the PRHIA reported a 43% reduction of dentists that provide services to the GHP population in 2013 which points to a service gap for low-income people.

To enhance oral health we will promote Pediatric Preventive Guidelines and continue public education.

CSHCN

Based on Phase I of the 2015 PRS-CSHCN, 18.6% of children from birth to 17 years have special health care needs. According to the 2013 Puerto Rico Community Survey (PRCS) population estimate, this percent translates to 161,765 CSHCN. Although the percentage of CSHCN is higher than in 2009 (2009 PRS-CSHCN), 18.6% versus 16.6%, the number of CSHCN is lower, 161,765 versus 180,889. Prevalence of CSHCN ranges from 15.1% to 23.9% across the seven health regions (Mayagüez: 23.9%, Bayamón: 21.8%, Fajardo: 19.9%, Ponce: 19.4%, Caguas: 16.2%, Metropolitan 15.7% and Arecibo: 15.1%). However, these differences are not statistically significant. With the exception of Caguas, the prevalence is higher than in 2009 in all regions (Mayagüez: 13.1%, Bayamón: 19.7%, Fajardo: 9.4%, Ponce: 18.7% Caguas: 21.8%, Metropolitan: 14.6% and Arecibo: 12.3%). The prevalence in Caguas decreased 5.0%, while the prevalence in Fajardo and Mayagüez increased substantially, 10.5% and 10.8%, respectively.

According to the 2013 Census, in Puerto Rico there are 508,256 homes with a child or youth, younger than 18 years. Based on the 2015 PRS-CSHCN, the estimated number of homes with a child or youth with a special health care need in PR is 123,207 (24.2%). This percentage is similar to the 2009 estimate of 25.0%. Of the 123,207 homes with a child or youth with special health care needs, there are 240,412 children younger than 18 years old (with or without special health care needs) that reside in these homes. This means that 27.7% of children live in households where at least one of them has a special health care need. Households where at least one child with special health care needs lives have a higher percentage of males (58.4%) versus females (41.6%), the family income is lower ($10,000-$14,999) compared to homes without CSHCN ($15,000-$24,999), and 16.5% report that someone in the family has received monetary governmental help in the past 12 months. There are no statistically significant differences between households with and without CSHCN, in children's age (median age: 11 years old), family size (median size: 4 children) and educational level (median level: associates degree).

Another source of information regarding the CSHCN population is the number of children with disabilities receiving early

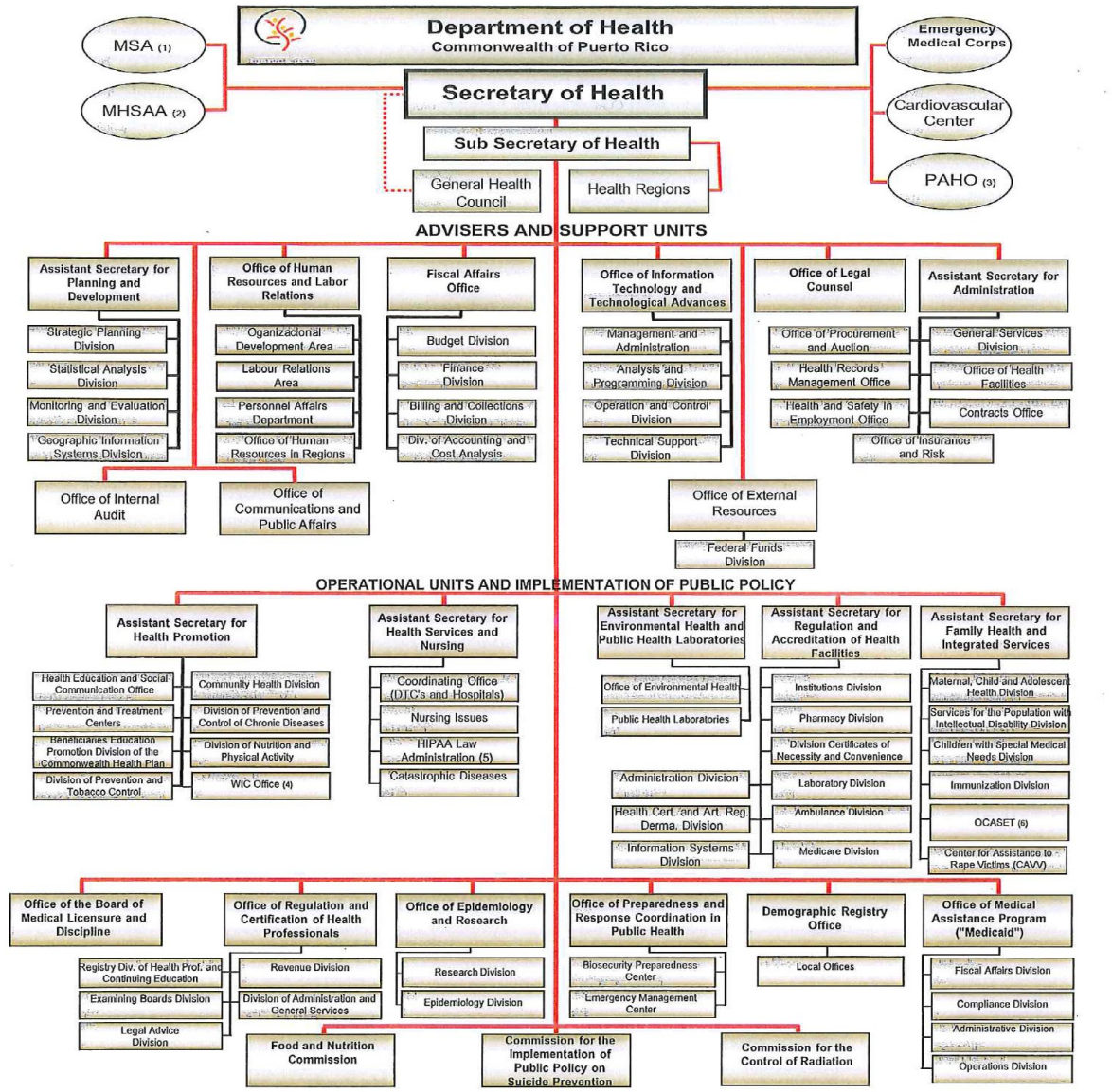
intervention services (EIS) and special education services under IDEA. The 2014 IDEA Part C Child Count indicated that 3,851 infants and toddlers, 3.3% of the population ages birth through 2, were receiving EIS. This represents a decrease in the percentage of infants and toddlers receiving EIS when compared to 2010: 3.97% (5,204) and 2011: 3.9% (4,883) and a slight increase when compared to 2012: 3.0% (3,683) and 2013: 3.1% (3,639). The 2014 Part B Child Count indicated that 16,868 children ages 3 to 5 years, inclusive, were receiving special education services. This represents a 13.5% of the population ages 3 to 5 years old. This represents an increase in the number of children ages to 5 years receiving special education services when compared to 2010: 10.1% (13,952), 2011: 11.1% (14,791), 2012: 10.3% (13,276) and 2013: 12.15 (15,038). The 2014 Part B Child Count also indicated that 112,218 children ages 6 to 21 years old, inclusive, were receiving special education services. This represents a 14.3% of the population ages 6 to 21 years old. This represents an increase in the percentage of children and youth receiving special education services when compared to 2010: 13.2% (112,608), 2011: 13.7% (114,523), 2012: 14.4% (116,936) and 2013: 13.8% (108,716).

II.B.2.b Title V Program Capacity

II.B.2.b.i. Organizational Structure

The PRDOH is the umbrella agency assigned in Article IV, Section 6 of the Constitution of PR responsible for all matters related to public health. The Secretary of Health is appointed by the Governor and confirmed by the Legislature.

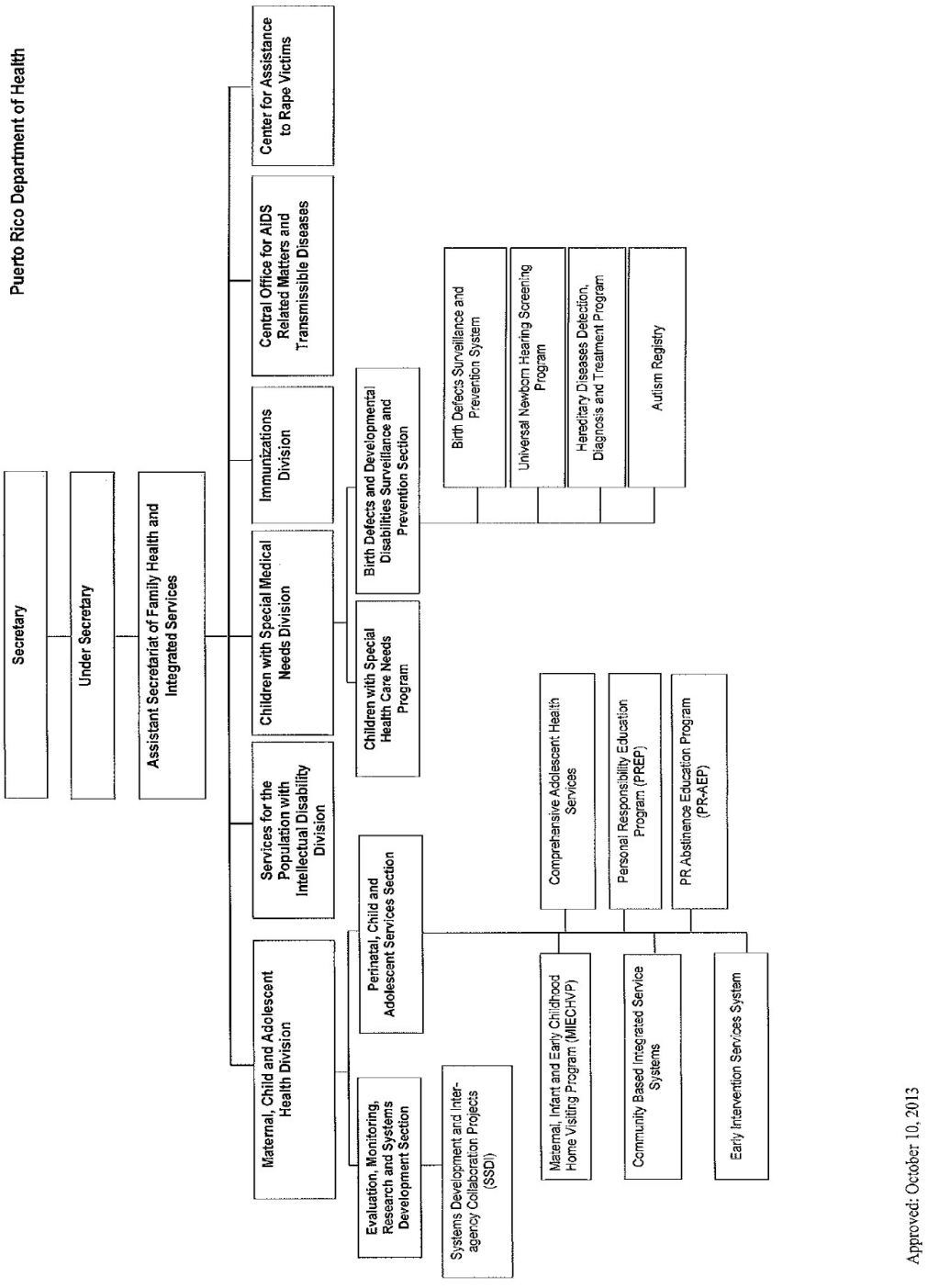
The agency is organized in two main structural levels that respond directly to the Secretary: 1) Advisers and Support Units and 2) Operational units and Implementation of Public Policy. The Assistant Secretariat for Family Health and Integrated Services is included in the second level, under which are the MCAH Division (TV- A & B, SSDI, CISS, MIECHV) and the Children with Special Medical Needs Division (TV-C).



(1) Medical Services Administration
(2) Mental Health Services and Addiction Administration
(3) Pan American Health Organization
(4) Special supplemental nutrition program for women, infants and children
(5) Health Insurance Portability and Accountability Act
(6) Central Office for AIDS Related Matters and Transmissible Diseases

According to Administrative Order 240 and Administrative Order 312

Ana del Carmen Rius Armendariz, MD
Secretary of Health
Fecha: 13 de julio de 2015



II.B.2.b.ii. Agency Capacity

MCAH

Several MCAH core and support programs facilitate and complement the health services offered at the health care system primary level in PR. The services are divided in seven Health Regions with a Medical Director (including one Pediatrician

and one OB/GYN), and six Public Health Educators.

Home Visits Program (HVP)

The HVP identifies health and social needs and offers case management and coordination services to participating families through individual education, screenings, referrals and follow-ups to different public agencies and community organizations. The HVP also collects information of social and health conditions and experiences of the participant, father of the child, children and her family (Family Case Coordination Form).

Currently about 65 nurses provide services to families in PR municipalities. The average caseload is 45 families reaching about 3,812 families per year.

The HVP provides services to pregnant women with multiple social and health risk factors. The interventions are classified according to the trimester of gestation. The HVP is voluntary and the woman continues participating in the HVP up to 24 months after delivery if no other pregnancy occurs.

The HVP provides services to children aged up to 24 months who received intensive medical attention as newborns or have a special health care needs. Interventions focus on healthy development and preventive visits according to the EPSDT and the PPHCSG.

Community Outreach Program

The Community Outreach Program (COP) is staffed by 25 Community Health Workers (CHW) in 25 of the 78 municipalities. Among their task is to identify MCA population and facilitate their enrollment into the HVP, GHP and other health services, coordinate interagency services, support the HVP including referral follow-ups, provide community health education on MCAH topics, disseminate educational materials, participate in health fairs and data collection.

The CHWs also gather information regarding private and public agencies and services available in communities, identify problems of access to health services and report it to the appropriate level. This serves to update the directory of services used by the HVP and other MCAH programs.

Perinatal Services

The MCAH Program has 9 perinatal nurses (PN) that visit the birthing hospitals. These nurses are trained in breastfeeding techniques, provide family planning counseling, and identify high risk pregnant women candidates for the HVP. They provide individual and group education, make referrals, collect perinatal data and participate in MCAH surveys and are resources for the prenatal courses.

Comprehensive Adolescent Health Program: Youth Health Promoters Project (YHPP)

The MCAH' Comprehensive Adolescent Health Program (CAH) components integrates all activities intended to reduce adolescent health risk factors. CAH is also responsible for the implementation of the Positive Youth Development Model (PYD). Regional Social Workers (SWs) train middle school voluntary students from 7th through 9th grade as Youth Health Promoters (YHPP) of healthy lifestyles. YHPP has about 589 promoters in 28 schools across the Island. The Regional SWs provide support to the HVP and conduct youth dialogues to collect information about their needs.

At the central level CAH has a physician as an Associate Director, a Healthy Youth Development System Coordinator and a SW. At the regional level there are seven SW's that are supervised by the Regional MCAH Directors.

Following are MCAH services provided by population health domains.

MCAH Programs	Domains					
	Women/Maternal Health	Perinatal / Infant Health	Child Health	Adolescent Health	Cross – cutting / Life Course	CSHCN
Home Visiting Program	X	X	X	X	X	X
Community Outreach Program	X	X	X	X	X	X
Perinatal Services	X	X				
Youth Health Promoters				X		

The MCAH Program will continue staff recruitment and training to enhance its effectiveness in achieving Title V goals.

A concerted action plan among diverse public/private entities and community organizations is vital to achieve MCAH goals. Some relevant relationships with non-profit community organizations are March of Dimes and the Naranjito Adolescent Program, Inc. (PANI). March of Dimes Preterm Taskforce offers public and professional education and investigates risk factors linked with the high preterm rate in PR. MCAH is active in this Taskforce providing analysis and statistics to develop and implement successful strategies.

MCAH contracted PANI to continue promoting the PDY Model in their service area. PANI also collaborates in creating a PYD Guide for NGO's and government agencies.

CSHCN

The CSHCN Program coordinates and provides services through the RPCs currently operating at different levels of service. All seven RPCs are providing a Primary Level of services that includes screening, medical evaluation, eligibility determination for Title V services, services coordination, referrals and family support. Core staff for these services include: a Pediatrician/Medical Director, Social Worker, Graduate Nurse and Services Coordinator. All RPCs with the exception of Fajardo are providing a Secondary Level of services that includes: consultation, evaluation/services and primary level staff support by allied health professionals of the following disciplines: Psychology, Speech and Language Pathology, Physical Therapy, Occupational Therapy and Nutrition. The scope of these services varies based upon the materials and equipment available at each RPC. Ponce RPC is the only Center providing dental services. A Tertiary Level of services, accessible through referrals to available community services and/or through the RPCs, includes the following: Audiology, Ophthalmology, Orthopedics, Gastroenterology, Physical Medicine and Rehabilitation, Neurology and Genetics consultation/evaluation. The availability and accessibility to these services varies greatly by Health Region. A Supratertiary Level of services, accessible through referrals to available community services and/or through the Metropolitan RPC, includes the following: Neurosurgery, Plastic Surgery, ENT, Orthodontia, Urology and Nephrology. The following Special Interdisciplinary Clinics at the Metropolitan RPC will continue operating: Neural Tube Defects, Craneo-Facial Disorders and Complex Orthopedic Conditions.

As part of the transformation process, improvements were made to the physical facilities of the Metropolitan RPC. Improvements of the physical facilities are also underway in the Arecibo and Mayaguez RPCs. The Caguas RPCs is in need of mayor improvements so that services can be expanded. Diagnostic and evaluations materials, as well as, necessary equipment are being purchased so that physical therapy, occupational therapy, speech and language pathology and nutrition services can be provided at the RPCs. The CSHCN Program is working with the DOH Office of Informatics and Technological Advances to provide the RPCs with the necessary technological infrastructure for internet access and to support the electronic medical record and billing for the services provided. This infrastructure will provide the capability for reporting unduplicated counts of the children and youth served by the CSHCN Program.

Effective July 1st, 2015, the Autism Center will be administered by the CSHCN Program to provide a unifying collaborative and administrative structure designed to ensure the successful execution of plans and strategies that support the

implementation of the PR Autism Law. Under the Law, the DOH is responsible of the identification, diagnosis, assessment, intervention and coordination of services for the population under 22 years old with Autism Spectrum Disorder (ASD) through the RPCs. The Autism Center will be synergistic and will work collaboratively with the CSHCN RPCs.

Blind and individuals with disabilities who are residents of Puerto Rico are not eligible for receiving Supplemental Security Income under Title XVI.

II.B.2.b.iii. MCH Workforce Development and Capacity

MCAH

a. The MCAH Program Components A&B is a multidisciplinary team of professionals dedicated to provide quality services to the maternal, infant and adolescent population. Our team provides the MCAH services from Central Level and 7 Regional Offices established island-wide.

As of June 30, 2015 our workforce consists of 148 regular/transitory employees and 9 professional services contracts. Of the regular employees 136 (136 FTE) are located in our 7 Regional Offices island wide. Among them are 65 Home Visiting Nurses, 25 Community Health Workers, 7 Perinatal Nurses, 7 Adolescents Coordinators and 6 Health Educators across the Island. Most Regional teams comprised with at least a Regional MCAH Director, Coordinator of Maternal and Infant Health Services, Coordinator of Adolescent Health Services, Health Educator, administrative and support staff. At the central level we have 12 regular (11.45 FTE) positions which includes the MCAH Director, Manuel Vargas, MD, MPH an experienced OB-Gyn with more than 30 years of experience. The 9 (8.5 FTE) Professional Services Contracts are localized at the Central Level, this positions includes a group of skilled public health professionals and highly experienced in the maternal, infant and adolescent that support the MCAH Division: one Biostatistician, Aurea Rodriguez, MPH; two Epidemiologists, Marianne Cruz, MS and Leslie Soto, MS; one Evaluator Sixto Merced, MS; one Cultural Anthropologist Norma Boujouen PhD; two Physicians Gloria Montalvo, MD (Comprehensive Adolescent Health Program Director) and Cindy Calderon, MD (Pediatric Consultant). Also as a Contract positions there are one Fiscal Affairs Coordinator Ruth López, MBA, JD; and one Health Education Component Coordinator, Darem Davila, Ed.D, MPHE.

b. The PRMCAH addresses cultural competency with the following approaches:

- The staff native language is Spanish, principal language in PR.
- The Life Course Training includes culture and cultural competency.
- All the MCAH services provided focuses in the importance of the PR cultural values such as respect and trust.
- Educational materials use words that are understood by groups other than Puerto Ricans (e.g. Dominicans) and persons with low educational levels.
- Families, youth and community leaders are consulted in the needs assessment and evaluation of activities.
- Assistance is provided to community groups in areas of their interest.
- A four-part training on conducting culturally relevant Dialogues was designed by the Cultural Anthropologist and offered to staff who will be Dialogue Facilitators. The training emphasizes listening, asking non-judgmental questions, cultural meanings and cultural reflexivity.
- Anthropological qualitative research is carried on the experiences and cultural views of populations.

CSHCN

The CSHCN program staff at the RPCs consists of 99 FTE regular/temporary positions (Arecibo: 16; Bayamón: 6, Caguas: 10; Fajardo: 3; Mayaguez: 13; Metropolitan: 29 and Ponce: 22), and 21.76 FTE contractual positions (Arecibo: 1.89; Bayamón: 5.50, Caguas: 3.45; Fajardo: 0.53; Mayaguez: 2.22; Metropolitan: 4.46; and Ponce 3.71). Additionally, the following staff provides services to the CSHCN program at the RPCs on fee for services basis: 4 audiologists (1 in Bayamón, 2 in Metropolitan and 1 in Ponce) and 1 occupational therapist (Ponce). Neurosurgery (Metropolitan RPC), orthopedics (Metropolitan and Mayaguez RPCs), orthodontia (Metropolitan RPC) and plastic surgery (Metropolitan RPC) services are contracted with the UPR Medical Sciences Campus or directly with the service provider on a fee for service basis.

The CSHCN Program staff at the state level consists of 8 FTE regular/temporary positions and 3.13 FTE contractual positions. Senior level management includes the Children with Special Medical Needs Division Director who is also the CSHCN Program Director. He is a pediatrician with a developmental pediatrics fellowship who has worked for the DOH since December 1986 in different positions including Acting Director/Director of the CSHCN Program from 1986 to 1994, Director of the Habilitation Services Division from 1992 to 1994, Pediatrician for the Early Intervention Services Program from 1994 to 2003, Medical Specialist for the BDSPS form 2008 to 2013 and Director of the Children with Special Medical Needs Division and the CSHCN Program since 2013. In May 2015, an Assistant Director joined the senior level management. She is a social worker who has worked for the DOH since 1993. Her initial experience was as social worker for the Pediatric AIDS Program from 1993 to 2005, then as Coordinator and Assistant Director of the Comprehensive Support Services for Families Affected with HIV/AIDS Program from 2005-2011, and Assistant Director of the Central Office for AIDS and Sexually Transmitted Diseases from 2011 to 2015. Key management staff also includes a Family Representative, contractual position, who has been with the CSHCN program since June 2009. Title V staff also includes 7 FTE regular/temporary positions and 2 FTE contractual positions of the BDSPS; and a 0.53 FTE contractual position of the HDDDT program.

Currently, CSHCN Program's staff and capabilities for evaluation and data analysis are limited. We are in the process of recruiting staff to reinforce this component. An Evaluator (0.8 FTE) was contracted on September 8, 2015. New CSHCN workforce is being recruited mostly through contracts and to a lesser extent through temporary positions.

II.B.2.c. Partnerships, Collaboration, and Coordination

MCAH

Over the years, MCAH has built close collaborations – formal agreements, committees, alliances, cross-coordination, resource and data sharing - with a broad base of organizations and agencies within and beyond the health field including other HRSA/MCHB investments.

i. Within the MCAH structure, there are other MCHB programs that share the MCAH Director as their

Project Director and receive support from administrative and support MCAH staff (accountant, purchasing agent, secretaries). The SSDI program is responsible for data collection, analysis and linkages. The MIECHV program address WRA health, pregnant women's health, infant health and child health. The CISS program links Childcare, Early Head Start and pediatric services to assure developmental screenings of children in early childhood.

ii. There are other Federal investments that closely collaborate with the MCAH Program. The WIC program fosters healthy nutrition in pregnant women, infant and children. The Immunization Program addresses vaccines as a protective factor. Three grants housed in MCAH also support our efforts. The Early Intervention program offers services to children with developmental delays and their families. The Abstinence Education and the Personal Responsibility Education programs address adolescent health. The Immunization Program and MCAH Program are housed administratively in the Assistant Secretariat for Family Health and Integrated Services in the DOH.

iii. Other HRSA programs that support our efforts are the HRSA-funded Health Centers and the Ryan White HIV/STD Program. The HRSA-funded Health Centers were the sites for the MCAH NA survey carried out among their clients. The Ryan White HIV/AIDS Program administratively housed at the DOH Central Office for the Management of AIDS and STD provides all services to low income HIV positive or AIDS patients.

iv. The MCAH Program has seven regional offices that implement the strategic plan; give feedback and report accomplishments and barriers to make needed revisions in achieving MCAH Program goals.

v. MCAH has strong relations with programs within the DOH. We share resources, trainings and data with the chronic disease and health prevention programs of the Auxiliary Secretariat for Health Promotion. The Administration of Mental Health and Anti-Addiction Services offer us educational trainings and data on mental health. The Office of Informatics and Advanced Technology (OITA), Birth Defects Surveillance and Folic Acid Campaign and the Newborn Screening for Hereditary Diseases provide us with data on MCA populations. The Demographic Registry Office has team up with MCAH to conduct the ESMIPR (PRAMS-like) survey among women in addition to data access. The Medicaid Program participates in the Infant Mortality CoIIN Committee and the MCAH Regional Boards.

vi. Other governmental agencies with whom MCAH collaborates are:

*ICO and PRHIA provide data on health services for the MCA population

* Education Department: MCAH provides resources and cross coordination of health promotion actions in public schools

* Family Department: Its home visiting program Nido Seguro replicates the MCAH HVP. It has representation in MCAH Regional Boards

*Head Start and Early Head Start Programs: Participate in MCAH Regional Boards and HNA Dialogues in addition to providing data. MCAH offers these programs resources and education to their staff and parents

vii. PR has no tribes, Tribal Organizations or Urban Indian Organizations

viii. The University of PR, Mayaguez Campus (Agricultural Extension Service): Trains staff about the PEAN curriculum used in the ICC-LC. MCAH staff also participates in professional trainings offered to larger audiences from diverse professional fields.

ix. Family/consumer partnerships:

*Families and youth give input through Dialogues and research

*MCAH Youth Health Promoters are peer leaders in their schools

*A group of youth, community organizations and agencies is organizing the MCAH Youth Advisory Council.

*Nurse Home Visiting Program Consumer Committees give input to MCAH

*Mothers groups are engaged in the Breastfeeding Alliance

x. Other State and local public and private organizations that serve the state's MCAH population and collaborate in our efforts:

*Association of Primary Health Care of PR: Supports MCAH NA and programmatic efforts and facilitates access to HRSA Funded Health Centers

*March of Dimes: Sponsors the Prematurity Taskforce in which MACH participates

*Hospital Association: Supports MCAH surveillances, research and policy implementation in hospitals

*AAP Puerto Rico Chapter, PR Pediatric Society: child/adolescent health promotion

*Highway Safety Commission: provides MCAH with data related to injury prevention

* Pediatric Obesity Prevention Alliance Inc: MCAH shares research results on childhood obesity

*Oral Health Alliance: MCAH is a member of the alliance

*Naranjito Youth Program: Receives funds from MCAH for the promotion of youth health in its service area

*Muralla de Vida, Separe, MAM, La Leche League PR, Proyecto Lacta, Lacta Vida, Promani: Participate in the MCAH sponsored Breastfeeding Alliance

*United Way: Sponsors the 211 line and supports MACH health promotion activities

CSHCN

The CSHCN Program has in place a collaborative agreement with the Lopez Family Foundation Telegenetics Clinic located at the University Pediatric Hospital since February 2015. The Clinic provides access to two geneticists from the Los Angeles Children Hospital, who are licensed to practice medicine in PR. As a result of the agreement, all children referred to the clinic are enrolled in the CSHCN Program in order to provide service coordination support that includes coordination of appointments and assistance for accessing recommended laboratory tests in or near the families' communities. Once the Ponce and Arecibo RPC have internet access, additional clinics will be established in these two centers.

As part of a collaborative effort, APNI (PR Parent Training and Information Center) is financing the Services Coordinators for

the Bayamón, Caguas, Mayaguez and Metropolitan Regions. CSHCN Program nurses at Arecibo, Fajardo and Ponce were identified to provide care coordination. All service coordinators are located at the RPCs.

The CSHCN Program and the DOE Special Education Program are working together to better coordinate services for CSHCN served by the two agencies. The CSHCN Program is working with the Mayor of Caguas and other stakeholders to identify the necessary funds or support for the improvements of the physical facilities of the Caguas RPC.

III.D. Financial Narrative

	2016		2017	
	Budgeted	Expended	Budgeted	Expended
Federal Allocation	$15,549,404	$15,643,430	$15,643,430	$15,636,032
State Funds	$11,662,053	$11,662,053	$11,732,573	$11,732,573
Local Funds	$0	$0	$0	$0
Other Funds	$0	$0	$0	$0
Program Funds	$83,283	$26,806	$124,322	$124,322
SubTotal	$27,294,740	$27,332,289	$27,500,325	$27,492,927
Other Federal Funds	$8,212,815	$8,275,672	$8,665,969	$9,250,875
Total	$35,507,555	$35,607,961	$36,166,294	$36,743,802

	2018		2019	
	Budgeted	Expended	Budgeted	Expended
Federal Allocation	$15,636,032	$15,613,262	$15,613,262	
State Funds	$11,727,024	$11,709,947	$11,709,947	
Local Funds	$0	$0	$0	
Other Funds	$0	$0	$0	
Program Funds	$300,713	$332,632	$142,537	
SubTotal	$27,663,769	$27,655,841	$27,465,746	
Other Federal Funds	$21,418,204	$16,020,171	$21,396,109	
Total	$49,081,973	$43,676,012	$48,861,855	

	2020	
	Budgeted	Expended
Federal Allocation	$15,800,897	
State Funds	$11,850,673	
Local Funds	$0	
Other Funds	$0	
Program Funds	$228,880	
SubTotal	$27,880,450	
Other Federal Funds	$17,325,276	
Total	$45,205,726	

III.D.1. Expenditures

The Finance Office and the Office of Federal Affairs of the PR Department of Health maintain budget documentation for Title V funding and expenditures consistent with Section 505(a)(1).

The PRDOH manages the MCH Block Grant Funds through two Divisions each specialized in each MCH Component with a structure developed for this purpose. PRDOH assigned the administration and management of the Block Grants Funds in two Divisions: Mother Child and Adolescent Health Division (MCAHD) and the Children with Special Medical Needs Division (CSMND). The MCAH Division is responsible of the Component A funds earmarked for the provision of services to pregnant women, mothers and infants; and Component B funds earmarked for the provision preventive services for children. The CSMND is responsible for the provision of services for the CSHCN. Each Division works in collaboration for the services and initiatives in common but maintains a separated administration of the funds as allocated by the 30-30-10 requirement. Detailed narratives from each Division's expenditures are included below. Expenditures of the State Maintenance of Efforts funds were computed accordingly to the numbers of participants and services provided as reported by the PRHIA. The PR MOE assigned for FY18 surpasses the requirement of FY1989 ($10,226,318) as explained in the Budget section.

Mother Child and Adolescent Health (MCAH) Division

The MCAH Division is responsible of the Component A funds earmarked for the provision of services to pregnant women, mothers and infants; and Component B funds earmarked for the provision preventive services for children. The MCAH Program provides services to the population based in a coordinated care structure. At first level our Regional teams identify the 3 target population in the outreach and referred them according to their particular needs and ages to the different areas of services provided by the MCAH Program, other governmental agencies or community based organizations. This structure has been helping us to provide an integrated service, educating the community, raising awareness and facilitating the access of services to improve the health and social wellbeing. Our coordinated structure improves the delivery of services and increase quality; enable the access of services, reduces costs and helps to ensure the carry out of the essential public health services.

Under the coordinated structure a health/community professional provides various services to different MCAH populations groups as established by the reporting domains. Funds were budgeted accordingly to the federal requirements and considering the behavior of the expenditures from previous years. At the end of each BY, we are able to identify the professional and population served within the different groups of the MCAH population, allowing us to determine the expenditures by type of individuals served and pyramid level. The expenditures are allocated based on the population served and the category of services provided with constant monitoring to verify the compliance with the 30-30-10 requirement.

The reported FY18 expended columns in Forms 3a and 3b reflect the expenditures registered according to each pyramid level and the 30-30-10 requirements. The MCAH expended all the allotted funds for FY18 with total of $8,977,625 which represents a 57.5% of the total MCH Block Grant. There were no differences in Form 2 between budget and expenditures columns for the FY18 of more than the 10%. Note for minor difference were included in Form 2.

All the positions for the HVN's were covered during this FY and a Human Consultant firm was contracted to maintain and fill any vacancies. The main reason of previous year's unused reported funds was due to the limitation to recruit new personnel and fill the vacancies. A 52% of the FY18 allocated funds for the Components A&B were invested at the main level of the Title V pyramid, Public Health Services and Systems.

The MCAH will continue with the implementation of the strategic plan developed to improve and reinforce the infrastructure to carry out the provision of the essential public health services. With this plan we expect to maintain the investment in the workforce, continue with the outreach of the MCAH services and working plan, and fully expended funds in the future.

As reported in Forms 3a and 3b the detailed expenditures of the MCAH Division for FY18 are as follows:

The expenditures for Individual served for the Components A&B are as follows:

A total of **$3,803,251** was dedicated to the Component A population for woman and infants less than 1 yr. The amount of **$4,886,872** was invested in the Component B for children 1 to 21 years.

The MCAH Division under the established working plan does not provide Direct Services. Services as preventive, primary or specialty care visits, preventive, primary, or specialty clinical services to pregnant women and children, dental care, birth control methods, pharmacy and laboratories services among others are provided by the GHP. This services covered by the GHP are reported as the MoE in the Non Federal Funds section.

An investment of **$4,311,783** for enabling services which includes all services provided under the Home Visiting Program and services provided by the Perinatal Nurses. Under this category are included the salaries and benefits of the health care professional who provided this services. Services under this category are not included in the State Plan submitted to CMS neither provided through any other source.

The amount of **$4,665,842** was dedicated to the main level of Public Health Services and Systems. This includes activities and infrastructure to carry out the essential public health services under MCAH Division like the evaluation and monitoring section, needs assessments, Prenatal and Adolescent Health Campaigns. Also salaries and benefits of personnel like the Consultants and Physicians who helps with the policy and standards development, program guidelines and planning are reported under this category. This level includes the professionals like the CHW's, Health Educators and Social Workers who facilitate the dissemination and the implementation of the Program initiatives in the community. Also production and development the materials to complement all the MCAH Initiatives are considered under this category. The investment in the administration of funds and the Program Management is considered as infrastructure as well as the development of the workforce capacity. This level as previously stated is the main level under the MCAH Program.

Other Federal Funds expenditures under MCAH are reported in Form 2.

Children with Special Medical Needs Division (CSMND)-CSHCN

Children with Special Medical Needs Division (CSMND) expended the allotted 42.5% of FY18 total MCH Block Grant.

The total expenditure of Title V funds for FY 2018 was $6,635,637.00. The amount breaks down as follows:

1) Direct Services: $585,704.75. The amount breaks down as follows:

a) Pharmacy: $114,020.15. Payment of special formulas for children and youth with inborn errors of metabolism ages 6-21 years.

b) Physicians/Charges: $451,750.42. Payment of specialty clinical providers such as plastic surgery, orthodontia and orthopedic surgery, for services provided through a formal process similar to paying a medical billing claim.

c) Durable Medical Equipment: $19,934.18. Payment of earphones not reimbursed by public or private payers.

2) Enabling services: $5,286,119.92 Salary and operational support to Regional Pediatric Centers to enable CSHCN access health care, case management, care coordination and referrals.

3) Public Health Services and Systems: $763,812.33. Needs assessment, program planning, implementation and evaluation, and policy development activities.

Other funds: $929,676.26

The total expenditure of other funds for FY 2018 was $929,676.26. The amount breaks down as follows:

1) Enabling services: $929,676.26. The amount breaks down as follows:

a) $152,000.00 - for the operational support of the newborn screening laboratory.

b) $777,676.26 - for the operational support of the Regional Pediatric Centers.

Program Income: $332,631.63

The total expenditure of Program Income funds for FY 2018 was $332,631.63 for operational support to Regional Pediatric Centers to enable CSHCN access health care, case management, care coordination and referrals (enabling services).

Other Federal Funds: $8,468,914.03

The total expenditure of other federal funds for FY 2018 was $8,468,914.03. The amount breaks down as follows:

1) $175,125.32, EHDI, for activities directed to reduce the lost to follow up and documentation of infants after the newborn hearing screening; and

2) $145,897.30, BDSPS, for population-based birth defects surveillance and prevention activities.

3) $35,171.04 PR EHDI, to complete and implement a sustainable, Early Hearing Detection and Intervention Information System (EHDI-IS) capable of accurately identifying, matching, collecting, and reporting data on all occurrent births that is unduplicated and individually identifiable through the three components of the EHDI process (screening, diagnosis, and early intervention).

4) $5,071,919.74, Zika MCH Services Program, for activities directed to ensure that community-based, comprehensive high quality health and social services are available to infants and children affected by ZIKV and their families

5) $2,610,455.91 Zika CMS Health Services Program, to support a system of care that assures that community-based, comprehensive high quality health and social services are available to infants and children affected by ZIKV and their families.

6) $430,344.72, ZBDSS, for surveillance, intervention, and referral to services activities for infants with microcephaly or other adverse outcomes linked with the Zika virus.

III.D.2. Budget

Program allocations have taken into account the 30-30-10 requirements established by Title V. The FY19 budget distribution for components reflects: 60% to the Components A&B and 40% to CSHCN including the no more than 10% for administration of funds. Efforts are made to match funds according to the identified needs through the three groups of individuals that comprise the Maternal and Child Health Services Block population.

Puerto Rico assures that the MCH funds are used for the purposes outlined in Title V, Section 505 of the Social Security Act. Traditionally for components A&B, a fair method has been used to allocate Title V funds among individuals and geographic areas having unmet needs. The fair allocation of funds is guided by an Integrated Index of Maternal and Infant Health Status (IIMIHS) developed by the MCAH Division to assess the health needs of the target population by municipality. One of the benefits of using this Index is that the information necessary to evaluate each of its variables is available on an ongoing basis through analysis of birth and death files.

PRDOH assigned the administration and management of the Block Grants Funds in two Divisions: Mother Child and Adolescent Health (MCAH) Division and the Children with Special Medical Needs (CSMN) Division. The MCAH Division is responsible of the Component A funds earmarked for the provision of services to pregnant women, mothers and infants; and Component B funds earmarked for the provision preventive services for children. The CSMN Division is responsible for the provision of services for the CSHCN.

Compliance with the 30-30-10 requirements;

Allocations of funds by MCH Population Groups are as follows:

Amount requested $15,800,897 (as assigned for BY 2017-18)

1. $3,950,224 (25%): for the provision of services to pregnant women, mothers and infants.
2. $4,740,270 (30%): for the provision of preventive services for children.
3. $5,530,314 (35%): for the provision of services to CSHCN.
4. $1,580,089 (10%): From this amount, 5% is for grant administration of Components A and B; and 5% for administration of the CSHCN program.

Budget allocation:

The MCAH Division allocates the funds up to 55% of the total Block Grant considering the behavior of the expenditures of previous years as explained in the Expenditures Section for both of the components. The CSMN Division allocates a 35% of the total of the Block Grant for CSHCN services.

Administration:

Up to 10% of the federal allocation is earmarked for the administration of the Grant.

For both Divisions up to a 10% of the total grant is assigned for the administration of for each individual budget: 5% MCAH Division and 5% CSMN Division. The total of 10% assigned will be invested to support salaries, benefits, office supplies and equipment of staff in charge of the administration and fiscal management of each allocation, newspaper advertisements for the public review of the annual Progress Report, information systems, mailing, AMCHP annual membership and others.

Maintenance of Effort: Puerto Rico is in compliance with the maintenance of effort requirements as described in Section 505(a)(4). State funds appropriations are used for the GHP and the implementation of a broad array of programs and services that contribute to improve the health and well-being of the MCH population. The services provided by the GHP considered in the MoE are those who match the Domains Reported in the Progress Report. For the Puerto Rico FY's1989 Maintenance of Effort ($10,226,318) state dollars used to provide services to the MCH population surpasses many times the requirements for the match. As of June 2018, PRHIA reported that

1,279,245 individuals of all ages and both sexes were covered by the GHP in Puerto Rico. Among these, 321,616 were women 20-49 years of age, 13,937 were infants <1 years of age, and 411,987 were children 1-19 years old, including CSHCN.

During the PR State FY 2017-2018, of all individuals holding the GHP, the MCH population represented 58%; the annual cost per person was $2,280.00 ($190.00 per month). Considering that 58% (747,540) of the beneficiaries of the GHP represent the MCH population, it is estimated that PR invested over $1,704,391,200 in federal and local funds to pay for the MCH population services. Additional State funds that provide services for the MCH population were identified for this State FY: Medicaid $1,802,466,760 and SCHIP $156,736,240.

Several earmarked state funds allocated for special services and programs were also identified. These include $100,000.00 for the EMSC Program; $5,504,331.48 to support 56 children and adolescents with Catastrophic Illnesses; and $539,261.45 for the operational support of the CSHCN Regional Pediatric Centers (salaries); for totaling $6,143,592.93. The CSHCN Program Income estimated for FY2020 is $228,880.00. The amount breaks down as follows: a) $ 205,992.00(90%) for operational and administrative support to the RPCs and the Autism Center and b) $22,888.00(10%) for administrative costs.

As described, the efforts of the Commonwealth of Puerto Rico surpass the matching requirements of Puerto Rico FY's1989 Maintenance of Effort ($10,226,318). The tables below summarize the funding sources provided by the State to pay for the health services of the population holding the GHP and other earmarked state funds.

Programs Addressing Different MCH Needs Supported with State Funds 2017-2018

Program/Service	State Allocation
Government Health Plan (GHP) [1]	$562,597,897.00
Infant and Toddlers with Disabilities- Part C IDEA MOE [2]	$2,000,000.00
Catastrophic Illnesses Funds [2]	$5,384,510.00
Emergency Medical Services for Children	$100,000.00
Rape Crisis Center	$294,473.00
Regional Pediatric Centers [2]	$539,363.00
In-Kind-Administration- Space in Facilities and Utilities	$200,000.00
TOTAL	**$571,116,243.00**

1. Estimated proportion for primary preventive services.
2. Funds used for CSHCN population.

Sources of the Government Health Plan (GHP) Funds (In millions)

SOURCE	AMOUNT	PERCENT
State Funds	$530	21
Municipal (Local)	161	6
Sub-Total	**$721**	**27**
Medicaid	1,802	67
SCHIP	157	6
Grand Total	**$2,646**	**100**

In addition to MCH dollars and the State funds listed above, there are other federal sources of funds that contribute to the achievement of the MCH outcomes. These other federal funds are included in Form 2. Additional detailed budget information of each Component is included below.

Additional detailed earmarking by pyramid level and other federal funds:

FY20 budget for Components A&B is $9,480,538, a 60% of the total MCH Block Grant budget. An estimated 55% ($8,690,493) was assigned for services provision in both components and 5% ($790,045) for administration of the funds.

Budget for Individual served for the Components A&B in FY20 are as follows:

A total of **$ 3,950,224 (25%)** assigned for the Component A: woman and infants less than 1 yr. The amount of **$4,740,270 (30%)** directed to the Component B for children 1 to 21 years.

Under Components A & B no Direct Services are provided. For FY20 the amount of **$4,550,658** was assigned to provide the enabling services and **$4,929,880** for level of Public Health Services and Systems. Other earmarked FY20 federal funds were reported in Form 2.

CSHCN

Federal Allocation: $6,320,359.00 (40.0% of the total federal allocation)

Of the Title V Federal Allocation for FY 2020, the amount earmarked for CSHCN is $5,530,314.00 (35.0%). In addition, an allocation of $ 790,045.00 (5%) is earmarked for CSHCN Title V administrative costs (fiscal and administrative support for management of the CSHCN Title V allocation).

The $5,530,314.00 breaks down as follows:

1) $488,141.71 are earmarked for direct services for CSHCN including payment of specialty clinical providers such as neurosurgery, plastic surgery, orthodontia and orthopedic surgery, and earphones not reimbursed by public or private payers.

2) $4,405,591.05 are earmarked for enabling services (salary and operational support to the Regional Pediatric Centers and Autism Centers to enable CSHCN access health care, case management, care coordination and referrals). operational support to the Birth Defects Surveillance and Prevention System activities including those related to CSHCN domain state priority: Reduce the prevalence at birth of neural tube defects; for operational support to the Hereditary Diseases Detection, Diagnosis and Treatment Program activities, and to support the newborn screening for CCHD; and

3) $636,581.24 are earmarked for new public health services and systems activities including improving the efficiency and effectiveness of the billing and collection processes for services provided; workforce development; policy development and quality assurance and improvement activities related to the following CSHCN domain selected priorities: a) Increase the number of CSHCN who receive regular ongoing comprehensive health care within a medical home; b) Increase the number of CSHCN aged 12 to 17 years who receive adequate support and services for their transition to adult health care; and c) Decrease the age when children at risk for Autism Spectrum Disorders (ASD) receive their first diagnostic evaluation.

Other funds: $539,261.45

The amount of nonfederal state funds budgeted for FY 2020 to support services for CSHCN is $539,261.45 for the operational support of the Regional Pediatric Centers (salaries).

Program Income: $228,880.00

The estimated amount of program income funds for FY2020 is $228,880.00. The amount breaks down as follows: a) $ 205,992.00 (90%) for operational and administrative support to the RPCs and the Autism Centers and b) $22,888.00 (10%) for administrative costs.

Other Federal Funds: $9,973,785.48

The amount of other federal state funds budgeted for FY 2020 is $9,973,785.48. The amount breaks down as

follows:

1) $250,000.00, EHDI, for activities directed to reduce the lost to follow up and documentation of infants after the newborn hearing screening;

2) $170,000.00, BDSPS, for population-based surveillance of birth defects and data utilization for public health action;

3) $147,373.00, PR EHDI, to complete and implement a sustainable, Early Hearing Detection and Intervention Information System (EHDI-IS) capable of accurately identifying, matching, collecting, and reporting data on all occurrent births that is unduplicated and individually identifiable through the three components of the EHDI process (screening, diagnosis, and early intervention).

4) $2,279,380.48, Zika MCH Services Program, to support a system of care that assures that community-based, comprehensive high quality health and social services are available to infants and children affected by ZIKV and their families.

5) $7,000,000.00, Zika CMS Health Services Program, to support a system of care that assures that community-based, comprehensive high quality health and social services are available to infants and children affected by ZIKV and their families.

6) $127,032.00, ZBDSS, for surveillance, intervention, and referral to services activities for infants with microcephaly or other adverse outcomes linked with the Zika virus.

CSHCN Budget Grand Total: $17,062,285.93

III.E. Five-Year State Action Plan

III.E.1. Five-Year State Action Plan Table

State: Puerto Rico

Please click the links below to download a PDF of the Entry View or Legal Size Paper View of the State Action Plan Table.

State Action Plan Table - Entry View

State Action Plan Table - Legal Size Paper View

III.E.2. State Action Plan Narrative Overview

III.E.2.a. State Title V Program Purpose and Design

The Title V program responsibilities are assigned to the Maternal, Child and Adolescent Health Division (Component A & B) and to the Children with Special Medical Needs Division (Component C) according to the operational structure of the Health Department.

The MCAHD use the life course model as the framework for the approach of all strategies and activities and in collaboration with our partners/stakeholders as allies, working towards our goals and objectives. The better the health condition of a WRA, the healthier the baby will be and with the adequate care of the baby will result in a healthier adult. Oral health status of the pregnant woman impacts the fetus and oral hygiene established in infancy has a lifetime protective effect. Our services are directed to empower and support the population toward reaching a healthier status: 1-HVP by nurses to high risk pregnant women and follow-up of mother and child until the baby reaches 2 y/o; 2-Outreach activities by CHMs ,HEs and PNs to channel the population to services needed, provide one to one health education and provide the Prenatal and Parenting courses; 3- Youth Health Promoters program and the YAC under the PYD model, allow youth empowerment, contribution with their peers and participation in the development and implementation of MCAHD strategies.

The Maternal Mortality Review Law was an achievement of our team and will provide the tools to help identify preventable causes of death that will serve to prioritize the strategies chosen toward promoting healthier WRA. The regulation that is required by law for the implementation of the Maternal Mortality Review Law was drafted In addition the WRA health services guidelines implementation as public policy by the DOH will help foster improved quality care based on evidence and changes in the delivery care system. The FIMR and LOCATe (CDC instrument for hospital maternal and neonatal services level) are other interventions that serve to identify further strategies to implement with the purpose to improve IM&M. The PFPCG, under the lead of MCAH staff promotes changes in regulations and practices and increased support for BF women in the community and in the hospitals.

The MCAHD has multiple partners that actively collaborate in the achievements of our goals and objectives, among them: UW; MOD; Hospital Association; ACOG and AAP local chapters; UPR School of Medicine and Public Health School; Ponce Medical School; Primary Health Care Association; CBOs; 330 Community Health Centers; PRHIA; WIC;LLL; Department of Family Welfare; and the Department of Education. Our staff has a leading role facilitating the accomplishments of the FIMR, MMR, Early Childhood Alliance, and BFPCG; also actively participates in the MOD prematurity prevention committee, Children Justice Act Council, Normative Policies for Head Start Council (Family Welfare Department), and Emergency Medicine Pediatric Council.

This collaborative work allows sharing the needs of the population and supporting policy changes in the system so as foster improved access and quality of care. It also allows the delivery of information that empowers the population to receive the services required and has served as a bridge for them to identify the resources available.

The Children with Special Medical Needs Division (CSMND) was created in November 2013 with the purpose and commitment of implementing the core public health functions of assessment, assurance and policy development through program efforts supported by the MCH Block Grant for CSHCN and their families. The Division strives to achieve its mission by accomplishing 3 goals: 1) promoting and supporting coordinated, comprehensive and family-centered systems of care at state and local levels for CSHCN and their families, 2) promoting and supporting the use of evidence-based approaches to address the needs of CSHCN and their families, and 3) serving as a collaborator and partner in addressing CSHCN issues. The organizational chart shows the structure of the Division and its programs. A close working relationship, effective communication, information sharing and mutual collaboration among the programs, makes it possible to operate and interact within the Title V three levels' framework to assess and monitor CSHCN's health problems and status; facilitate access to care; and inform and educate the public, among other public health activities.

III.E.2.b. Supportive Administrative Systems and Processes

III.E.2.b.i. MCH Workforce Development

The Maternal, Child and Adolescent Health Division (MCAH) and the Children with Special Medical Needs Division (CSMN) are comprised by Health and Social Skilled Professionals. Both Divisions recruits experienced and specialized professionals to carry on the objectives and services within the population. Therefore these workforces, development and human resources approach are required to be able to provide quality specialized services.

MCAHD is a multidisciplinary team of professionals dedicated to provide quality services to the maternal, infant and adolescent population. Our team provides services from Central Level and 7 Regional Offices (ROs). At June 30, 2019 workforce consists of 155 regular/transitory employees and 12 professional services contracts. Total of 148 (FTE) regular/transitory employees are located at the RO's, including 75 Home Visiting Nurses (HVNs), 33 Community Health Workers (CHWs), 7 Perinatal Nurses, 5 Adolescents Coordinators (SWs) and 5 Community Health Educators (CHEs). The MCAH ROs teams are comprised of a MCAH Regional Director (RD), HVNs Supervisor, SW, CHE, HVNs, CHWs and clerical support staff. At Central Level the team is composed by 7 regular (6.96 FTE) positions including the PR MCH Block Director, MD, MPH, an OB-Gyn with more than 30 years of experience. The 12 (11.5 FTE) Professional Services Contracts are at Central Level, all of them skilled public health professionals and highly experienced in MCAH population. An Evaluation and Data Analysis Section is composed of: One Biostatistician, MPH; Two Epidemiologists (1.25 FTE); Two Evaluators, MS; and a Cultural Anthropologist with a PhD. Three Physicians: MD Associate Director for Adolescent Health; MD, FACOG Ob-Gyn Consultant and MD, FAAP Pediatric Consultant. Other contracted positions includes: Positive Youth Coordinator, MA; facilitator for the Early Childhood; Curricula Consultant, MHE, PhD; HVP Coordinator MPHE, MAEd, MIS; and the Mental Health Consultant, PhD.

Previous year's intense work has continued to fill key vacant positions. As to date we have in place HVNs in 68 of 78 municipalities including Vieques and Culebra and CHWs with flextime to enhance the services provision in the community. Some challenges in the Workforce area prevails like: Vacant positions for RD in Bayamón, Arecibo and Ponce; The Island's fiscal situation; and the uncertainty in the applicability of the Single Employer Law. A human resource consulting firm was contracted with the purpose to help with a speedy recruitment of CHWs, HVNs and other supporting personnel but additional procedures were introduced by the PRDOH Human Resources Office. Key personnel as: Perinatal Nurse; HVNs; Mayaguez Regional Director; and three Office Assistant are maintained under this contract.

MCAHD are continuously identifying emerging needs and topics to schedule trainings for staff to improve the workforce development capacity. Monthly meetings are conducted at Central Level to discuss emerging issues, community issues/feedback and share other programmatic and administrative information. MCAH continuously expands the scope of cultural competency and produces culturally sensitive educational materials for the population, with this purpose a Cultural Anthropologist is part of our team.

Some of the training developed and provided for the MCAHD staff are: *New HVP staff orientation*, *Infant CPR Anytime, Oral health screening*, *Motivational Interview techniques, Value and benefits of the Home Visiting Program, Trainings in Prenatal Course, Positive Parenting 0-5yrs and 6-11yrs for the CHWs, Early Childhood Caries (ECC) risk screening, Interactive lesson on the management of crying babies with SBS simulation doll, updated Safe Sleep Course, among others.*

HOME VISITING PROGRAM
STAFF TRAINING 2017-2019

DATE	TOPIC	AUDIENCE
July 2017	Oral health and dental cavity screening. Reference materials for infant and child care.	Home Visiting Nurses (HVN) Regional Supervisors
August – December 2017	Presentation of the revised Home Visiting Program Procedures Manual	HVN Regional Supervisors Regional Directors
September 2017 – February 2018	Intimate partner violence	HVN Regional Supervisors
January – February 2018	Maternal mental health and wellbeing	HVN Regional Supervisors
May 2018	Developmental screening tools: ASQ-3 & ASQ:SE-2	HVN Regional Supervisors
May 2018	Skills and roles in Caries Risk Assessment QI	Regional Supervisors
June 2018	HIPAA update (self-study module)	HVN Regional Supervisors

DATE	TOPIC	AUDIENCE
October 2018	Interviewer training for "Mental health status and resilience among postpartum participants of the Puerto Rico Home Visiting Program after Hurricanes Irma and María" research study	HVN Regional Supervisors Regional Directors
December 2018	Perinatal loss and the FIMR protocol	Perinatal Nurses Regional Supervisors Regional Directors
January – April 2019	Presentation of the Home Visiting Program Documentation Manual and revised program forms (two-day training)	HVN Regional Supervisors Regional Directors
June – July 2019	Birth and Breastfeeding Summit: Vital response in emergencies	Regional Supervisors
June 2019	Pediatric Preventive Services and Caries Risk Assessment	Caguas region

The CSMND adopted the Workforce Development Framework (WDF), developed by the National Child Welfare Workforce Institute (NCWWI, 2015), for agency leaders to understand best and promising practices for a competent, committed, diverse workforce in an inclusive workplace. The framework is an approach to assess, plan, and implement strategies to address workforce gaps and evaluate results. Workforce development is an ongoing process as the Division's goals, activities, and environment evolve over time. The workforce analysis involves a review of: mission staff, anticipated retirements/separations, skills and competencies, optimal headcount, future needs, and the gap between supply and demand. Although staff recruitment is challenging, the CSMND has minimal staff turnover. The majority is retained due to competitive compensation, a healthy teamwork environment, and ongoing skills development activities. Maintaining a high-morale culture, where employees support one another, collaborate, and work through glitches, has contributed to the programs' effectiveness. To effectively retain workforce, the CSMND strives for a welcoming and inclusive culture and climate, mutual trust and respect, and a sense of self-value.

A workforce analysis was carried out in 2016 on the CSHCNP capacity to track children potentially exposed to ZIKV infection during pregnancy, provide screening/assessment, and ensure accessibility to comprehensive health care. Service Coordinators, Family Engagement and Support Advocates (FESAs), and Liaison Coordinators were identified as needed. Service Coordinators are professionals who help secure needed services for CSHCN and their families. Currently, there are 34 Service Coordinators recruited with the Zika MCHB Services Program funds. Liaison Coordinators support the recruitment/retention of families by locating, visiting and recruiting families. Five Liaison Coordinators have been recruited for the CMS Zika Health Care Services Program. FESAs offer family support and promote families' participation. It is required that FESAs be parents of CSHCN, since this puts them in

the unique position of having firsthand experience. A total of 13 FESAs are currently providing services at the RPCs. This complete workforce reinforces quality service coordination as part of the medical home enhancement in PR.

In addition, 28 Arboviral Diseases Health Educators (ADHE) were recruited with CMS Zika funds. ADHEs are located at the WIC Clinics to provide Arboviral prevention education to women, work with ZAPSS to identify Zika positive women who have delivered and for whom no follow-up information is available, and re-connect families lost to follow-up with the DSSCP.

A work team of experts was recruited to support the implementation of the EHR system at the seven RPC's and two Autism Centers. The work team consists of a Project Manager, an Information System Coordinator and two Information System Technicians (IST). Two additional IST are in the process of recruitment. It is expected to have all the clinical and financial modules running 'live' by 2020. EHR increases efficiency in the tracking of clinical history and preventive care, and is key for the medical home model.

The PR-BDSPS was the first CSMND's program with a Title V funded Service Coordinator to ensure early identification and linkage to health/community services for infants with birth defects and their families. Afterwards, a Title V funded Service Coordinator was contracted for the Hereditary Diseases Detection, Diagnosis and Treatment Program for timely diagnosis, treatment and intervention of newborns identified by the Newborn Screening Program (HDDDTP).

The CSHCNP senior and new staff is frequently convened for quality improvement, capacity and leadership development, case management discussions and other emerging needs. The skill and knowledge development activities recommended by the National MCH Workforce Development Center continue to be used. Skill development activities for increasing partnerships between families and the CSHCNP are also being provided in collaboration with APNI.

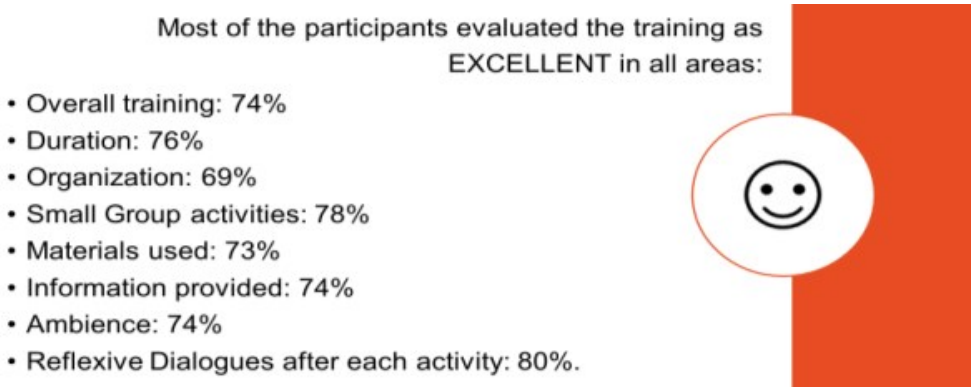
III.E.2.b.ii. Family Partnership

The PR Title V aims at including families as partners in decision-making processes at all levels.

The CMSND has a family representative that is a paid staff since 2008 and has become a leader and advisor at all levels. She participates in the annual Title V Block Grant Application/Annual Report, in the review of new policies, education materials, brochures, literature and reports, and in outreach work and training for professionals and families. She represents the CSHCNP in committees such as the EHDI Advisory Committee and the Special Education Advisory Committee of the Department of Education and serves as the Family Engagement and Support Advocates Lead, and as the AMCHP Family Delegate. She is a leader and model for the 13 FESAs, who after 18 months of being part of the CSHCNP staff, have grown in leadership and empowerment. FESAs encourage parents to take an active role in making community services more responsive to their goals and needs, support and teach families to navigate the health system of care and participate in outreach work and training activities for both professionals and families.

The MCAHP proudly can say that its efforts to include families as paid staff has proven to have a positive impact. Presently, there are 6 full-time employees (5 HVNs and 1 HCWs) that are former participants of the Home Visiting Program. Through the lens of families, they bring to the MCAHP "lived" expertise about the needs, challenges and life experiences of pregnant women, their children and families. This expertise is highly valued and considered in enhancing the physical, mental and social health of the populations served by the MCAHP.

PR Title V main activity in FY 2018 was the staff training "Family Inclusion in Title V". A total of 244 MCAH/CSHCN staff from the 7 Health Regions received the training. A team of 11 trainers composed of four MCAH /CSHCN staff, three CSHCN mothers and four YAC youth offered the trainings. This number of trainers made it possible for having representation of staff, families and youth in each training session.



III.E.2.b.iii. States Systems Development Initiative and Other MCH Data Capacity Efforts

The Puerto Rico State Systems Development Initiative (PRSSDI) is housed in the MCAH Division. The aim of PRSSDI is to develop, enhance and expand MCAH data capacity in a timely manner to allow for informed decision making and resource allocation that supports effective, efficient and quality programming for women, infants, children and youth, including children and youth with special health care needs.

PRSSDI assists in improving the MCAH data capacity within the five-year Health Needs Assessment (HNA) and ongoing interim HNAs, support data needs for the annual Title V MCH Block Grant Application/Annual Report, and develop and track data for the NOMs, NPMs, SPMs, and ESMs. PRSSDI also advances the development and utilization of linked information systems between key MCH datasets. PRSSDI is directed to collaborate and provide on-site support for the Jurisdictional PR MCH Survey, an MCHB-initiated effort to develop and implement a survey that will assist in reporting and tracking data required for Title V MCH Block Grant NPMs.

The main advantage of the PRSSDI is a wide array of professional resources in the Title V Monitoring and Evaluation Unit (MEU) that help ensure the accomplishment of PRSSDI project goals and objectives and other MCH data capacity efforts. One of these efforts is the development of instruments to gather information for those MCAH indicators with limited data source and/or information needed for monitoring and measure progress toward the established Title V MCH Block Grant NPMs and NOMs, since they are not included in most of the national surveys. The Cultural Anthropologist who is in charge of qualitative research, the Evaluators that assist in the development of the SPMs as well as the ESMs, and the Epidemiologists who oversees those investigations and analyses on MCAH health issues, compose the MEU. Other asset that provides collaboration with PRSSDI are: a Pediatrician, an OB/GYN Consultant and a Psychologist, PhD that provide support to the team. The MEU is supervised by the MCAH Division Director.

For the past several years, PR has been improving the availability, timeliness and quality of the MCH data toward multiple mechanisms to report in the Title V MCH Block Grant Application/Annual Report. Through letters signed by the Secretary of Health, PRSSDI gathers MCAH data and information from multiple programs within and outside the DOH. This method has been effective in improving data quality due to the strengthened collaboration developed with programs.

For the supplemental data not available thru other sources, MCAH and CSHCN Programs have developed and implemented customized national surveys as follows:

1. **Maternal and Infant Health Survey (MIHS, a customized CDC – PRAMS-like survey):** From 2002 to 2016, every other year, MCAH conducted the MIHS. As of 2016 PR became the first jurisdiction participating in PRAMS which allows comparable data between PR and mainland. PRSSDI collaborated with the MCAH Division to submit the PRAMS Project application. In 2016, PR became the first jurisdiction participating in PRAMS which allows comparable data between PR and mainland.
2. **PR Survey of Children with Special Health Care Needs (PRS-CSHCN) based on SLAITS Project:** The CSMND developed the PRS-CSHCN. Several surveys were performed mainly to obtain the CSHCN NPMs data, however these surveys could not be comparable with states' data or use to prepopulate the NPMs.
3. **Other survey used to gather MCAH data for the MCH Block Grant Application/Annual Report:**
    a. **Behavioral Risk Factor Surveillance System (BRFSS)**: MCAH Division added 17 questions from the National Survey of Children's Health to the BRFSS. PRSSDI Staff collaborated in the selection and cultural translation of those questions. MCAH began to report data from this source the past year.
    b. **Jurisdictional MCH Survey:** Determined by MCHB to bring the capacity to prepopulate and report on the Title V MCH Block Grant applications/annual NPMs for which the data apply. It will be a face to face interview to about 200 families island wide. PRSSDI, along with CSHCN staff, evaluated the English version and the Spanish translation of the Jurisdictional MCH Survey Pretest Core Questionnaire and Jurisdiction-Specific Module drafts and submitted recommendations to NORC at the University of Chicago. In addition to the questionnaires, we also reviewed the translating scripts for interviewers, and informed consent. PR is part of the second phase of the Jurisdictional MCH Survey, which is expected to start by the second trimester of 2020.

PRSSDI will be assessing the possibility to participate in others national surveys in order to have federally available data for the NPMs and NOMs and to perform data analysis and research.

The Puerto Rico Early Hearing Detection and Intervention (PR EHDI) Program receives funds under CDC NOA "Enhancement of the PR EDHI-IS for Documentation and Use of Follow-up Diagnostic and Early Intervention Services Data" to fully develop the PR EHDI-IS. This information system will be capable of accurately identifying, matching, collecting, and reporting data on all live-births through the three components of the EHDI process (screening, diagnosis, and early intervention). Moreover, the PR EHDI-IS development is in accordance with Programmatic Goals 2- 8 of CDC's EHDI-IS Functional Standards with several attributes such as unduplicated and individually identifiable records. In 2018 two birthing hospitals participated in the pilot of the new EHDI-IS (module 1).

In regard to access to electronic health data, PRSSDI resumed data linkages with several sources (birth data, infant mortality, Medicaid eligible, WIC). OITA collaborates in performing the birth – Medicaid eligibility, and birth – infant deaths linkage files. The linkage between birth and WIC participants file is executed by PRSSDI. An evaluation

process was implemented to ensure the validity and completeness of the data linkages, this process is perform to all linkage files to assess the quality of the linkage. PRSSDI will continue the development and utilization of linked information systems between key MCH datasets, in order to evaluate a more comprehensive range of MCA outcomes between agencies.

Since 2005, MEU monitors maternal deaths thru the Puerto Rico Maternal Mortality Epidemiological Surveillance System (SiVEMMa). Electronic data linkage is periodically performed using the death, birth and fetal death files. Newspaper articles help to identify additional cases, mainly those related to homicides of pregnant women or sudden deaths for unknown causes. To further enhance the maternal mortality surveillance and the review process, the PRDOH submitted a bill to the PR legislature to establish as a State Act the SiVEMMa and the Maternal Mortality Review Committee (MMRC). The MCAHD played a leading role in developing the proposed bill including participation in public hearings. Act 186 of 2016, known as the Puerto Rico Maternal Mortality Epidemiological Surveillance System Act, provides the legal tools for the collection of data needed for a complete review of maternal deaths in Puerto Rico (underlying health, social and other contributing factors). The Act also provides for the creation of the MMRC (composition, privacy, legal protection, and responsibilities) to review maternal deaths to make recommendations for preventive actions. All members of the MMRC must be officially appointed by the Secretary of the PRDOH. It includes a multidisciplinary panel of experts in the mental, behavioral, medical, and data analysis professions. SiVEMMa is also in the process to report to the CDC Maternal Mortality Review Information Application (MMRIA). PRSSDI has received the needed documentation of the methodology and the process of integration to the system.

CSMND performs data linkages between the Birth Defects Surveillance and Prevention System (BDSPS), the Zika Birth Defects Surveillance System (ZBDSS) and Zika Active Pregnancy Surveillance System (ZAPSS) databases and are conducted regularly to identify infants for a more accurate calculation of the prevalence among infants with possible congenital Zika virus infection.

Data linkages between the BDSPS, ZBDSS and ZAPSS databases are conducted on a case-by-case basis as received by either system to identify children meeting the System's inclusion criteria. The development of data collection tools based on the existing BDSPS infrastructure, collecting and storing data in a similar, if not identical, format and conducting routine case/data comparisons of the ZAPSS and BDSPS/ZBDS databases in Puerto Rico, has improved case ascertainment, ensuring a greater proportion of affected infants are referred to appropriate medical follow-up and early intervention services, and allowed for more accurate calculation of the prevalence of birth defects potentially related to congenital Zika virus infection.

The PR Vital Statistics Record Office (VSRO) granted access to and shares birth certificate data with BDSPS, ZBDSS and ZAPSS epidemiologists to improve the capacity for rapid case ascertainment of birth defect cases.

One challenge that faces PRSSDI is gathering reliable health data derived from insurance plan claims, specifically claim data that come from the GHP. For MCAH and CSHCN Programs this information is extremely important since these data represent a holistic view of the low income patient's interactions with the health care system. Every year PRSSDI requests data to the PRHIA, the agency that manages the GHP. PRHIA receives claim data from five Health Insurers Companies who provide coverage for the GHP.

We have significant oscillations in claims data in comparison between years. Although several strategies were used to have more accurate data, PRSSDI had to request access to the PRHIA information system to make in-depth evaluations of these claim records. By ensuring access to these data PRSSDI will be able to perform data linkages and analyses to assess needs and for monitoring the MCAH strategies based on services. However, this access has not been granted yet. Therefore, PRSSDI will continue its communications with PRHIA in order to work on an agreement that will allow PRSDDI to provide support to their personnel with the data that is required and finally obtain reliable data.

To formalize data sharing collaboration with agencies, PRSSDI has been performing several memorandums of

understanding (MOU), through the MCAH Division. Among these are the PR Primary Health Association that ratifies mainly the participation in the HNA and other investigations to be carried out, the Demographic Registry Office that ensures the continuous access to the vital events data at any time (provisional or final data files) and CDC for data sharing for the Multi-Jurisdiction Risk-Appropriate Care Analysis. Also, the MCAH Division completed MOUs with ACOG, the PR Institute of Forensic Sciences and the PR Hospital Association so they can be part of the MMRC. Currently, PRSSDI and the MCAH Division is in the process of completing a MOU with ASSMCA for data sharing collaboration and ensure services for participants identified in the different programs that need mental health support.

The CSMN Division has a written agreement for the exchange of information between ZAPPS and the PR Health Insurance Administration (PRHIA). The purpose of the agreement is: 1) to provide PRHIA information of pregnant women with laboratory evidence of possible Zika virus infection to identify those enrolled in the GHP in order to assign them with a specific code that will allow them to receive the services recommended by the PRDH, 2) in return, for PRHIA to provide ZAPSS demographic information to validate its data, and 3) to ensure that infants born to mothers with laboratory evidence of possible Zika virus infection receive the services recommended by the PRDH.

Two agreements for the exchange of information of pregnant women and infants affected or potentially affected by Zika were settled; one with the HRSAFHC and another with APNI.

For data and information dissemination, MEU provides their support to MCAH Program sharing statistics at the general public as well as to the media. We also participate in meetings providing MCAH data and statistics to our allies and in Conferences such as AMCHP, City Match, among others. MEU also developed instruments such as the Integrated Index of Maternal and Infant Health Status (IIMIHS) that includes 14 maternal and infant health indicators by municipality to assess the health needs of the target population by geographic area. Other analyses are performed like the CDC Levels of Care Assessment Tool (CDC LOCATe) to help MCAH monitor neonatal and maternal risk appropriate care.

PR will be part of a Multi-Jurisdiction Risk-Appropriate Care Analysis, which consists of analyzing birth outcomes and maternal complications according to the level of care (neonatal or maternal) as assessed by CDC LOCATe. MEU will link LOCATe database with vital statistics (birth and infant mortality) and maternal complications (according to insurance claims) and will share it with CDC for the Risk-Appropriate Care Analysis.

We support prevention and awareness initiatives such as Month of Prematurity Prevention of March of Dimes, the Adolescent Pregnancy Prevention Month and Safe Christmas Campaign. For the pregnancy prevention, we collaborate providing updated data for maternal and infant health indicators that CAHP disseminates to the press and stakeholders, organizations and general public. In addition, we provide data for the initiatives developed by March of Dimes PR Chapter as well as data of non –intentional injuries to EMSC for the Christmas Campaign.

In terms of the five-year health needs assessment (HNA) and the ongoing HNA, they are performed mainly by MEU. The MEU team plays a key role in conceptualizing, organizing, and carrying-out the HNAs. An internal steering committee consisting of the MEU staff, the Pediatric Consultant, the MCH Director and staff from several MCH programs and key stakeholders is established to support the HNA process. This committee is led by the PRSSDI and the Cultural Anthropologist to ensure the best integration of the quantitative and qualitative methodologies. All the activities for the HNA are discussed with the steering committee in order to make informed decisions during the HNA process. Leading the efforts of the HNA gives to the PRSSDI the advantage to support directly the data capacity in each step of the HNA process.

III.E.2.b.iv. Health Care Delivery System

The Title V program and the Title XIX Medicaid program are under the organizational structure of the Health Department. The health care for the low income population, Medicaid and CHIP eligible are channel through the PRHIA that contract private Health Insurance Companies (HICs) to provide de clinical services needed and included in the State Plan submitted to CMS. It includes special coverage for CSHCN and ASD (included as attachment). The PRHIA receive the Medicaid, CHIP, Local Central government and Municipalities fund to cover for the GHP.

The terms of services delivery by the HICs for the GHP beneficiaries changed. The main change is that each HIC will cover beneficiaries all over the island and not only by regions as before.

Services coordination isn't mandatory by CMS and not included in the PR State Plan. That limitation has provided a good opportunity for TV MCAHD staff collaboration with Title XIX Medicaid program, especially with the Medical Assistance Office (MAO) which performs the eligibility evaluation.

The MCAHD CHWs and the HEs are in the community constantly looking for pregnant women to offer them education on health issues that can impact them and one specific task is the referral to the MAO for the evaluation of eligibility to the GHP to those without health insurance coverage and to other services needed as are identified. This contact with the population at the community level allows our personnel to refer for the HVP and to recruit for the Prenatal and Parenting courses, tools that increase the prevention and promotion of health. At the same time MAO personnel at their local offices refer to MCAHD staff the pregnant women that they certify as eligible for the GHP. This collaboration allows MCAHD a more extensive impact toward improving the overall health of the MCH population.

The HVP provide the education and support by nursing personnel, to high risk pregnant women for complications that complement the clinical services provided by the GHP.

The MCAHD began collecting data for the CDC collaborative project, PRAMS on March 2017. This project will provide data that will help to guide our efforts toward healthier MCH population. Also during 2017, the CDC collaborative project, Zika Pos-Partum Emergency Response Survey Ⅱ (ZPER) was implemented in birthing hospital to identify different aspect that helped direct the efforts in the fight against the Zika virus, specially the most vulnerable pregnant women. During 2018, a Disaster Supplemental –PRAMS was implemented, which data helped to establish preventive measures on health care services.

The Early Intervention (EI), IDEA Part C program is under the MCAHD which allows the direct access for the families' referred from the HVP and other staff. The services provided under EI at the children natural environment increase those needed by the MCH population and not covered in the same way as in the GHP.

As a part of the CSMND response to the 2016 Zika Epidemic, collaborative working relationships were established with other federal, state and non-governmental partners to complement the Title V CSHCNP leadership efforts to provide a system's approach to ensure access to quality health care and needed services for infants born to mothers with laboratory evidence of possible Zika virus infection during pregnancy. The Title V CSHCNP was among the first responders and the backbone for services for infants and children born to mothers with laboratory evidence of possible Zika virus infection during pregnancy.

In coordination with the CDC, ZAPSS was established to identify and actively monitor pregnant women with laboratory evidence of possible Zika virus infection and prenatally or perinatally exposed infants born to these women. The information collected by ZAPSS is being used to inform best practices in care for women infected with Zika virus during pregnancy and their infants. Also, the ZBDSS was established to rapidly identify and track birth defects that might be related to Zika virus infection during pregnancy.

The CSMND also has a close working relationship with PR Maternal and Fetal Medicine (MFM) specialists. Ultrasounds and amniocentesis results of birth defects cases, as well as those of pregnant women with laboratory evidence of possible Zika virus infection, are shared with ZAPSS, BDSPS and ZBDSS. This allows for the prenatal identification of infants with birth defects and pregnancy interruptions. The information is also being used to inform

best practices in care for women infected with Zika virus during pregnancy and their infants. A MFM Liaison regularly visits their offices to obtain the studies reports.

The HRSA Zika MCH Services Program provides for increasing the capacity of the Title V-CSHCNP to track children potentially exposed to ZIKV infection during pregnancy, provide screening and assessment services, and ensure accessibility to comprehensive health care services. Funds are being used to address unmet workforce needs, buy necessary equipment to provide screening, diagnosis, treatment and care; acquire health information and tele-health technology and equipment; implement family engagement strategies and provide family to family support services that ensure coordinated and comprehensive care in a medical home.

The CMS Zika Health Care Services Program also provides for increasing access to specialized health care services for pregnant women, infants and children adversely or potentially affected by Zika. Funds are being used to address unmet workforce needs, buy necessary equipment to provide screening, diagnosis and care services for pregnant women, increase access to specialized services for infants and children, transportation services and to ensure coordinated and comprehensive care in a medical home, among others.

There is also collaboration with APNI in the implementation of HRSA FOA Optimizing Family Support for Families of Children with or at-risk for Congenital ZIKA Virus Infection: “Empowering families in the prevention and care of the ZIKA virus”. Funds are being used to identify and disseminate culturally appropriate information regarding the health care needs to families of children with or at-risk for congenital ZIKV infection, assist families of children with or at-risk for congenital ZIKV infection in identifying and accessing resources in order to secure essential health care and community-based family support services, increase in knowledge of families and professionals regarding the care of children with or at risk for congenital ZIKV infection, and promoting families active engagement in their children’s health care, among others.

Collaboration with HRSA National Health Service Corps (NHSC) Loan Repayment Program helped to recruit qualified health care providers, including pediatricians, nurses, social workers and other direct services professionals, who chose to take their skills to the CSHCN Program at the RPCs.

Collaboration with HRSA EHDI program allows for the identification and early referral to services of infants with possible congenital Zika virus infection and congenital hearing loss.

Regarding the current Title V – Title XIX IAA/MOU, CSMND staff established contact with the PRHIA (PR Medicaid Agency) to work on strategies that can lead to successful collaborations between the PRHIA and the CSHCNP. Strategies developed by the National Academy of State Health Policy (NASHP) and AMCHP Standards for Systems of Care for CYSHCN (July 2017) are used as a guide to strengthen the agreement. Two meetings have taken place and topics over the table are the enhancement of data sharing, strategies for a better understanding of the relationship between CSHNP-service coordination and GHP-case management, and educating PRHIA staff about Title V. The PR-UNHSP has also met with the PRHIA to identify strategies for children with positive hearing screenings to access a diagnostic evaluation without the need of a pediatrician’s referral, and GHP special coverage for children diagnosed with hearing loss. These activities are still in progress.

III.E.2.c State Action Plan Narrative by Domain

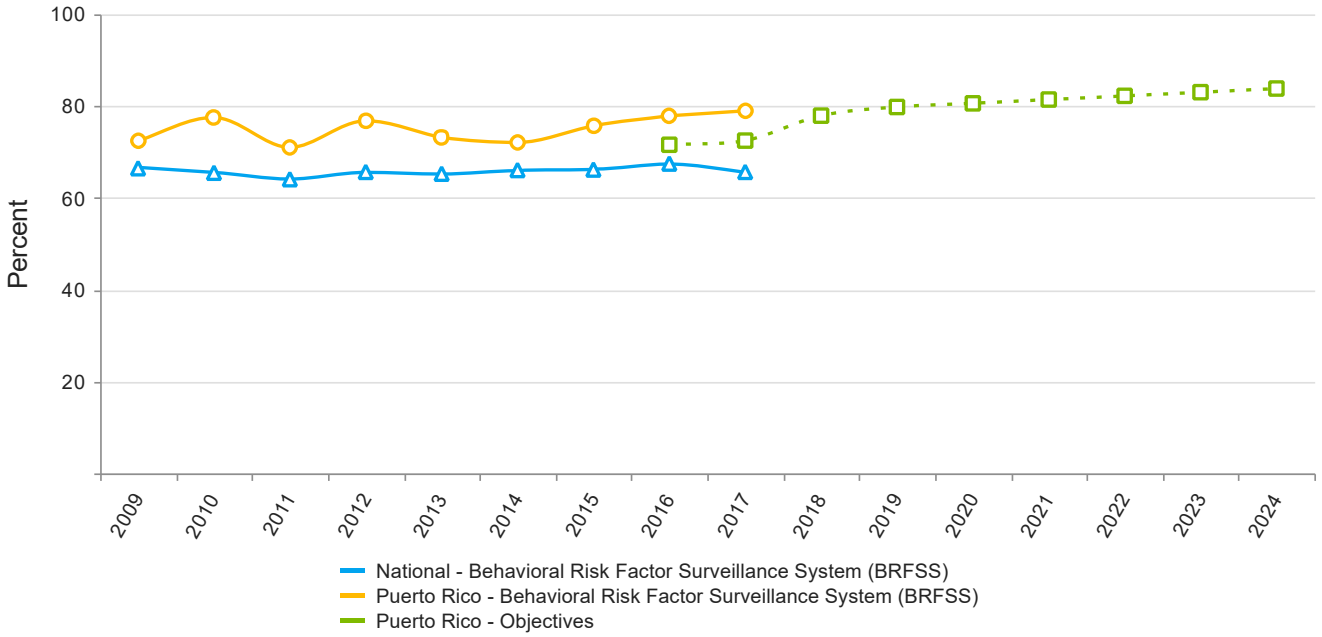
Women/Maternal Health

Linked National Outcome Measures

National Outcome Measures	Data Source	Indicator	Linked NPM
NOM 2 - Rate of severe maternal morbidity per 10,000 delivery hospitalizations	SID	Data Not Available or Not Reportable	NPM 1
NOM 3 - Maternal mortality rate per 100,000 live births	NVSS	Data Not Available or Not Reportable	NPM 1
NOM 4 - Percent of low birth weight deliveries (<2,500 grams)	NVSS-2017	10.5 %	NPM 1
NOM 5 - Percent of preterm births (<37 weeks)	NVSS-2017	11.4 %	NPM 1
NOM 6 - Percent of early term births (37, 38 weeks)	NVSS-2017	34.7 %	NPM 1
NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths	NVSS-2016	8.0	NPM 1
NOM 9.1 - Infant mortality rate per 1,000 live births	NVSS-2016	7.6	NPM 1
NOM 9.2 - Neonatal mortality rate per 1,000 live births	NVSS-2016	5.1	NPM 1
NOM 9.3 - Post neonatal mortality rate per 1,000 live births	NVSS-2016	2.5	NPM 1
NOM 9.4 - Preterm-related mortality rate per 100,000 live births	NVSS-2016	244.2	NPM 1
NOM 10 - The percent of infants born with fetal alcohol exposure in the last 3 months of pregnancy	PRAMS	Data Not Available or Not Reportable	NPM 1
NOM 11 - The rate of infants born with neonatal abstinence syndrome per 1,000 hospital births	SID	Data Not Available or Not Reportable	NPM 1
NOM 23 - Teen birth rate, ages 15 through 19, per 1,000 females	NVSS-2017	24.2	NPM 1
NOM 24 - Percent of women who experience postpartum depressive symptoms following a recent live birth	PRAMS	Data Not Available or Not Reportable	NPM 1

National Performance Measures

NPM 1 - Percent of women, ages 18 through 44, with a preventive medical visit in the past year
Indicators and Annual Objectives



Federally Available Data			
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)			
	2016	**2017**	**2018**
Annual Objective	71.5	72.4	77.8
Annual Indicator	75.6	77.7	78.9
Numerator	500,771	509,399	487,822
Denominator	662,076	655,595	618,458
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2015	2016	2017

Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	79.7	80.5	81.3	82.1	82.9	83.7

Evidence-Based or –Informed Strategy Measures

ESM 1.4 - Reduce the percent of uninsured women in reproductive age in Puerto Rico, by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		10	7.8
Annual Indicator	10.6	7.9	7.9
Numerator	95,622	68,727	67,041
Denominator	897,899	870,641	848,623
Data Source	PRHIA, ICO and US Census	PRHIA, ICO and US Census	PRHIA, ICO and US Census
Data Source Year	2016	2016-17	2017-18
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	7.8	7.7	7.6	7.5	7.4	7.3

State Performance Measures

SPM 1 - Percent of cesarean deliveries among low-risk first births

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		39.7	40.5
Annual Indicator	40.2	40.9	41.5
Numerator	3,865	3,357	3,125
Denominator	9,618	8,209	7,524
Data Source	Vital Statistics	Vital Statistics	Vital Statistics
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	41.1	40.8	40.4	40.1	39.8	39.4

State Action Plan Table

State Action Plan Table (Puerto Rico) - Women/Maternal Health - Entry 1

Priority Need

Improve Women in Reproductive Age Health and Wellbeing including emergent conditions

NPM

NPM 1 - Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Objectives

1.Increase to 80.5% of women reporting a past year preventive visit during 2020 (Baseline: 78.9%, BRFSS 2017).

Strategies

1.Disseminate and promote the WRA Preventive Health Services Guidelines which includes recommendations for preconceptive health for women in reproductive age for all audiences through diverse publishing media and forum.

2. Outreach and referral of uninsured women for Medicaid Program eligibility evaluation.

3. Provide information to WRA regarding Zika signs and symptom, transmission, and prevention.

4. Continue the current Maternal Mortality Review Committee activities in Puerto Rico.

ESMs	Status
ESM 1.1 - The Preventive Health Services Guidelines for women in reproductive age will be established as a Department of Health Public Policy in Puerto Rico by September 2018	Inactive
ESM 1.2 - Women of Reproductive Age (WRA) Preventive and Preconceptive Health Services Guidelines will be included in the educational curriculum of health care providers in training in Puerto Rico by September 2018	Inactive
ESM 1.3 - The number of participants reached with promotion activities through MCAH staff in community meetings regarding the preventive health services as required by Affordable Care Act by September 2017-2021 (ongoing)	Inactive
ESM 1.4 - Reduce the percent of uninsured women in reproductive age in Puerto Rico, by September 2017-2021 (ongoing)	Active
ESM 1.5 - The number of Health Professional Organizations that included the WRA Preventive and Preconceptive Health Services Guidelines in the continuous medical education activities of health care in training and experienced providers by September 2017	Inactive
ESM 1.6 - The number of the Puerto Rico Home Visiting Program participants reached with information regarding Zika signs and symptom, transmission, and prevention 2017-2021 (ongoing)	Inactive
ESM 1.7 - The bill to establish the PR Maternal Mortality Epidemiologic Surveillance System and the Maternal Mortality Review Committee will be re-submitted to Puerto Rico legislature by September 2018	Inactive
ESM 1.8 - The number of cases reviewed by the Maternal Mortality Review Committee by September 2018-2021 (ongoing)	Inactive

NOMs

NOM 2 - Rate of severe maternal morbidity per 10,000 delivery hospitalizations

NOM 3 - Maternal mortality rate per 100,000 live births

NOM 4 - Percent of low birth weight deliveries (<2,500 grams)

NOM 5 - Percent of preterm births (<37 weeks)

NOM 6 - Percent of early term births (37, 38 weeks)

NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths

NOM 9.1 - Infant mortality rate per 1,000 live births

NOM 9.2 - Neonatal mortality rate per 1,000 live births

NOM 9.3 - Post neonatal mortality rate per 1,000 live births

NOM 9.4 - Preterm-related mortality rate per 100,000 live births

NOM 10 - The percent of infants born with fetal alcohol exposure in the last 3 months of pregnancy

NOM 11 - The rate of infants born with neonatal abstinence syndrome per 1,000 hospital births

NOM 23 - Teen birth rate, ages 15 through 19, per 1,000 females

NOM 24 - Percent of women who experience postpartum depressive symptoms following a recent live birth

State Action Plan Table (Puerto Rico) - Women/Maternal Health - Entry 2

Priority Need

Improve birth outcomes

SPM

SPM 1 - Percent of cesarean deliveries among low-risk first births

Objectives

1. Reduce to 40.8% the percent of cesarean deliveries among term (37+ weeks), singleton, and vertex births to nulliparous women in Puerto Rico by 2020 (Baseline: 41.5%, Vital Statistics 2018).

Strategies

1. Provide education activities regarding prenatal care through workshops (Spanish title: “Cursillo Prenatal”).
2. Distribute information regarding premature births signs and symptoms through Ob/Gyn’s Office to all pregnant women.
3. Outreach and referral of pregnant women to initiate prenatal health care.
4. Continue multimedia campaign promoting completing 40 weeks gestation and healthy lifestyles during pregnancy.
5. Disseminate and promote the Prenatal Health Care Services Guidelines.
6. Continue to promote the implementation of the Hard Stop Policy in Birthing Hospitals.

During the reporting year (2017-18), the Maternal, Child and Adolescent Health Division MCAHD continued its work with Women's Reproductive Health (WRH) and Maternal Health (MH). WRH focuses on the health of women during the years between menarche and menopause, including the pre- and interconceptional periods, while MH concentrates on women's health during pregnancy and immediately after birth. The MCAHD directs its efforts at different levels, including community-wide education and outreach, individual education and support, professional development, and stakeholder/system level interactions.

MCAHD RESPONSE TO HURRICANES IRMA AND MARIA

In September 2017 two major hurricanes, Irma and Maria, hit Puerto Rico back to back, causing devastation throughout the island. The copious rains accompanied by high winds brought flooding and landslides, toppled trees and utility posts, weakened roads and bridges, and caused structural damage to residential and public buildings. Roads were left impassable by debris and floods. Thousands of homes, in both rural and urban sectors, lost their roofs, or walls; many were rendered uninhabitable. After the storms, the entire island faced an electrical outage, the longest continuous blackout in US history. The infrastructure collapse also encompassed an almost complete failure of the telecommunication system, inoperative water treatment plants, no access to tap water, and restricted access to banking and digital commerce. Ports and airports were closed to incoming cargo shipments, which brought food and fuel shortages. Hospitals and medical offices closed or offered only limited services according to the availability of generators for electrical power. These events and their aftermath had a severe impact on the health and wellbeing of the population, with women and children being among the most vulnerable subsets.

In the face of this crisis, the MCAHD continued its work with WRH and MH. Immediately after Maria MCAHD staff undertook actions to reach pregnant women, mothers, infants and children in need, particularly those staying in shelters or in unsafe living conditions. Efforts were directed at all vulnerable MCH populations, not only Home Visiting Program (HVP) participants. In the immediate post-hurricane efforts, the HVNs made contact with 165 pregnant women, 624 postpartum women, 299 infants and 264 children (12-24 m/o). The HVNs made assessments of the needs of each family and endeavored to find the resources needed to supply them. Many of the HVNs had suffered damage to their own homes and were as affected by the storm's aftermath; however, they made a supreme effort to fulfill their obligations to the population.

The efforts were coordinated at the regional level and involved Regional MCH Directors, HVP Supervisors, Home Visiting Nurses (HVNs) with the support of Central Level staff, particularly the MCH Social Worker. Educational materials were developed to cover emerging public health threats and needs, including leptospirosis, scabies, lice, clean drinking water, safe food storage, personal hygiene, hand washing, interpersonal violence, unintentional injuries, and others. These were used by HVNs and other regional staff in their work in the shelters and with other vulnerable populations.

HVNs divided their efforts between the shelters and their HVP participants. Some participants were found in the shelters, but many others were unreachable in the first days or weeks after the storm, due to lack of cell phone service, limited access to remote rural areas, or participants who went to stay with relatives in other towns.

A needs inventory was developed to help HVNs focus their work with HVP participants post-hurricane (see Figure 1). As soon as the HVNs were able to reach a participant, whether at home or in another location, they would fill out the instrument, which explored:

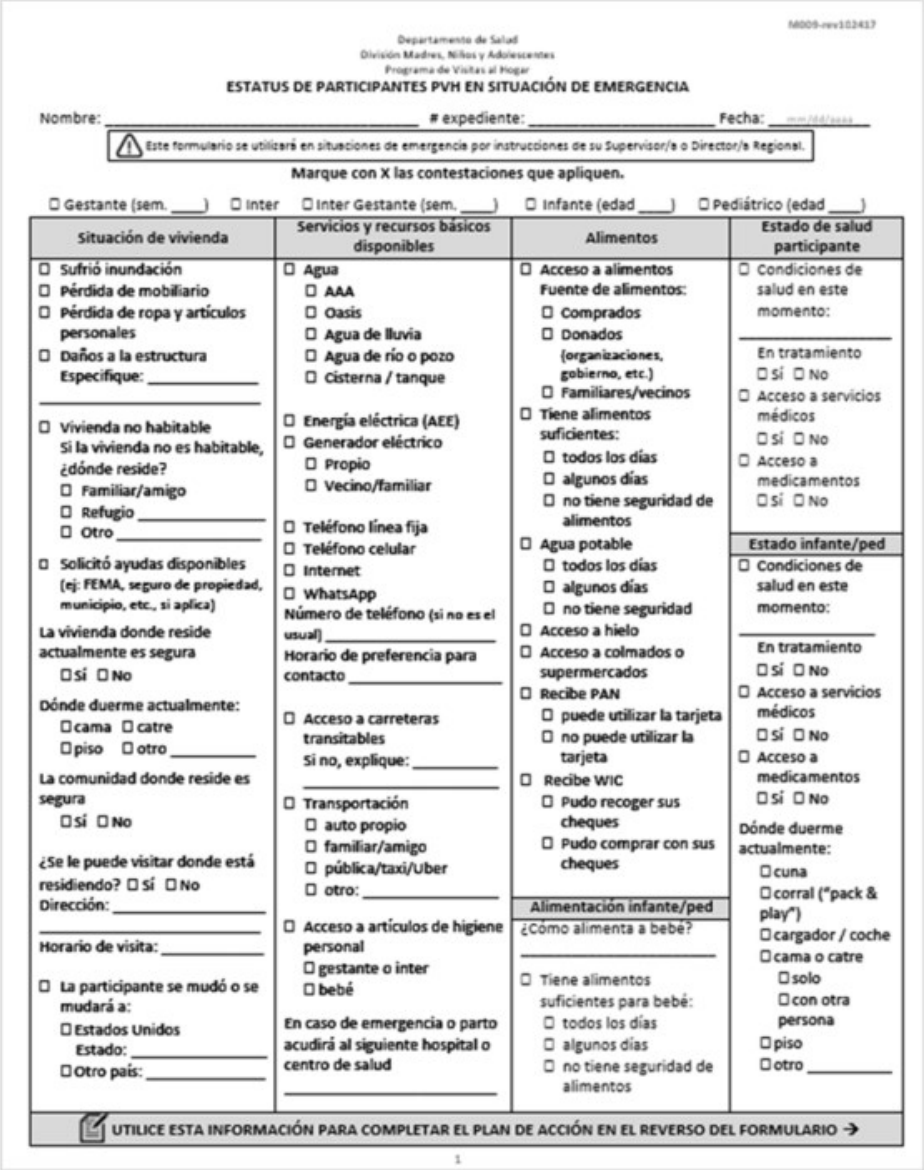
1. Housing situation: damages to or loss of the home and personal possessions, current living arrangements, availability of a safe space for baby to sleep, plans to relocate, etc.
2. Status of utilities and basic services: water, electric power (grid or generator), transportation, etc.
3. Drinking water and safe food for adults, infants and children: access to supermarkets, availability of foodstuffs in stores, availability of baby food or formula if not breastfeeding, access to WIC or PAN funds to pay for food, access to ice or refrigeration for safe storage of perishables, etc.

4. Health status of participant and family members: access to physical and mental health care, adequate supply of medications and vaccines, if needed, etc.
5. For pregnant participants, plans for delivery if their hospital or OB of choice was not available, plans for transportation to hospital, etc.

A total of 789 HVP participants filled out the instrument between October and December 2017. The information was used by the HVN to delineate an action plan to attend to the family's most pressing necessities, which may have differed from the pre-hurricane needs and action plan.

One in five (21.6%) of the participants who responded to the survey reported their house had suffered damages in the hurricane. Of those whose house was left uninhabitable, 93.2% were living with relatives or friends. The rest were in shelters (4.2%), had rented a house (0.8%) or had other arrangements. None reported having no place to live. Most (83.6%) felt their current house was safe and about the same number (84.6%) stated they felt safe in their neighborhood. At the time of the interviews, 84.9% had running water service; however, only 22.5% had electric service. Two thirds (63.1%) had cell phone service. One quarter of participants (27.6%) stated the roads in their immediate neighborhood were affected or impassable. It's a matter of concern that 39.3% stated they had no access to basic hygiene needs for themselves and 58.3% had no access for their infants. In terms of food, the majority (93.5%) had steady access, but 5.9% stated that on some days they did not have enough food for themselves and 4.0% for their babies. Many participants had difficulties accessing grocery stores (32.3%), receiving their WIC funds (35.9%) and buying foods with the WIC allowance (53.4%). Not only were there shortages of basic food supplies in supermarkets, but the loss of electric power and communications meant there were great difficulties in processing electronic debit transactions. Nearly half of participants (46.7%) stated they did not have access to medications for themselves and 55.1% did for their children's medications; 41.2% could not receive medical services for themselves and 55.1% for their babies. Many pharmacies and medical offices were closed or only partially operational after the storms due to the lack of electric power and running water.

Figure 1. HVP Post-hurricane Needs Inventory



M009-rev102417

Departamento de Salud
División Madres, Niños y Adolescentes
Programa de Visitas al Hogar

ESTATUS DE PARTICIPANTES PVH EN SITUACIÓN DE EMERGENCIA

Nombre: _____ # expediente: _____ Fecha: ___/___/____

⚠ Este formulario se utilizará en situaciones de emergencia por instrucciones de su Supervisor/a o Director/a Regional.

Marque con X las contestaciones que apliquen.

☐ Gestante (sem. ____) ☐ Inter ☐ Inter Gestante (sem. ____) ☐ Infante (edad ____) ☐ Pediátrico (edad ____)

Situación de vivienda	Servicios y recursos básicos disponibles	Alimentos	Estado de salud participante
☐ Sufrió inundación ☐ Pérdida de mobiliario ☐ Pérdida de ropa y artículos personales ☐ Daños a la estructura Especifique: _____ _____ ☐ Vivienda no habitable Si la vivienda no es habitable, ¿dónde reside? ☐ Familiar/amigo ☐ Refugio _____ ☐ Otro _____ ☐ Solicitó ayudas disponibles (ej: FEMA, seguro de propiedad, municipio, etc., si aplica) La vivienda donde reside actualmente es segura ☐ Sí ☐ No Dónde duerme actualmente: ☐ cama ☐ catre ☐ piso ☐ otro _____ La comunidad donde reside es segura ☐ Sí ☐ No ¿Se le puede visitar donde está residiendo? ☐ Sí ☐ No Dirección: _____ _____ Horario de visita: _____ ☐ La participante se mudó o se mudará a: ☐ Estados Unidos Estado: _____ ☐ Otro país: _____	☐ Agua ☐ AAA ☐ Oasis ☐ Agua de lluvia ☐ Agua de río o pozo ☐ Cisterna / tanque ☐ Energía eléctrica (AEE) ☐ Generador eléctrico ☐ Propio ☐ Vecino/familiar ☐ Teléfono línea fija ☐ Teléfono celular ☐ Internet ☐ WhatsApp Número de teléfono (si no es el usual) _____ Horario de preferencia para contacto _____ ☐ Acceso a carreteras transitables Si no, explique: _____ _____ ☐ Transportación ☐ auto propio ☐ familiar/amigo ☐ pública/taxi/Uber ☐ otro: _____ ☐ Acceso a artículos de higiene personal ☐ gestante o inter ☐ bebé En caso de emergencia o parto acudirá al siguiente hospital o centro de salud _____	☐ Acceso a alimentos Fuente de alimentos: ☐ Comprados ☐ Donados (organizaciones, gobierno, etc.) ☐ Familiares/vecinos ☐ Tiene alimentos suficientes: ☐ todos los días ☐ algunos días ☐ no tiene seguridad de alimentos ☐ Agua potable ☐ todos los días ☐ algunos días ☐ no tiene seguridad ☐ Acceso a hielo ☐ Acceso a colmados o supermercados ☐ Recibe PAN ☐ puede utilizar la tarjeta ☐ no puede utilizar la tarjeta ☐ Recibe WIC ☐ Pudo recoger sus cheques ☐ Pudo comprar con sus cheques **Alimentación infante/ped** ¿Cómo alimenta a bebé? _____ ☐ Tiene alimentos suficientes para bebé: ☐ todos los días ☐ algunos días ☐ no tiene seguridad de alimentos	☐ Condiciones de salud en este momento: _____ En tratamiento ☐ Sí ☐ No ☐ Acceso a servicios médicos ☐ Sí ☐ No ☐ Acceso a medicamentos ☐ Sí ☐ No **Estado infante/ped** ☐ Condiciones de salud en este momento: _____ En tratamiento ☐ Sí ☐ No ☐ Acceso a servicios médicos ☐ Sí ☐ No ☐ Acceso a medicamentos ☐ Sí ☐ No Dónde duerme actualmente: ☐ cuna ☐ corral ("pack & play") ☐ cargador / coche ☐ cama o catre ☐ solo ☐ con otra persona ☐ piso ☐ otro _____

UTILICE ESTA INFORMACIÓN PARA COMPLETAR EL PLAN DE ACCIÓN EN EL REVERSO DEL FORMULARIO →

1

MCAHD PROGRAMS FOR WRA/MH

The MCAHD reaches the population of WRA and pregnant women through various strategies. At the individual level, the Home Visiting Program (HVP) focuses on pregnant women at high risk for adverse birth outcomes. Home Visiting Nurses (HVNs) offer education, support and care coordination to women from pregnancy through two years after the birth of their child. Perinatal Nurses visit birthing hospitals to provide education and referrals to new mothers, regardless of risk level. On the other hand, at the community level the Health Educators design educational activities and materials on maternal and child health topics and lead the public education efforts. The Community Health Workers (CHWs), in turn, offer educational and health promotion activities in the community.

To develop these strategies, in 2017-18 the MCAHD Regional personnel included 81 Home Visiting Nurses in 70 of the 78 municipalities; 7 Perinatal Nurses who visit birthing hospitals; 7 Health Educators; and 46 Community Health Workers.

HOME VISITING PROGRAM

The Home Visiting Program (HVP), staffed by the Home Visiting Nurses (HVNs), operates in 73 municipalities. The Home Visiting Nurses (HVNs) offer holistic case management, care coordination, support and education services to pregnant and parenting women, their children up to age 2, and their families. They use a series of screening instruments and tools to identify participants' strengths and needs based on a bio-psychosocial model of care. HVNs educate participants regarding protective behaviors, including appropriate prenatal care, healthy eating, physical activity, breastfeeding, positive parenting, infant and child development, safety, and related topics. Risk behaviors that can affect mother and baby are also emphasized, including alcohol use, smoking, prescription and over-the-counter medication use, exposure to toxic substances, stress, intrafamily and partner violence, maternal depression, and related topics. HVNs refer participants to care providers in the community according to the identified needs and offer follow up to ensure services are received. They also monitor whether pregnant women are receiving adequate PNC and that infants and children are receiving care according to EPSDT guidelines.

Criteria for admission to the program include:

- primigravidas up to 21 or over 35 years of age
- primigravidas with chronic health conditions (diabetes, hypertension, lupus, epilepsy, among others), morbid obesity, or Zika virus infection, regardless of age
- pregnant women with a previous pregnancy or infant loss and no living children.

The *HVP Norms and Procedures Manual* was revised in 2017 to have a stronger bio-psychosocial component and reflect evidence-based or promising practices. The HVP Coordinator, Evaluator and Title V Mental Health Consultant visited the Health Regions to present the changes in the program's focus and approach. During 2018, the staff carried out a complete overhaul of all the participant forms and screening instruments to reflect the emphasis of the revised *Norms and Procedures Manual*.

HVP – INTERVENTIONS WITH PARTICIPANTS

The majority of the HVNs interventions are with families, particularly pregnant and parenting women, their babies, and their families, although they offer limited group orientations if required. During 2017-2018, the HVP provided services to 6,347 participants, distributed as follows:

HOME VISITING PROGRAM
PARTICIPANTS BY CATEGORY AND AGE GROUP 2017-2018

Participant category	# (%)
Pregnant women ≤ 21 y/o	584 (65.0)
Pregnant women ≥ 22 y/o	314 (35.0)
Total pregnant	**898 (100.0)**
Interconceptional women ≤ 21 y/o	1,678 (63.0)
Interconceptional women ≥ 22 y/o	984 (37.0)
Total interconceptional	**2,662 (100.0)**
Pregnant interconceptional women ≤ 21 y/o	54 (74.0)
Pregnant interconceptional women ≥ 22 y/o	19 (26.0)
Total pregnant interconceptional	**73 (100.0)**
Infants (< 12 months)	1,128 (41.6)
Children (12 – 24 months)	1,586 (58.4)
Total infants/children	**2,714 (100.0)**
TOTAL PARTICIPANTS	**6,347**
Total participating families	**3,633**

Source: HVP annual report, 2017-18, MCAHD.

Of the 3,633 women, 1,281 were newly-admitted pregnant participants. Slightly less than half (45.3%) entered the

HVP in the first trimester of pregnancy. However, the majority (84.2%) had started their prenatal care in the first trimester of pregnancy. The majority (91.7%) of HVP participants were GHP beneficiaries; 7.3% had private insurance and only 0.9% report paying out of pocket for medical care.

During 2017-2018, HVNs had an average caseload of 26 families. They completed 26,111 home visits. Another 2,907 visits were attempted but proved unsuccessful. HVNs carried out 54,097 interventions with participants, as detailed in the following table.

HOME VISITING PROGRAM
INTERVENTIONS WITH PROGRAM PARTICIPANTS 2017-2018

Category	Interventions				
	Home visit	Phone call	HVN's office	Other	Total
Pregnant	8,755	2,207	388	329	1,1679
Interconceptional	17,115	3,268	529	479	21,391
Pregnant interconceptional	370	105	10	11	496
Infants (<12 months)	10,784	1,261	236	220	12,501
Children (12–24 months)	6,910	664	234	222	8,030
TOTAL	**43,934**	**7,505**	**1,397**	**1,261**	**54,097**

Source: HVP annual report, 2017-18, MCAHD.

A tobacco use history instrument was administered to 699 pregnant participants, 77 of whom stated they had ever smoked. The following table shows their current tobacco smoking status:

HOME VISITING PROGRAM
HISTORY OF TOBACCO USE 2017-2018

Current status of ever-smokers	n	%
Smoke same amount as before pregnancy	0	0
Decreased # of cigarettes smoked since becoming pregnant	4	5.2
Stopped smoking during pregnancy	58	75.3
Stopped smoking before pregnancy	15	19.5
TOTAL	**77**	**100**

Source: HVP annual report, 2017-18, MCAHD.

In addition, an alcohol and drug use screening instrument based on the 4P+ screen was administered to 851 pregnant participants. Results are shown in the following table. Women are generally aware that alcohol, tobacco and other drug (ATOD) use during pregnancy carries a stigma; therefore, accurate information is frequently withheld from health care providers. With this in mind, the HVNs offer education on the effects of ATOD on the fetus to all women, regardless of their admitted use.

HOME VISITING PROGRAM
ALCOHOL AND OTHER DRUG SCREENING 2017-2018

ITEM	%
Parents had problems with drug or alcohol use	11.1
Partner has problems with drug or alcohol use	2.8
Partner's temper has caused problems	2.7
Participant has ever drunk alcohol	44.8
Participant drank any alcohol in the month before pregnancy	13.0
Frequency of alcohol use in the month before pregnancy	
Every day	0.0
3-6 days per week	2.8
1-2 days per week	10.1
Less than 1 day per week	62.4
Never	24.8
Frequency of alcohol use in the month before the interview	
Every day	0.0
3-6 days per week	0.0
1-2 days per week	0.0
Less than 1 day per week	1.0
Never	99.0
Frequency of drug use in the month before pregnancy	
Every day	2.0
3-6 days per week	1.0
1-2 days per week	1.0
Less than 1 day per week	0.0
Never	96.0
Frequency of alcohol use in the month before the interview	
Every day	0.0
3-6 days per week	0.0
1-2 days per week	0.0
Less than 1 day per week	0.0
Never	100.0

Source: HVP annual report, 2017-18, MCAHD.

Two thirds of participants reported having visited a dentist during pregnancy (65.2%) and in the interconceptional period (64.2%).

HVNs and regional HVP supervisors received training on the prevalence and impact of perinatal mood and anxiety disorders (PMAD) in pregnant and postpartum women as well as on the effects that maternal wellbeing has on the mother-infant relationship. Strategies to prevent, identify and refer participants who are at high risk of developing PMADs were reinforced with additional training. HVNs and supervisors also received training on crisis intervention to reinforce skills.

All participants of the HVP were screened for maternal depression/anxiety using the 10-question Edinburgh Postnatal Depression Scale (EPDS) at least once during pregnancy and up to three times during the first year postpartum, for a total of 1,933 screens. Participants who present symptoms suggestive of depression can also be screened at any other time at the HVN's discretion. Close monitoring of symptoms and progress is provided to all those who scored ≥10 or who had a positive response to item 10 of the EPDS, which indicates suicidal ideation. These cases were referred for prompt mental health attention, per the HVP protocol.

The following table details the scores obtained by participants in the EPDS and the action taken by the HVN according to the level of risk identified by the scale.

HOME VISITING PROGRAM
EDINBURGH POSTNATAL DEPRESSION SCALE 2017-2018

Score obtained	%
<10 points	88.6
10-12 points	5.7
>12 points	5.7
Action taken by HVN (score >10 points)	
Referred to mental health professional	53.6
Referred, but participant refuses referral	9.8
Education	5.4
Participant is receiving mental health care	24.6
No referral	5.4
Information not available	1.3
Item 10 (suicidal ideation)	
Negative (no ideation)	98.6
Positive (ideation)	1.4
Action taken by HVN (if item 10 is positive)	
Referred to mental health professional	85.2
Referred, but participant refuses referral	3.7
Participant is receiving mental health care	11.1

Source: HVP annual report, 2017-18, MCAHD.

In terms of deaths among HVP participants, 53 families (1.45%) experienced a death during pregnancy or infancy, as detailed in the following table:

HOME VISITING PROGRAM
DEATHS OF PARTICIPANTS 2017-2018

Miscarriages (< 20 wks)	Fetal deaths (≥ 20 wks)	Infant deaths (<12 m/o)	Child deaths (1-22 y/o)	Maternal deaths
33	14	6	0	0

Source: HVP annual report, 2017-18, MCAHD.

Per the HVP protocol, all families experiencing a loss are followed for 3 to 6 months. During this time the HVN supports the grieving mother and other members of the family, with an emphasis on grief management, depression screening, as well as offering education on postpartum and well woman care, interconceptional spacing, and other women's health topics. Referrals for mental or physical health services are provided as needed before the participant leaves the program.

HVP – ACTIVITIES AT THE COMMUNITY LEVEL

In addition to the interventions with HVP participants, the HVNs offer education, support and care coordination on a limited basis to pregnant and parenting women in the community who do not qualify for the HVP or who are not able to engage in a long-term commitment to the program. Partners, relatives and friends of HVP participants are also offered education to prepare them to support their loved ones. This is a way to increase the scope and reach of the mission of the MCAHD for vulnerable populations. The following table summarizes the interventions with these groups.

HOME VISITING PROGRAM
INTERVENTIONS WITH NON-PARTICIPANTS 2017-2018

Participant category	Interventions				
	Home visit	Phone call	HVN's office	Other	Total
Pregnant women	562	380	240	418	**1,600**
Non-pregnant women	1,848	281	515	796	**3,440**
Men	672	31	210	432	**1,345**
Infants (<12 months)	243	67	106	136	**552**
Children (12–24 months)	155	42	108	172	**477**
TOTAL	**3,480**	**801**	**1,179**	**1,954**	**7,414**

Source: HVP annual report, 2017-18, MCAHD.

A total of 1,564 referrals were given to non-participants of the HVP, as detailed below:

HOME VISITING PROGRAM
REFERRALS FOR NON-PARTICIPANTS 2017-2018

Referred to	Total
Government Health Plan (GHP)	63
Prenatal care	150
Medical care (adults)	202
WIC	100
Department of the Family	69
Housing Department	177
Municipal services	54
Department of Education	7
Mental health	49
Oral health	71
Breastfeeding support groups	37
Avanzando Juntos	74
Pediatrician	37
Home Visiting Program	96
Others	378
Total	1,564

Source: HVP annual report, 2017-18, MCAHD.

HVNs are offered in-service training on a regular basis to ensure they have the most updated information regarding MCH issues and have the tools and skills needed for effective interventions with their participants. During 2017-18, the following topics were offered:

HOME VISITING PROGRAM
HVN TRAINING TOPICS 2017-2018

July 2017	Oral health and dental cavity screening Reference materials for infant and child care
August – December 2017	Presentation of the revised Home Visiting Manual
September 2017 – February 2018	Intimate partner violence
January – February 2018	Maternal mental health and wellbeing
May 2018	ASQ-3 & ASQ:SE-2
June 2018	HIPAA update (self-study module)

Source: HVP annual report, 2017-18, MCAHD.

The Regional HVP supervisors hold monthly meetings with the HVP Coordinator, Evaluator and the Title V Mental Health Consultant. The focus of these meetings is to present new information that pertains to the program, discuss challenges and successes, weigh options to overcome any challenges, and facilitate uniformity and quality of implementation of the program model at the local level.

PERINATAL NURSES – INDIVIDUAL AND GROUP INTERVENTIONS

During 2017-18 the 8 Perinatal Nurses (PNs) offered education and referrals to pregnant and postpartum women and their companions in birthing hospitals throughout the Island. The total population reached (unduplicated) was 8,513, distributed as follows:

PERINATAL NURSES
POPULATION REACHED 2017-2018

Participant type	#	%
Pregnant women	893	10.5%
Pospartum women	5089	59.8%
Companion – male	1,119	13.1%
Companion – pregnant	11	0.1%
Companion – non-pregnant	1,401	16.5%
Total	**8,513**	**100.0%**

Source: Perinatal Nurse annual report, MCAHD.

In addition to the individual and group interventions, the PNs carried out 8,313 visits to hospitals, private and public agencies and organizations to promote their services, gather information regarding available services, and to coordinate care for pregnant and postpartum women.

The following two tables reflect the number of orientations offered to the population reached by the PNs. The first reflects individual orientations and the second shows the group orientations.

PERINATAL NURSES
INDIVIDUAL ORIENTATIONS 2017-2018

Topic	Pregnant women	Postpartum women	Companions			Total
			Males	Pregnant women	Non-pregnant women	
Women's health	106	323	105	6	448	988
Prenatal care	446	18	23	6	14	507
Risks in pregnancy	497	13	21	4	12	547
Labor and childbirth	202	64	19	7	25	317
Postpartum care	64	2,410	666	11	906	4,057
Breastfeeding	179	4,059	656	7	685	5,586
Neonatal screening	26	1,957	514	3	506	3,006
Care of the premature baby	4	105	32	4	28	173
Care of the newborn	130	3,782	855	3	718	5,488
EPSDT	86	2,199	311	1	291	2,888
Car seat use	48	1,484	193	1	174	1,900
Prevention of violence	0	4	0	1	0	5
Family planning	43	1,436	314	30	351	2174
Total	**1,831**	**17,854**	**3,709**	**84**	**4,158**	**27,636**

Source: Perinatal Nurse annual report, MCAHD.

PERINATAL NURSES
PERSONS REACHED IN GROUP ORIENTATIONS 2017-2018

Topic	Pregnant women	Postpartum women	Companions			Total
			Males	Pregnant women	Non-pregnant women	
Women's health	0	0	0	0	0	0
Prenatal care	2	1	1	0	0	4
Risks in pregnancy	2	1	1	0	0	4
Labor and childbirth	1	0	0	0	1	2
Postpartum care	0	15	5	0	9	29
Breastfeeding	1	20	5	0	11	37
Neonatal screening	0	4	3	0	1	8
Care of the premature baby	0	0	0	0	0	0
Care of the newborn	0	16	3	0	8	27
EPSDT	0	5	2	0	4	11
Car seat use	0	1	3	0	3	7
Prevention of violence	0	0	0	0	0	0
Family planning	0	1	0	0	1	2
Total	**6**	**64**	**23**	**0**	**38**	**131**

Source: Perinatal Nurse annual report, MCAHD.

COMMUNITY HEALTH WORKERS AND HEALTH EDUCATORS

During 2017-2018, educational efforts of CHWs and HEs were focused on group interventions in schools, communities, health service provider sites, and other activities. The population groups reached include reproductive age women, pregnant and parenting women and their companions, and the general public. In the reporting year, there were 7 HE (one per region) and 46 CHWs, distributed as follows:

Region	Number of CHWs
Arecibo	6
Bayamón	9
Caguas	7
Fajardo	3
Mayagüez	10
Metro	3
Ponce	8
Total	46

In regards to women of reproductive age and maternal health (WRA/MH), the main interventions are the Prenatal Course and group orientations on various aspects of women's health, pregnancy and reproductive health.

The Prenatal Course consists of four educational sessions that include information and educational activities divided into the following topics: healthy lifestyles, prenatal care, risk behaviors, stages and changes in pregnancy, conditions affecting pregnancy, delivery planning, delivery process, signs and prevention of premature birth, caesarean birth, postpartum care, baby care, breastfeeding, birth spacing and family planning. Information on the transmission of Zika and preventive measures, its effect on the fetus and the need to test during pregnancy for infection has been added to this course. As part of the course, the participants complete a socio-demographic profile and a pre-and post-test. The Prenatal Course was offered by both CHWs and HEs, as shown in the following table.

COMMUNITY HEALTH WORKERS AND HEALTH EDUCATORS
PRENATAL CARE COURSE 2017-2018

Staff offering the course	CHW	HE	TOTAL
Number of courses offered	252	21	273
Total participants	1,235	194	1,429
Participants who completed 4 sessions	1,142 (92.5%)	181 (93.3%)	1,323 (92.6%)

Source: CHW and HE annual reports 2017-18, MCAHD.

Health education topics on WRA/MH include women's preventive physical and mental health care; family planning, reproductive decision-making and contraceptive methods; preconceptional health including control of chronic conditions before pregnancy; interpregnancy spacing; use of folic acid and prevention of birth defects; healthy relationships; intrafamily and intimate partner violence; physical activity and nutrition for a healthy weight; seasonal diseases (influenza, Chikungunya, dengue and others); and community services related to depression, addiction, violence, child care, among others. Topics related to Zika virus transmission include signs and symptoms, effects on the fetus, prevention of mosquito bites and mosquito control inside and outdoors, and the use of condoms for protection from sexual transmission. All educational presentations and materials are revised and updated by the Health Educators as needed.

Community Health Workers reached a total of 27,869 persons aged 10 and up through a variety of activities covering these topics, including individual orientations, prenatal and parenting courses, and group activities in the community, health care provider offices and health fairs. The following table describes the distribution by age and participant category. In addition, 1,210 children ages 3-9 participated in CHW activities.

COMMUNITY HEALTH WORKERS
POPULATION REACHED IN GROUP AND INDIVIDUAL ORIENTATIONS 2017-2018

Age groups	Pregnant		Non-pregnant		Males		Total	
	#	%	#	%	#	%	#	%
10 – 14	18	0.4%	696	3.7%	544	10.9%	1,258	4.5%
15 – 17	268	6.7%	743	3.9%	388	7.8%	1,399	5.0%
18 – 19	412	10.2%	925	4.9%	232	4.6%	1,569	5.6%
20 – 21	626	15.6%	1,397	7.4%	316	6.3%	2,339	8.4%
22 – 34	2,437	60.6%	7,718	40.9%	1,503	30.1%	11,658	41.8%
35 – 54	261	6.5%	5,458	29.0%	1,402	28.1%	7,121	25.6%
55 and over	2	0.0%	1,916	10.2%	607	12.2%	2,525	9.1%
Total	**4,024**	**100.0%**	**18,853**	**100.0%**	**4,992**	**100.0%**	**27,869**	**100.0%**

Source: CHW annual report 2017-18, MCAHD.

The next two tables refer specifically to individual and group interventions of the CHWs with WRA, both pregnant and non-pregnant, by age group. The first table reflects individual orientations and the second pertains to group interventions according to location of the intervention, age group and pregnancy status.

COMMUNITY HEALTH WORKERS
WOMEN REACHED IN INDIVIDUAL ORIENTATIONS 2017-2018

Age group	Status: Pregnant / Non-pregnant	Number
10 - 14	P	5
	NP	41
15 - 17	P	110
	NP	94
18 - 19	P	174
	NP	303
20 - 21	P	221
	NP	373
22 - 34	P	606
	NP	1,462
35 - 54	P	79
	NP	714
	Total	**4,182**

Source: CHW annual report 2017-18, MCAHD.

COMMUNITY HEALTH WORKERS
WOMEN REACHED IN GROUP ORIENTATIONS 2017-2018

Age group	Status: Pregnant / Non-pregnant	Location of educational activity				Total
		Schools	Community	Health care settings	Health fairs	
10 - 14	P	0	3	4	3	10
	NP	411	83	48	103	645
15 - 17	P	4	32	64	10	110
	NP	224	117	116	90	547
18 - 19	P	1	63	98	11	173
	NP	38	117	202	182	539
20 - 21	P	0	93	188	20	301
	NP	26	262	384	252	924
22 - 34	P	4	337	992	84	1,417
	NP	195	993	2,403	1,355	4,946
35 - 54	P	2	29	78	19	128
	NP	135	824	1,694	1,206	3,859
Total participants		**1,040**	**2,953**	**6,271**	**3,335**	**13,599**
Total activities		**167**	**372**	**1,031**	**175**	**1,745**

Source: CHW annual report 2017-18, MCAHD.

The Health Educators reached a total of 8,941 persons aged 10 and over in group and individual orientations, as shown in the following table. In addition, 2,310 children ages 3-9 also participated in educational activities or orientations.

HEALTH EDUCATORS
WOMEN REACHED IN INDIVIDUAL ORIENTATIONS 2017-2018

Age group	Pregnant / Non-pregnant	Number
10 - 14	P	0
	NP	6
15 - 17	P	3
	NP	6
18 - 19	P	6
	NP	6
20 - 21	P	13
	NP	13
22 - 34	P	15
	NP	66
35 - 54	P	4
	NP	70
	Total	**208**

Source: HE annual report 2017-18, MCAHD.

The next two tables reflect the Health Educators' individual and group interventions with WRA, pregnant and non-pregnant, by age group. The first table reports the individual orientations and the second the group interventions according to location of the intervention, age group and pregnancy status.

HEALTH EDUCATORS
WOMEN REACHED IN GROUP ORIENTATIONS 2017-2018

Age group	Status: Pregnant / Non-pregnant	Location of educational activity				Total
		Schools	Community	Health care settings	Health fairs	
10 - 14	P	0	0	1	0	**1**
	NP	812	163	0	189	**1,164**
15 - 17	P	4	9	1	4	**18**
	NP	264	95	2	194	**555**
18 - 19	P	1	8	1	6	**16**
	NP	16	112	4	95	**227**
20 - 21	P	1	14	13	18	**46**
	NP	7	106	9	150	**272**
22 - 34	P	1	74	24	32	**131**
	NP	77	756	69	380	**1,282**
35 - 54	P	0	15	4	4	**23**
	NP	122	923	46	505	**1,596**
Total participants		**1,305**	**2,275**	**174**	**1,577**	**5,331**
Total activities		**164**	**187**	**25**	**46**	**422**

Source: HE annual report 2017-18, MCAHD.

HEALTH EDUCATORS
POPULATION REACHED IN GROUP AND INDIVIDUAL ORIENTATIONS 2017-2018

Age groups	Pregnant		Non-pregnant		Males		Total	
	#	%	#	%	#	%	#	%
10 – 14	1	0.2%	1,170	19.4%	971	38.9%	2,142	24.0%
15 – 17	27	6.6%	69	1.1%	524	21.0%	620	6.9%
18 – 19	29	7.0%	256	4.2%	169	6.8%	454	5.1%
20 – 21	84	20.4%	301	5.0%	77	3.1%	462	5.2%
22 – 34	235	57.0%	1,583	26.2%	266	10.7%	2,084	23.3%
35 – 54	36	8.7%	1,859	30.8%	303	12.1%	2,198	24.6%
55 and over	0	0.0%	795	13.2%	186	7.5%	981	11.0%
Total	**412**	**100.0%**	**6,033**	**100.0%**	**2,496**	**100.0%**	**8,941**	**100.0%**

Source: HE annual report 2017-18, MCAHD.

PUERTO RICO PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PR-PRAMS) AND ZIKA POSTPARTUM EMERGENCY RESPONSE (PRAMS-ZPER)

The major goals of the Puerto Rico Pregnancy Risk Assessment Monitoring System (PR-PRAMS) are to collect data on maternal attitudes, behaviors and experiences that occur prior to, during, and after pregnancy. Data will support TV for scientific decision making and resource allocation for effective and quality programming to reduce maternal and infant morbidity and mortality. Survey response rates for 2017 and 2018 were 63% and 80% respectively. Data for 2017 is available for research.

The MCAH conducted the PRAMS Zika Postpartum Emergency Response (PRAMS-ZPER) project from August 2016 to April 2018 to assess knowledge and concerns about Zika, counseling and testing by health care providers, and use of measures to prevent Zika during pregnancy. The results help plan prevention efforts. ZPER expanded to a 4-part study spanning two years with multiple components, including surveillance to assess response and recovery following Hurricane Maria.

The first island-wide hospital-based study was successfully conducted from August to December 2016 and surveyed women who had just delivered a live infant during their hospital stay between 24 and 36 hours postpartum. Nearly 2,400 women completed the survey for a participation rate of 81%. The results provided the first and only source of population-based information about provider practices, including Zika testing of pregnant women, and use of preventive measures during pregnancy in PR during the 2016 Zika outbreak.

The findings were published in a 2017 CDC Morbidity and Mortality Weekly Report titled Measures Taken to Prevent Zika Virus Infection During Pregnancy — Puerto Rico, 2016. They were also shared internally by the PRDOH to identify health regions with lower Zika testing rates for pregnant women. Findings have also been presented at public health conferences and other forums.

Due to the high participation rates and high quality of the data, ZPER included a postpartum phone follow-up survey and repeated both phases of the project in 2018. The second part of the study incorporated interviews with male partners of the recently pregnant women, an assessment of the impact of Hurricane Maria on pregnant women, and an educational presentation for parents of the newborns who welcomed their babies in the midst of the hurricane recovery efforts. The MCAH moved forward despite the major disruption of all levels of infrastructure across the island due to the hurricane and completed the project with an unprecedented 96% participation rate for new mothers and 77% for their partners. This became the first test of this surveillance methodology in an emergency response setting for an epidemic affecting pregnant women and children following a major natural disaster.

ZPER protocols and methodology are available for other state health departments to use or adapt in the event of a future maternal and child health emergency. There are 5 databases available for research. The project provided population-based surveillance data of high scientific quality during the Zika outbreak that was used to assess

implementation of clinical testing recommendations and women's adherence to recommendations for Zika prevention during pregnancy. These data can also be leveraged to better understand the impact of other initiatives that were ongoing during the Zika outbreak in PR such as the Zika Contraceptive Access Network (ZCAN), and access to services among Zika-affected infants.

The educational presentation for new parents was developed in response to the experience from the first year, when mothers would ask the interviewer questions about caring for their babies and fathers also desired to be involved. It filled a widespread need for information on newborn and maternal postpartum care, in addition to reinforcement of the message about Zika virus prevention. It was offered to over 2,500 new parents who welcomed their newborns in the aftermath of Hurricane Maria. Each family also received informational brochures to reference following hospital discharge, a crib mosquito net, a calendar of the babies' first year that included stickers for noting dates of baby doctor appointments and infant milestones, as well as a section for recording immunizations. Due to the success of the implementation of PRAMS-ZPER, The Coalition for Excellence in MCH Epidemiology awarded the MCAH the 2018 Award for Effective Practice at the State (Territory) Level. The award was received in September 13th at the CityMatCH Leadership and MCH Epidemiology Conference in Portland, OR.

PREVENTIVE HEALTH SERVICES GUIDELINES (PHSG)

During 2016-2017, the MCAH staff developed the Preventive Health Services Guidelines (PHSG), for Women of Reproductive Age (PHSG-WRA) and for Women during the Preconceptional, Prenatal and Post-Partum time periods (PPP-PHSG). The interventions included recommendations given by Federal and State Government Health Agencies, recognized Academic and Non-Government Institutions, including all services covered by Federal Health Recommendations for Puerto Rico. The recommendations selected are consistent with those proposed by the US Preventive Services Task Force, American Congress of Obstetrics and Gynecology, American Academy of Pediatrics, Center Disease Control and Prevention, Institute of Medicine, World Health Organization, Women's Preventive Health Initiative and others.

Screening interventions are aimed at achieving a state of health and well - being in women of reproductive age. This care is advised to be early and periodic. The content of the guidelines describe appropriate care based on scientific evidence and broad consensus while reducing inappropriate variation in practice. They also provide a focus for continuing education and promote efficient use of resources. The goal of MCAH Program is that these guidelines be used to promote optimum health in WRA by recommending periodic preventive medical encounters for screening, physical exam, early diagnosis, treatment and preventive guidance for health care providers, health care providers training centers, community, and WRA.

According to the BRFSS, in 2015, 75.6% of women in Puerto Rico had a past year preventive health care visit, while in 2016 it was 77.7% and in 2017 it was 78.9%; a slowly increase. By providing and promoting PHSG use by providers, women will receive a minimum of uniform quality interventions and screening for early diagnosis, screening and treatment and guidance on achieving optimum health status prior to conception. These PHSG will be followed by periodic yearly reviews and updates to assure the guidelines respond to accepted and recognized evidence.

During 2017-2018 the Guidelines draft were send to stakeholders for review and comments. There was agreement in the content of the document. The crisis created by the hurricanes Irma and María delayed all activities directed to the final implementation as public policy. A lot of the recommendations included in the Guidelines were impossible to be follow with the results of the damage caused by the hurricanes. Also in 2018 the Women's Preventive services Initiative released the Recommendations for Well-Woman Care-A Well Woman Chart; for which a review of our Guidelines will proceed.

MATERNAL MORTALITY

Another priority for the MCAH Program was the review of Maternal Mortality. The Maternal Mortality Epidemiological Surveillance System Act (Act # 186 -2016) was approved on December 8 2016. The Protocol for the implementation

of the Act was developed and submitted to the State Department on July 2017. Communications to the different agencies and entities require to be represented in the MMRC were send with copies of the Act, the Protocol and the request to submit the name of the representation.

As a result of the impact of hurricanes Irma and María the work related to the MMRC was placed on hold. By February 2018, that the communications and electric power supply was restore in most of the island, the TV Evaluator began linking and evaluating the Vital Statistics birth and death data to identify maternal death from 2015. At the same time, communications with personnel working at CDC-MMRIA began in search to complete requirements and start reporting at the application.

Before Act # 186 and through the Maternal Mortality Epidemiologic Surveillance System (MMESS) 121 cases were identified from 2009 to 2014. Still, in spite of a MMESS, it was difficult for the Department of Health to obtain information regarding the process and care of the pregnancy from health care providers and hospital institutions. There continues to be fear that it will be used against them in court. For this reason, it was imperative to adopt a legislation that protected the information collected, the members of a Maternal Mortality Review Committee (MMRC) and the review process, in general.

The initial review of cases began with women younger than 21, identifying interpersonal violence and trauma as a major cause. Women 35 years old or older was the only group without violent or traumatic deaths (homicides or traumas by accidents).

Women/Maternal Health - Application Year

Maternal Health (MH) and Women's Reproductive Health (WRH) will continue to be priorities for the MCAHD. Promoting changes in attitudes and the adoption of healthful behaviors by women starting long before they think of pregnancy increases the likelihood of positive birth outcomes. Establishing healthy habits and an optimal health condition prior to conception protects the embryo and fetus in a very vulnerable period from the harmful effects of smoking, alcohol, drugs, stress, etc. Promoting healthy lifestyles decreases the incidence of health risks and chronic diseases that complicate pregnancy and adversely affect birth outcomes and maternal health and morbidity (diabetes, hypertension, obesity, etc.). These efforts must take into account social, cultural and environmental factors that can have a positive or negative effect the woman's physical and mental wellbeing.

HOME VISITING PROGRAM

The *HVP Documentation Manual* was published and distributed in 2019, with a two-day training for all HVNs, Supervisors and Regional Directors. Information about this training and the implementation of the new forms will be submitted in next year's Annual Report.

Maternal health care will continue to be a main feature of the Home Visiting Program (HVP). The Home Visiting Nurses (HVN) will continue to receive periodic in-service training on various aspects of women's physical and mental health, including preconceptional, prenatal and postpartum care, so they can offer updated information to participants, as well as on effective interventions with participants. This double-pronged approach improves both the content and the delivery of their interventions.

HVP participants will continue to be screened for maternal depression using the Edinburgh Postnatal Depression Scale. Alcohol, tobacco and drug use is assessed using a modified 4P+ Scale, which is complemented with a tobacco use history for ever-smokers. Beginning in 2019, the HVP has added the following screening tools: Cambridge Worry Scale, which assesses sources of worry or stress related to pregnancy and childbirth; Adverse Childhood Exposure (ACEs), which identifies women who have a history of traumatic experiences and enables HVNs to take a trauma-informed approach to their interventions; and the Women's Experience with Battering scale, to identify women at risk for physical or emotional violence. The information garnered from these screening instruments, taken together with the participant's Biopsychosocial Profile (the core participant record), is used by the HVNs to develop the care plan for each participant. The HVNs' interventions will continue to feature health education and support, as well as case management and care coordination by means of referrals to available services in the community.

The HVP protocol specifies the educational and support interventions that are offered to all pregnant and interconceptional women; however, the HVNs will continue to personalize their actions according to the participant's needs and available resources. In addition, the HVP reacts to emerging threats or needs and incorporates the response into the protocol accordingly, as has been the case with the Zika virus epidemic and the hurricanes Irma and Maria. MCAHD staff remains on the alert for additional health topics or modifications to the approach that is taken with participants, and will make the necessary adaptations to the protocol, instruments or educational materials to respond accordingly.

HVNs will continue to offer education, support, care coordination and case management to pregnant and parenting women, their children up to age 2, and their families. They will continue to pay special attention to women who quit smoking during pregnancy to avoid relapse. Nutrition and physical activity during and after pregnancy, postpartum care, well-woman health care, maternal mental health and wellbeing are some of the topics that make up the WRA/MH component of the HVP curriculum.

COMMUNITY HEALTH WORKERS, HEALTH EDUCATORS AND EDUCATIONAL CAMPAIGNS

Community Health Workers (CHWs) and regional Health Educators (HE) will continue to participate in educational and outreach activities at the community and individual level, including group orientations in schools and universities, health care provider offices, human services offices and other locations where the MCH population can be reached. In addition to providing education and orientation on health topics, the CHWs identify women who do not have health insurance coverage and refer them to the Medicaid office for evaluation of eligibility and certification. They also identify pregnant women who are not receiving prenatal care and other persons who are not otherwise connected to the health care system and provide referrals for needed health services.

HEs and CHWs will continue to include the topics of oral health, nutrition and physical activity, Zika and other mosquito-borne diseases, alcohol, tobacco and drug use, family planning, well-woman care, premature birth signs and symptoms, the Hard Stop policy that discourages elective inductions or cesareans before 39 weeks of pregnancy, and related MCH topics in educational activities and individual orientations in the community. The HEs will continue to revise and update the educational materials and curricula used by the CHWs and HVNs to include emerging conditions and incorporate the latest evidence-based information.

The CHWs will continue to deliver the prenatal course “A Baby on its Way” in the communities. The purpose is to provide participants with the necessary knowledge and tools to have a healthy pregnancy and delivery, prevent risk behaviors, provide appropriate care for the baby, recognize the laws and regulations that promote quality birthing services and support for breastfeeding initiation in the hospital. The target populations are pregnant women and their companions. This course will also continue to be available for train the trainer activities to disseminate information through other agencies. These actions seek to effectively use every opportunity to disseminate information and prevention strategies, in collaboration with organizations that also provide education to professionals and communities, in general.

The “Encounter of my life” (*Encuentro de mi vida*) prenatal education campaign that started in 2018 emphasizes the importance of completing 40 weeks of pregnancy, attending prenatal care regularly, adopting healthy behaviors and avoiding risks during pregnancy. It covers also the postpartum period and the importance of breastfeeding and having the father and other relatives support mom and baby. The campaign will continue to be disseminated in digital, broadcast and print media, with emphasis on social media and the web page www.encuentrodemivida.com.

PUERTO RICO PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PR-PRAMS) AND ZIKA POSTPARTUM EMERGENCY RESPONSE (PRAMS-ZPER)

Zika continues to be an important concern for the MCAHD and will continue to be as the emerging effects on the fetus are identified in surviving children. The Zika virus is transmitted both by sexual contact and via its vector, the *Aedes aegypti* mosquito, which is endemic year-round due in PR. Therefore, the control and eradication of Zika endemic in PR remains an urgent and constant challenge for the PRDOH. Preconception orientation is important to empower women of reproductive age (WRA) to make informed decisions. These decisions must consider the risks of Zika in the context of the various methods of birth control to carefully plan pregnancies and reduce unintended pregnancies as well as barrier methods for pregnant women to avoid the risk of Zika virus infection and its harmful effects on the fetus. MCAH staff will continue to distribute brochures and provide orientations directed to WRA and their communities, related to signs and symptoms of Zika, prevention of mosquito’s bites and community cleaning to eliminate mosquito breeding sites. Also directed to pregnant women, signs and symptoms and risks of Zika infection orientations will be provided.

The MCAH Home Visiting Nurses (HVNs) and Community Health Worker (CHWs) will continue to provide health information at the community level and one-on-one orientation during home visits. They will distribute brochures to reinforce the verbal information. They will also continue to distribute mosquito repellents and condoms in their educational efforts with WRA. The HVN and CHW will continue to promote early prenatal care and testing for Zika in pregnancy as well as the referral to the (PRDOH) surveillance system to follow up with babies born to Zika-positive

mothers.

The MCAH staff will continue collaborating with the efforts directed by the CDC and the PRDOH for the investigation and management of this virus threat. This includes the analysis of the spread of the disease and the profile of affected women and babies. PR MCAH Division will disseminate information collected in the Puerto Rico Pregnancy Risk Assessment Monitoring System Zika Postpartum Emergency Response Survey (PRAMS-ZPER).

MCAH will continue to provide support to the educational and preventive campaigns which have emerged as a response to the Zika threat. These efforts will be especially directed at educating pregnant women as well as women and men in reproductive age (including youths) on how to protect themselves and their families from contracting the Zika virus from either mosquito bites or by sexual transmission.

The Puerto Rico Pregnancy Risk Assessment Monitoring System (PR-PRAMS) data will support TV's scientific decision making and resource allocation for effective and quality programming to reduce maternal and infant morbidity and mortality. The PR-PRAMS Steering Committee will use findings to guide recommendations for developing or modifying intervention programs or for securing resources for program changes. Survey response rates for 2017 and 2018 were 63% and 80%, respectively. Data for 2017 is currently available for research. The survey will continue during years 2019-2020. Data from 2018 will be available in 2020.

PREVENTIVE HEALTH SERVICES GUIDELINES

Improving WRA's preconceptional and interconceptional health status decreases the incidence of chronic diseases that complicate pregnancy and adversely affect birth outcomes and maternal health and morbidity. The goal of the Preventive Health Services Guidelines (PHSG) is to include health care since the first menses, including interconceptional health care. Guidelines were designed to support the decision-making processes in patient care as recommended by the American College of Obstetrics and Gynecology (ACOG), US Preventive Task Force and many other recognized agencies as part of the Women's Preventive Health Initiative. Primary care health providers are responsible for educating WRA under their care of the importance of family planning, birth spacing and the benefits of early PNC, for optimum preconceptional health.

The Preventive Health Services Guidelines for Women of Reproductive Age (PHSG-WRA) and the Preconceptional, Prenatal and Post-Partum Preventive Health Services Guidelines (PPP-PHSG) for Puerto Rico developed in collaboration with experts in women's health care in Puerto Rico are being review according to the Recommendations for Well-Woman Care by the Women's Preventive Services Initiative. Then will be submitted and recommended for approval as a Public Policy by the Secretary of the Department of Health. Once approved, these PHSG will be disseminated to the government and private health insurance providers, health professionals' organizations and community organizations during 2019-2020. A recommendation for a period of orientation to familiarize with the Guidelines will be followed by a mandated order of compliance. The PHSG as Public Policy will promote screening in a uniform and consistent manner. Data regarding fulfillment will be required from the Government and Private Health Insurances to assess compliance with the Public Policy. Also, the PHSG-WRA and PPP-PHSG will have an every two years review for updating to maintain excellence in care. These guidelines will be published in the PRDOH Web Page and reach up to our stakeholders and other government agencies for broader distribution.

From the stakeholder's perspective, an outreach strategy for the Preventive Guidelines (PHSG) will be through the MCAH Regional Boards (RB). An educational orientation will be given to the RB for distribution among employees and patients of government agencies and community programs that participate in the RB.

Other dissemination strategies are to access opportunities where groups of health services providers convene. For example, the Obstetricians and Gynecologist annual meeting where MCAH Staff has been invited to present the PHSG. Other opportunities are Faculty Meetings and Grand Rounds at Hospitals around the Island. There are 68 Hospitals and 4 Schools of Medicine in Puerto Rico, so the PR Hospital Association and the OB GYN Grand Rounds will be accessed for a presentation of the PHSG. The MCAH Program will continue reinforcing awareness of

importance of updated and quality Prenatal Care services to pregnant women as soon as requested. Also, health promotion activities by the MCAHD will include as part of their topics the PHSG-WRA and PPP-PHSG, and facilitate dissemination throughout the community. The PHSG will also be disseminated to the general population and to other health providers, like pharmacists and nutritionists, caring for pregnant women, with the objective to decrease maternal death and improve birth outcomes.

MATERNAL MORTALITY REVIEW

Another priority for the MCAH Division is to implement Act 186 of 2016, the Puerto Rico Maternal Mortality Epidemiological Surveillance System Act (SiVEMMa), which provides the legal tools for the collection of data needed for a complete review of maternal deaths in PR (underlying health, social and other contributing factors). The Act also provides for the creation of the Maternal Mortality Review Committee (MMRC), which is charged with the review of maternal deaths to make recommendations for preventive actions, and stipulates its composition, privacy, legal protection, and responsibilities.

The Maternal Mortality Committee was convened in April 2019 to set the agenda for the work they will be doing in the coming year. At this meeting, the participants received information regarding the SiVEMMa law and protocol, an overview of recent MM statistics, criteria to establish priorities, the procedure for case presentations and proposed dates for future meetings.

Activities proposed for 2019-20 include the following:

- Develop a presentation regarding Act #186 that will be offered in hospitals to orient them to the requirements of said law.
- Prepare a brochure and other promotional materials regarding Act #186 and disseminate it to increase awareness among hospitals and health care providers.
- Garner collaboration of the Hospital Association, PR Health Insurance Administration (PRHIA), the Administration of Medical Services of Puerto Rico (ASEM) and other stakeholders.
- The SiVEMMa coordinator and OB-GYN consultant will visit hospitals where a maternal death has occurred to train the regional Perinatal Nurses on data extraction from the hospital records, which will increase the capacity of the MCAHD to present cases to the MMRC.
- Convene the MMRC members for cases review.
- Use the CDC Maternal Mortality Review Information Application (MMRIA), which allows data to be compared nationally.
- Develop reports to be share with stakeholders and to be use developing strategies for MM decrease.

Perinatal/Infant Health

Linked National Outcome Measures

National Outcome Measures	Data Source	Indicator	Linked NPM
NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths	NVSS-2016	8.0	NPM 3
NOM 9.1 - Infant mortality rate per 1,000 live births	NVSS-2016	7.6	NPM 3 NPM 4
NOM 9.2 - Neonatal mortality rate per 1,000 live births	NVSS-2016	5.1	NPM 3
NOM 9.3 - Post neonatal mortality rate per 1,000 live births	NVSS-2016	2.5	NPM 4
NOM 9.4 - Preterm-related mortality rate per 100,000 live births	NVSS-2016	244.2	NPM 3
NOM 9.5 - Sleep-related Sudden Unexpected Infant Death (SUID) rate per 100,000 live births	NVSS-2016	63.7	NPM 4

National Performance Measures

NPM 3 - Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)
Indicators and Annual Objectives

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective	70.8	74.8	29.5
Annual Indicator	74.4	57.9	51.5
Numerator	285	205	157
Denominator	383	354	305
Data Source	Vital Statistics	Vital Statistics	Vital Statistics
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	51.6	51.7	51.8	51.9	52.0	52.1

Evidence-Based or –Informed Strategy Measures

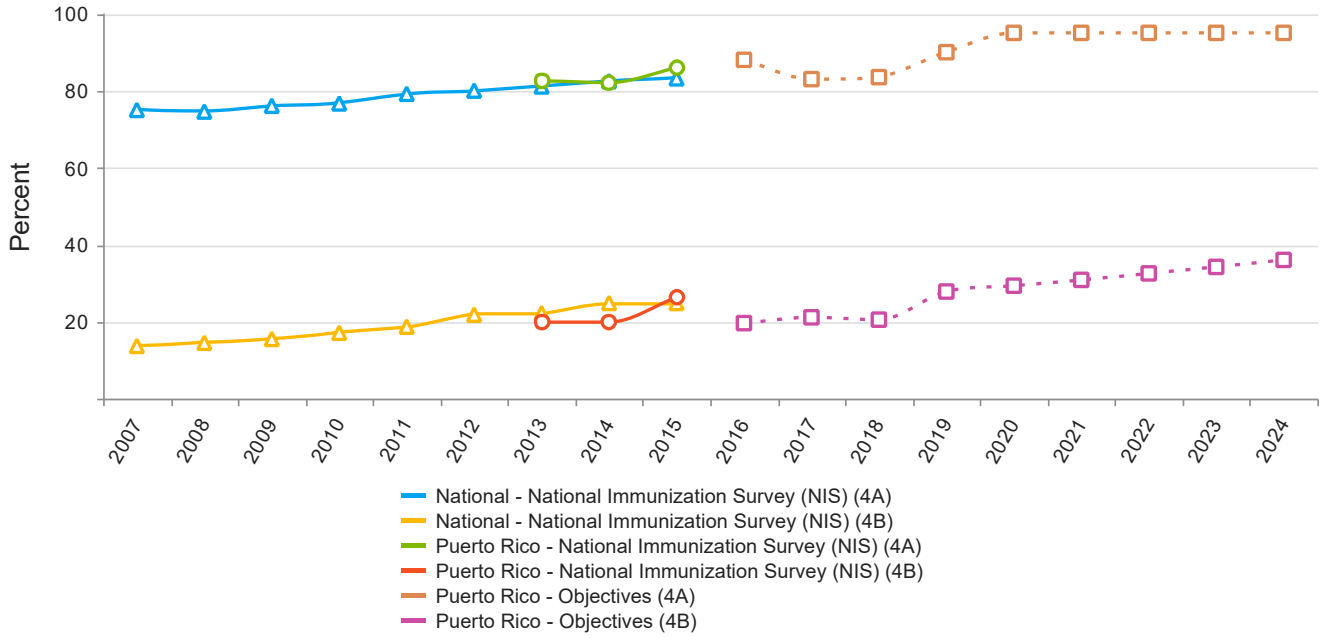
ESM 3.2 - Evaluation and classification of the hospitals in Puerto Rico according to the maternal and perinatal care guidelines will be completed by September 2018

Measure Status:	Inactive - Completed		
State Provided Data			
	2016	**2017**	**2018**
Annual Objective		No	0
Annual Indicator	No	No	Yes
Numerator			
Denominator			
Data Source	N/A	N/A	LOCATe Survey
Data Source Year	N/A	N/A	2017-2018
Provisional or Final ?	Final	Final	Final

ESM 3.7 - The use of LOCATe as an instrument to promote quality improvement in Neonatal and Maternal Care services by September 2020.

Measure Status:				Active		
Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	96.0	96.0	96.0	96.0	96.0	96.0

NPM 4 - A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months Indicators and Annual Objectives



NPM 4A - Percent of infants who are ever breastfed

Federally Available Data			
Data Source: National Immunization Survey (NIS)			
	2016	**2017**	**2018**
Annual Objective	88	83	83.5
Annual Indicator	82.7	81.9	85.9
Numerator	25,467	25,075	21,344
Denominator	30,787	30,611	24,861
Data Source	NIS	NIS	NIS
Data Source Year	2013	2014	2015

State Provided Data			
	2016	2017	2018
Annual Objective	88	83	83.5
Annual Indicator	94.8	96.6	96.3
Numerator	26,807	23,509	20,631
Denominator	28,266	24,328	21,418
Data Source	Vital Statistics	Vital Statistics	Vital Statistics
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	90.0	95.0	95.0	95.0	95.0	95.0

NPM 4B - Percent of infants breastfed exclusively through 6 months

Federally Available Data			
Data Source: National Immunization Survey (NIS)			
	2016	**2017**	**2018**
Annual Objective	19.7	21.2	20.6
Annual Indicator	20.1	20.1	26.5
Numerator	6,133	6,093	6,531
Denominator	30,551	30,260	24,618
Data Source	NIS	NIS	NIS
Data Source Year	2013	2014	2015

Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	27.9	29.4	30.9	32.6	34.3	36.1

Evidence-Based or –Informed Strategy Measures

ESM 4.1 - The percent of Puerto Rico Home Visiting Program (HVP) participants who ever breastfed by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		67	73.1
Annual Indicator	66.6	73.1	75.9
Numerator	341	578	626
Denominator	512	791	825
Data Source	HVP Participants Records	HVP Participants Records	HVP Participants Records
Data Source Year	2015-16	2016-17	2017-18
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	76.0	76.1	76.2	76.3	76.4	76.5

State Action Plan Table

State Action Plan Table (Puerto Rico) - Perinatal/Infant Health - Entry 1

Priority Need

Decrease Infant Mortality

NPM

NPM 3 - Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)

Objectives

1. Increase to 51.7% of very low birth weight infants (less than 1,500 grams) born in hospitals level III or higher NICU in Puerto Rico during 2020 (Baseline: 51.5%, Vital Statistics 2018).

Strategies

1. Perform continuous assessment of hospitals classification levels using CDC LOCATe instrument, based on the maternal and perinatal care capacities established by American College of Obstetrician Gynecology, the Society for Fetal-Maternal Medicine, and the American Academy of Pediatrics.

2. Disseminate findings of the LOCATe Multijurisdictional Analysis to all Birthing Hospitals .

3. Continue the current Fetal and Infant Mortality Review Advisory Committee in Puerto Rico with the purpose of identifying gaps and improve maternal and infant care.

4. Continue multimedia campaign promoting completing 40 weeks gestation and healthy lifestyles during pregnancy

5. Train HVP participants and communities on CPR Anytime for infants.

6. Promote the creation of a network between hospitals for the transfer of high risk pregnant women.

7. Promote safe sleep guidelines in Birthing Hospitals.

ESMs	Status
ESM 3.1 - Adaptation of the maternal and perinatal care guidelines according to American College of Obstetrician Gynecology, and the American Academy of Pediatrics for Puerto Rico with the input of the Review Committee will be completed by September 2017	Inactive
ESM 3.2 - Evaluation and classification of the hospitals in Puerto Rico according to the maternal and perinatal care guidelines will be completed by September 2018	Inactive
ESM 3.3 - The annual report of the Puerto Rico Fetal and Infant Mortality Review Advisory Committee with findings and recommendations to improve maternal and infant care will be completed by September 2017-2021 (ongoing)	Inactive
ESM 3.4 - The Percent of PRMCAH Staff (Health educators and Home Visiting Nurses) trained on Cardio Pulmonary Resuscitation Anytime for infants by September 2018-2021 (ongoing)	Inactive
ESM 3.5 - The percent of Puerto Rico Home Visiting Program (HVP) families trained on CPR Anytime for infants by September 2017-2021 (ongoing)	Inactive
ESM 3.6 - The percent of participants in Puerto Rico of the Prenatal Course that identify the campaign message by September 2017	Inactive
ESM 3.7 - The use of LOCATe as an instrument to promote quality improvement in Neonatal and Maternal Care services by September 2020.	Active

NOMs
NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths
NOM 9.1 - Infant mortality rate per 1,000 live births
NOM 9.2 - Neonatal mortality rate per 1,000 live births
NOM 9.4 - Preterm-related mortality rate per 100,000 live births

State Action Plan Table (Puerto Rico) - Perinatal/Infant Health - Entry 2

Priority Need

Decrease Infant Mortality

NPM

NPM 4 - A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months

Objectives

1.Increase to 95% of infants who were reported to ever breastfed in Puerto Rico during 2020 (Baseline: 96.3%, Vital Statistics 2018).

2.Increase to 29.4% of infants who were reported as breastfed exclusively through 6 months in Puerto Rico during 2020 (Baseline: 26.5%, NIS 2015).

Strategies

1. Train the Home Visiting Program staff with knowledge and techniques to promote and support successful breastfeeding initiation in the prenatal and postpartum period.

2. Promote and support successful breastfeeding initiation to Home Visiting Program participants in prenatal and postpartum periods.

3. Promote and support HVP participants to breastfeed exclusively until 6 months.

4. Promote the requirements for hospitals to establish policies and support for successful breastfeeding initiation and rooming-in according to Administrative Order No. 336, which includes the 10 Baby Friendly Hospital steps.

5. Continue collaboration efforts with the Puerto Rico Hospitals Association to promote the 10 Baby Friendly Hospitals steps, to increase successful breastfeeding initiation.

6.Continue the activities of the Breastfeeding Promotion Collaborative Group.

7.Continue collaboration with WIC Program (Peer Counselors).

8. Promote knowledge of existing laws that protect the rights of breastfeeding mothers.

9. Develop and disseminate guidelines to promote breastfeeding and safe infant feeding during disasters for hospitals and communities.

ESMs	Status
ESM 4.1 - The percent of Puerto Rico Home Visiting Program (HVP) participants who ever breastfed by September 2017-2021 (ongoing)	Active
ESM 4.2 - The percent of Puerto Rico Home Visiting Program (HVP) participants who practice breastfeeding exclusively at 6 months by September 2017-2021 (ongoing)	Inactive
ESM 4.3 - The percent of birthing hospitals implementing the 10 steps of Baby Friendly Hospitals in compliance with Administrative order #336 by September 2017-2021 (ongoing)	Inactive
ESM 4.4 - PR MCAH staff support of an annual activity promoting breastfeeding and focused on a gap in support services as identified by the Puerto Rico Breastfeeding Promotion Collaborative Group by September 2017-2021 (ongoing)	Inactive
ESM 4.5 - The percent of hospitals in Puerto Rico using the directory of Community Based Organizations providing post-partum breastfeeding support by September 2017-2021 (ongoing).	Inactive
ESM 4.6 - Final Guidelines for the management of donated maternal milk in Puerto Rico will be completed by September 2017	Inactive
ESM 4.7 - The Bill for the Management of Donated Maternal Milk will be approved in the Puerto Rico Legislature by September 2019	Inactive

NOMs
NOM 9.1 - Infant mortality rate per 1,000 live births
NOM 9.3 - Post neonatal mortality rate per 1,000 live births
NOM 9.5 - Sleep-related Sudden Unexpected Infant Death (SUID) rate per 100,000 live births

On September 20, 2017 Maria, a category five hurricane, pounded the entire island of PR and its smaller outlying islands of Vieques and Culebra with rain and wind for 16 hours. The wind and rain caused structural damage to homes and buildings, sudden dangerous flooding, landslides, fallen bridges, and the flooding and debris blocked roads and highways. After the storm the entire island faced an electrical outage, an almost complete failure of the telecommunication system, non-functional water treatment plants and no access to tap water, restricted access to banking or digital commerce, and health care services dependent on the capacity of generators for electrical power. An estimated 18,000 people were in government shelters during the storm.

Although the hurricane caused the electrical grid to fail, most hospital institution thrived and continued to offer maternal-infant services with the use of generators for a source of electricity. One hospital in the south-east coast had to cease operation due to severe structural damage. Despite the damages and the challenges they continued operational by implementing many adaptations such as decreasing ward size, and/or allowing prenatal care to occur in the hospital facilities, because many obstetric offices had severe damage or did not have electricity to operate. In some hospitals the Obstetrics Department faculty and nurses implemented 24 to 48 hours in-house shifts so as to be immediately available in case of a maternal emergency due to lack of communication, poor state of the roads making travel and lack of road lamp post , making traveling difficult and dangerous at night. Few births occurred in unexpected places due to difficulty to reach their hospitals. The following table reports births as they occurred before and after the storm in 2017.

Distribution of Births Before and After Hurricane María* by Place of Birth PR 2017

Place of Birth	1/2017 to 8/2017		9/2017 to 12/2017		Total 2017	
	n	%	n	%	n	%
Births in hospitals	15,985	99.3	8241	99.3	24,226	99.3
Births at home, unknown if planned	4	0.0	3	0.0	7	0.0
Births at home, planned	71	0.4	33	0.4	104	0.4
Births at home, unplanned	20	0.1	13	0.2	33	0.1
Births at other	16	0.1	9	0.1	25	0.1
Total Births 2017	16,096		8,299		24,395	

Source: Vital, Statistics, Demographic Registry, PR Department of Health
*Hurricane Maria September 20 2019

Distribution of Births Before and After Hurricane María* PR 2017						
By Birth Weight	1/2017- 8/2017		9/2017 -12/2017		Total 2017	
	n	%	n	%	n	%
Very Low Birth Weight (<1,500 grams)	241	1.5	113	1.4	354	1.5
Low Birth Weight	1,453	9.0	767	9.2	2,220	9.1
Normal Weight	14,402	89.5	7,419	89.4	21,821	89.5
Total Births 2017	16,096		8,299		24,395	
By Gestational Age	1/2017- 8/2017		9/2017-12/2017		Total 2017	
	n	%	n	%	n	%
< 37 wks	1,880	11.7	916	11.0	2,796	11.5
37-38 wks	5,701	35.4	2,769	33.4	8,470	34.7
> Or = 39 wks	8,510	52.9	4,606	55.6	13,116	53.8
Total Births 2017	16,091		8,291		24,382	

Source: Vital, Statistics, Demographic Registry, PR Department of Health
*Hurricane Maria September 20, 2019

Infant Mortality Before and After Hurricane María PR 2017						
	1/2017 - 8/2017		9/2017- 12/2017		Total 2017	
	n	Rate	n	Rate	n	Rate
Infant Mortality	127	7.9/1000	47	5.7/1000	174	7.1
Total Births 2017	16,096	births	8,299	births	24,395	

Source: Vital, Statistics, Demographic Registry, PR Department of Health
*Hurricane Maria September 20 2019

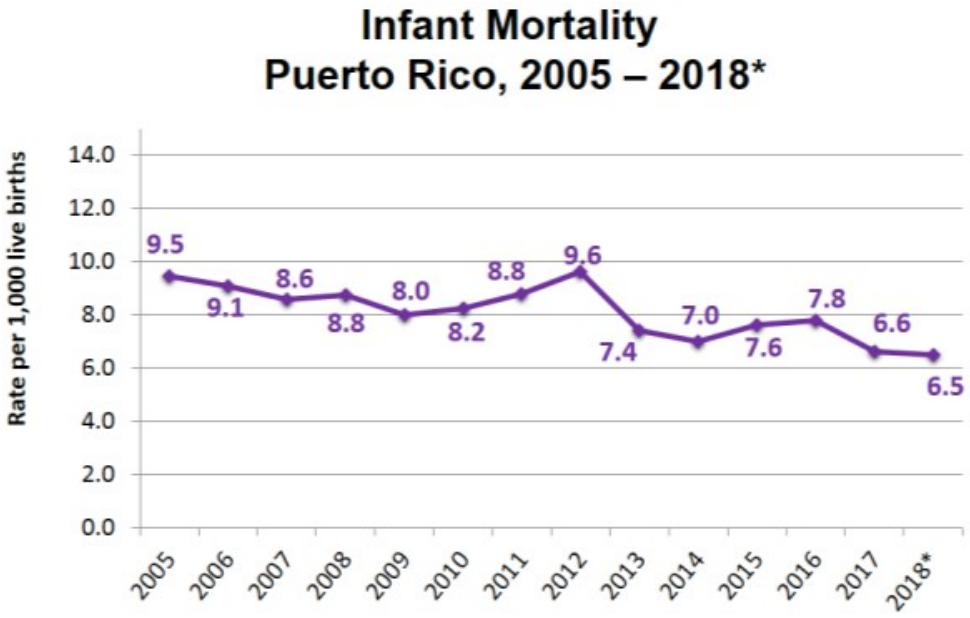
Despite the many challenges there were no significant changes in the percent of women giving birth unplanned at home or in other, out of an institution. Pregnant women had to overcome hardships such as limited access to food and water, therefore long term effects of the stress experienced by this population are at present unknown and will require observation and evaluation.

Home Visiting Nurses (HVNs) assumed a leadership role in their communities evaluating the needs of pregnant women. Because they remained updated of the available services that remained or that emerged in the community after the storm, they were able to refer the population to the resources appropriately. An outstanding example was the HVN in Culebra, an outlying island, who demonstrated her leadership role becoming the main liaison for all the mitigation and recovery efforts directed to families, due to her knowledge and established relationship with the community.

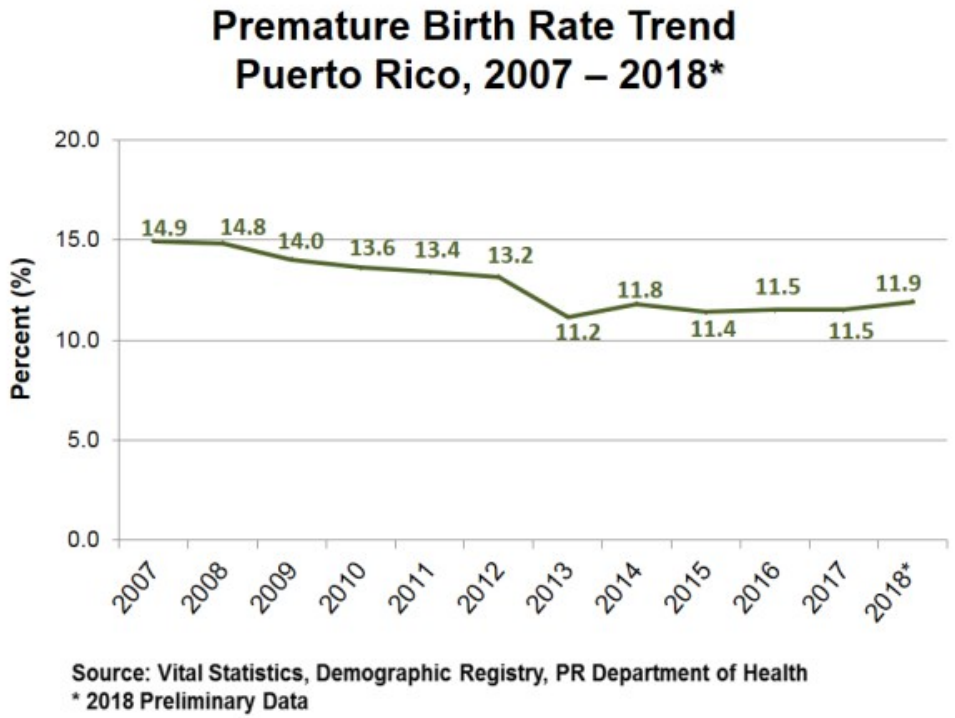
Vital Statistics (VS) data for 2018 report the IM rate of 6.5 per 1,000 Live Births (Preliminary Results). Prematurity (conditions associated) and low birth weight continue to be among the first five causes of infant mortality on the island. 2017 VS reported 270.6 preterm related deaths per 100,000 live births. Respiratory distress syndrome continues to be the main cause of death in early preterm babies. Preterm birth (PTB) in Puerto Rico, although has been decreased since 2015, remains high at 11.9% (preliminary VS 2018). Low birth weight (LBW) is related to preterm birth, an increasing health concern and the first cause of death for early preterm babies. According to preliminary VS data for 2018, 10.3% of live births had low birth weight for gestational age. Infant, neonatal and post-neonatal mortality demonstrate a decreasing tendency in preliminary data for 2018, as shown in the following table.

Infant and Perinatal Mortality Rates (per 1,000 live births)

Mortality	2005	2016	2017	2018*	Percent Change		
	Rate x 1,000				2018 vs. 2005	2018 vs. 2016	2018 vs. 2017
Infant	9.3	7.8	7.1	6.6	-29.03	-15.38	-7.04
Neonatal	6.7	5.3	5	4.2	-37.31	-20.75	-16.00
Post neonatal	2.6	2.5	2.1	2.4	-7.69	-4.00	14.29
Perinatal	8.5	8.8	7.5	Not Available			



Source: Vital Statistics, Demographic Registry, PR Department of Health
* 2018 Preliminary Data



Multiple factors contribute to IM and morbidity, which remains a priority to address by the PR MCAH. One of them continues to be the risk of fetal infection by Zika virus. Although the epidemic was declared over in 2017, it continues to be a threat for pregnant women due to the year-round presence of Aedes species mosquito which may transmit the Zika virus, due to Puerto Rico's tropical weather. Therefore, since 2016, the MCAHD has continued providing educational orientation and promoting pregnant women adopt preventive measures to avoid infection. In June 2016 a CDC grant was awarded to the MCAH to develop the Zika Postpartum Emergency Response Survey in Puerto Rico (ZPER) in order to conduct a rapid population-based assessment of maternal behaviors and experiences related to Zika virus exposure among recently pregnant women in PR. The survey was administered during three months in 36 birthing hospitals. Data was analyzed by CDC. MCAH staff collaborated evaluating the Spanish-language questionnaires, requesting IRB approval and assisting in the hiring of the personnel that worked in the study (Coordinator, interviewers, data entry clerk and others). Findings of the first stage of the study were published in the CDC's Morbidity and Mortality Weekly Report (D'Angelo DV, Salvesen von Essen B, Lamias MJ, et al. *Measures Taken to Prevent Zika Virus Infection During Pregnancy — Puerto Rico, 2016*. MMWR Morb Mortal Wkly Rep 2017; 66:574–578). Due to the high rate of responses and relevant information obtained a second ZPER was completed in 2017-2018. Puerto Rico received the 2018 National Epidemiology Award at CityMatch for its remarkable achievement in the P.R. Pregnancy Risk Assessment Monitoring System (PRAMS) and Z-PER Survey despite the challenges of the post hurricane disasters.

The HVNs and Community Health Workers (CHWs) continued promoting early prenatal care and testing for Zika in pregnancy as well as referral to the PRDOH surveillance system to follow up babies from Zika positive mothers. The MCAH staff collaborated with all efforts directed by the CDC and the PRDOH for the investigation and management of exposure to the Zika virus.

The MCAH Program has continued collaborating in the PR CoIIN for infant mortality reduction. The main objective of the Collaborative Improvement and Innovation Network (CoIIN), an initiative originated by HRSA and MCHB, is to reduce infant mortality in the US and its jurisdictions. The three strategies that the PR team has continued to promote

are: preconception/interconception health, prevention of preterm and early term births, and perinatal regionalization. The MCAH staff also continued to promote the adoption of the Hard Stop Policy by hospitals through collaborative efforts with the Hospital Association. Administrative Order 366, which requires hospitals to adopt the Hard Stop Policy, was developed by MCAH staff and approved by the Secretary of Health on June 8, 2017. Complying with AO 366 is a requirement to obtain renewal of operational license from the Health Department.

MCAH staff members are members of the March of Dimes (MOD) Prematurity Prevention Committee, in which a representative of the Hospital Association also participates, that focuses on prevention of preterm births and the importance of completing at least 39 weeks of pregnancy. The approval of AO 366 was announced in the Prematurity Summit on June 9, 2017, sponsored by MCAH, during which the Sub Secretary of the PRDOH received the Virginia Apgar Prematurity Leadership Award for reducing prematurity by 31.7% during 2015 in Puerto Rico. This activity was attended by 256 participants (pediatricians, obstetricians, nurses, health educators, hospital administrators and other stakeholders).

Maternal and Neonatal Levels of Care Assessment (LOCATe)

The Maternal and Neonatal Levels of Care Assessment Tool (LOCATe) was created with the main objective of producing standardized assessment of level of maternal and neonatal care in hospitals within states, facilitate stakeholder conversations and minimize burden for respondents. The assessment is based on the compliance with the requirements delineated in the Maternal and Neonatal Levels of Care Guidelines by American College of Obstetricians and Gynecologists (ACOG), The Society for Maternal Fetal Medicine (SMFM) and the American Academy of Pediatrics (AAP). Puerto Rico implemented LOCATe during 2017. PR LOCATe, in an innovative approach, was completed in a face to face interview between MCAH staff with a team representing each hospitals administrative and medical staff; composed of the OB/Gyn Director, NICU or Neonatal Director, Nurse Supervisors and Administrator. This was done in an effort to minimize the possibility of having more than one survey by hospital answered by Survey Monkey. About 85% of the birthing hospitals (representing 83.5% of 2016 births) consented to participate in LOCATe. During 2017-2018, 27 out of 28 hospitals completed the initial interview. PR LOCATe interviews started in June 2017, however because of Hurricane María, data collection stopped until March 2018 when the rest of the hospitals were able to complete their initial interviews. After Hurricane María one of the participating hospitals closed the obstetric and nursery ward due to severe damages. Despite challenges after the storm the survey was completed and data was effectively collected. Preliminary data and LOCATe innovative strategy of face to face interviews in PR was presented in the 2018 AMCHP Conference.

Prenatal Multimedia Campaign

During 2017-2018 the multimedia campaign *El Encuentro de Mi Vida* (“The Encounter of My Life”) was renewed with the purpose to continue to spread the message to pregnant women and the community at large that pregnancy lasts 40 weeks, encouraging adequate care of the pregnant woman and the avoidance of risk behaviors that can affect the fetus, as a strategy to decrease infant prematurity, morbidity and mortality. It consists of a linguistically and culturally appropriate multimedia campaign aimed mainly at Spanish speaking pregnant women and their partners. The idea to appeal to emotions of pregnancy was discussed among MCAHD staff (subject matter and health education experts). Core messages and intended audience were determined by MCAHD staff. An advertising agency was contracted to produce the campaign. Production details, selection of actors, vetting message delivery and ensuring correct breastfeeding position were overseen by the MCAHD team. This project is an innovative campaign aimed at strengthening families by helping parents make informed choices. Videos were aired on TV, movie theaters & online beginning in July 2018. The web page www.encuentrodemivida.com was created providing access to the 5 videos and shorter clips of the couple giving advice regarding optimum prenatal care. The page also features fact sheets related to various aspects of prenatal care, infant care, and breastfeeding.

All educational materials available in the website were developed by MCAHD staff, health educators and education specialists in accordance with ACOG and AAP recommendations overseen by the pediatric and obstetric gynecologist consultants. Banner ads for the website were featured on social media & news outlet pages beginning in July 2018.

Home Visiting Program

The Home Visiting Program (HVP) is an initiative that provides case management and care coordination services, health education and counseling to pregnant women with complex medical and social risk factors associated with LBW and VLBW infants, pregnant teens, and women older than 35 y/o. In the outreach activities delivered by the HEs, CHWs and Perinatal Nurses, they have the opportunity to identify and recruit pregnant women for the HVP. High-risk pregnant women are also referred from WIC and other collaborators in the community. A total 1281 pregnant women were initiated in the HVP during 2017-2018.

The population served by the HVP has a larger percent of adolescents as summarized in the following table. Adolescents are considered at higher risk for complications and poor outcomes but despite these differences in risk, outcomes are comparable to the general PR births outcome.

COMPARISON OF BIRTHING MOTHER AGE RANGE HVP PARTICIPANTS VERSUS PR BIRTHING POPULATION		
Birthing mother age range	% of population in age range HPV 2017 TO2018*	% of population in age range PR births for 2017 & 2018**
19 years or <	45%	10%
20 a 25 years	35%	38%
26 a 35 years	17%	43%
36 years or >	2.3%	9%

Source of data: *HVP data
**Vital, Statistics, Demographic Registry, PR Department of Health, 2018 Preliminary Data

COMPARISON OF BIRTH OUTCOMES BETWEEN HVP PARTICPANTS VERSUS PR BIRTHS		
Gestational age at birth	Percent of all live births in HVP (7/2017 to 6/2018)*	Percent of all live births in PR for 2017 & 2018**
Early preterm <34 weeks	4%	3%
Late preterm 34 a 36 weeks	9%	9%
Early term 37 a 38 weeks	29%	35%
Late term 39 weeks or more	58%	53%
Birth weight		
Very Low Birth Weight (<1,500 grams.)	1.4%	1.4%
Low Birth Weight (1,500 a 2,499 grams.)	8.7%	9.0%
Normal weight (2,500grams or more)	90%	89.6%
Source: *HVP Data **Vital, Statistics, Demographic Registry, PR Department of Health, 2018 Preliminary Data		

Although similar birth outcomes are observed in the HVP in comparison to the general birth population, the program serves a high risk population, suggesting its positive impact on birth outcomes. Further evaluations are being implemented in an effort to measure the impact of the HVP.

The Home Visiting Program nurses (HVNs) also delivered orientation and referrals to non-participants of the HVP as reported in the following table.

REFERRALS BY HVN TO NON-PARTICIPANTS	
Medicaid	63
Prenatal Care	150
Health Care Services	202
WIC Program	100
Department of the Family	69
Department of Housing	177
County Office	54
Department of Education	7
Mental Health Services	49
Oral Health Services	71
BF support groups	37
Early Stimulation	74
Pediatric Health Care Services	37
Home Visiting Program	96
Others	378
total	1,564

Educational Strategies implemented by MCAH Staff

The MCAH Program staff also continued offering educational activities to increase awareness of IM to participants, providers and the general population. The MCAH staff, Health Educators (HEs) and Community Health Workers(CHWs), provide education to pregnant women on the signs and symptoms of preterm delivery, the importance of early prenatal care, healthy eating habits and adequate weight gain during pregnancy, physical activity, preconception health, oral health, health complications that may arise, labor and delivery processes, breastfeeding, newborn care, and family planning. During the activities, staff encouraged women to abstain from risk behaviors such as smoking during pregnancy, and offered recommendations to reduce this behavior as well as other factors that contribute to poor outcomes. HVNs ensure that all HVP participants are evaluated in the WIC Program. The WIC Program also contributed toward reducing IM rates by focusing on women with nutritional risk factors.

The MCAHD had 8 perinatal nurses (PNs) during 2017-18, distributed in the 7 regions. The PNs provided educational services to 893 pregnant women; 36% of them were referred to needed services such as GHP, MCAH HVP, WIC, Prenatal course / Parenting course, and Zika prenatal clinics. Among other populations that received orientations from the PNs during 2017-2018 where 5089 post-partum women, 1,119 men and 1,401 accompanying non-pregnant women. Orientations covered by PNs included the following topics: Women's Health, Prenatal Care, Risks during Pregnancy, Delivery Processes, Postpartum Care, Breastfeeding, Neonatal Screening, Premature Baby Care, Newborn Care, Pediatric Preventive Care (EPSDT), Protective Car Seat Placement and Use, and Family Planning. The Perinatal Nurses also completed 8,313 visits to hospital, agencies and organizations.

Population reached by the PNs, CHWs and HEs with topics relevant to WRA and pregnant women are reported in the following table.

TOPICS RELEVANT TO PREGNANCY DELIVERED BY MCAH STAFF
2017-2018

Topics relevant to pregnant women	Participants reached by HE	Participants reached by CHW	Participants reached Total
Prenatal health care and Prenatal visits	198	1,971	2,169
Healthy Lifestyles during pregnancy	42	1,944	1,986
Avoidance of risk behaviors during pregnancy	42	1,743	1,939
Well being during pregnancy	na	167	171
Labor Plan and preparation	51	457	508
Use of repellents to protect against Zika, Dengue, Chikungunya	56	826	882
Breastfeeding	280	716	996
Nutrition during pregnancy	18	220	238
Benefits of breastfeeding	11	159	170
Physical activity during pregnancy	19	119	138
Correct latching for effective breastfeeding	na	60	65
Laws that protect breastfeeding mothers	na	43	49

OTHER TOPICS RELEVANT TO PREGNANCY DELIVERED BY CHW
2017-2018

Oral health during pregnancy	180
Premature birth	135
Common pregnancy complaints	94
Laws relevant to labor	44
Gestational diabetes	36
Alcohol during pregnancy	34
Tobacco during pregnancy	30
Drugs during pregnancy	19
Preeclampsia	10
Eclampsia	10

TOPICS RELEVANT TO POST PARTUM HEALTH AND
NEWBORN CARE DELIVERED BY MCAH STAFF 2017- 2018

Topics	Participants reached by HE	Participants reached by CHW	Participants Total
Family planning	96	683	779
Post partum care and family planning	62	1,413	,1475
Baby hygiene and care	76	901	977
Care of premature baby	43	0	43
Correct car seat placement and use	3	360	363
Safe sleep	3	65	68
Day care	0	52	52

TOPICS DELIVERED BY PERINATAL NURSES 2017-2018

Topic	Participants reached by PN
Breastfeeding	5,623
New born care	5,515
Post partum care	4,086
Newborn screening	3,014
Pediatric Preventive Health Care	2,899
Family planning	2,176
Correct car seat placement and use	1,907
Women health care	988
Avoidance of risk behaviors during pregnancy	551
Prenatal health care	511
Process of labor	319
Care of Premature baby	173

MCAH staff offered prenatal courses that discuss important health issues related to the prenatal, postpartum and interconceptional stages. A total of 1323 participants completed the 4 sessions of the prenatal course, “A Baby on its Way”. The main purpose of this course is building knowledge and providing participants with tools to maintain a healthy pregnancy, preventing risk behaviors, increasing the chances for a healthy delivery and appropriate care for the baby. The target population is pregnant women and their companions. This course consists of four educational sessions that include accurate information and educational activities divided into the following topics: healthy lifestyles, prenatal care, risk behaviors, pregnancy stages and changes in pregnancy, conditions affecting pregnancy, delivery planning, delivery process, premature birth, caesarean birth, postpartum care, baby care, breastfeeding, birth spacing and family planning. Information on the transmission of Zika and preventive measures, its effect on the fetus and the need to test during pregnancy for infection has been added to this course.

PARTICIPANTS THAT COMPLETED 4 SESSIONS
OF THE PRENATAL COURSE* 2017-2018

Offered by	Maximum # of participants	Total # completed 4 sessions	% completed 4 sessions
HE	194	181	93.3%
CHW	1,235	1,142	92.5%
Total	1,429	1,323	92.6%
*Complete course consists of 4 sessions			

FIMR

MCAH staff has headed the Puerto Rico Fetal Infant Mortality Review (PR FIMR) since 2006, complementing local population-based fetal and infant mortality data. The objective of the FIMR is to identify system-related risk factors for fetal and infant mortality and to generate recommendations to address them. To this end, the Review Team examines de-identified comprehensive information regarding infant and fetal deaths. The PR FIMR concentrates on deaths occurring to families participating in the HVP, all of whom are considered at high risk for IM. When a fetal or infant death occurs in the HVP, priority is given to provide the mother bereavement support. If the mother consents to an

interview, the HVP nurse supervisor or MCAH perinatal nurse conduct an interview to obtain information which helps identify social determinants of health that have an impact on maternal health and the circumstances surrounding the death. Relevant information from the hospital record is abstracted by the MCAH regional perinatal nurses or MCAH directors. A copy of the HVP participant files is sent to the FIMR coordinator for additional data abstraction. The HVP files contain demographic and social determinant data, besides a chronological description of the participant's strengths, challenges and interventions during pregnancy obtained by the HVP nurses in their interventions. The MCAH Pediatric Consultant prepares the case summaries that are reviewed and discussed by the Committee. The PR FIMR has identified critical community strengths and weaknesses as well as unique health/social issues associated with poor outcomes. The following table details deaths or losses occurred to participants of the HVP for 2017 to 2018.

DEATHS OR LOSSES IN HVP 2017-2018

Death or losses	n	To Population	
Abortions <20 weeks gestational age	33	767 (720 Infants born alive +33 abortions + 14 fetal deaths)	4.3% losses due to abortions
Fetal death 20 weeks or > of gestational age	14	767 (720 Infants born alive +33 abortions + 14 fetal deaths)	1.8% losses due to fetal death
Fetal death 20 weeks or > of gestational age	14	734 (720 Infants born alive + 14 fetal deaths)	Fetal death rate 19.1 for each 1000 births
Maternal Death	0	767 (720 Infants born alive +33 abortions + 14 fetal deaths)	0 maternal loss
Infant death, less than 1 y/o	6	720 Infants born alive	IM rate 8.3 for each1,000 births
Pediatric Death 1 to 21 y/o	0	1,586 Children between 1 and 2 y/o	0

In August 2017, the FIMR Committee summarized the following recommendations based on findings of the discussion of cases, to promote:

- Pre-conceptive Health in WRA.
- Providing information to tutors or caregivers of pregnant teens on the symptoms and signs of premature birth and where to go for services if they present them.
- Providing information to women of reproductive age of the risk of contracting sexually transmitted diseases, when using contraceptive methods that do not provide adequate barrier against sexually transmitted diseases.
- The Department of Health establishes a Committee to develop a Protocol to be implemented in hospital and health institutions to manage the loss of an early pregnancy and of a fetal death or Neonatal as indicated in Law No. 184 of 2016.

- Evaluation of hospital practices relating to support of parents during the hospitalization and/or bereavement after protocol is established and implemented.

All the recommendations applicable to HVP were incorporated as priorities to address and take action.

The FIMR coordinator and Pediatric Consultant of PR MCAH, Dr. Cindy Calderon, presented the experience of PR FIMR in evaluating the needs of a pregnant woman with ZIKA, in collaboration with Rosemary Fournier, sponsored by the National Center for Fatality Review & Prevention at the City Match 2017. This activity was from September 17 to 20, 2017 in Nashville Tennessee, coinciding with Hurricane Maria's hit on the island.

The 2017-2018 period was a challenging year with emerging needs during rescue and recovery after the disasters caused by hurricanes Irma and Maria. FIMR meetings scheduled for October 2017 had to be postponed after the disaster caused by the storms due to other priorities relating to recovery, and lack of appropriate venues to meet. In May 16, 2018, Puerto Rico still was in a recovery phase and the first FIMR meeting was focused on identifying the challenges to birth and neonatal services due to interruptions in basic services caused by the storms and ongoing challenges and gaps to provide neonatal services in hospitals as a result of the damage caused by storms in September 2017. The care of newborns with complications requires life sustaining equipment in specialized units and therefore relies on a constant source of electric power. These patients may also require transfers for sub-specialized services to other institutions. Neonatologist from different regions of the island participated in this FIMR meeting, in a focal group discussion, sharing the challenges they confronted managing the NICU units after the storm due to the prolonged crisis. They provided recommendations based on their experience. From this meeting recommendations to improve preparedness and recovery for future disasters that place infants and pregnant women at risk were developed. The recommendations were shared with the Hospital Association and the Department of Health Emergency Preparedness Team as they develop plans to improve disaster preparedness and response for future catastrophic events for which the population of newborns and pregnant women are a vulnerable population at greater risk.

Puerto Rico FIMR Recommendations After Hurricane Disaster
All hospitals develop and implement a protocol that ensures regular maintenance and checkup of all electrical equipment required to sustain life to ensure: • optimum performance of equipment • battery backup is at maximum capacity • the equipment is plugged into the emergency electrical system • a maintenance check list is placed on each equipment • a check list of all equipment dependent on electrical power is available in each NICU unit
All hospitals develop and implement a protocol of necessary personnel in order to continue providing services in the event of an emergency or disaster that includes: • a predetermined list of staff organized in in teams to be able to continually cover services • plans to meet all the basic needs of the staff; including meals and areas of rest and recovery for the staff in the event that personnel have to physically remain in the institution for a prolonged time
All hospitals develop and implement a protocol to ensure a constant source of electricity to operate life sustaining equipment without interruption: • adopting an alternate electrical source readily available that automatically connects in case of an electrical grid failure. • having a second alternate electrical source readily available that automatically connects in case the primary alternate source fails. • implementing a year round program of verification and maintenance of the institutions generators • having adequate storage of fuel to run the electrical generators for prolonged time if necessary.
All hospitals develop a plan to sustain their operations independently of other institutions in the event that communications cannot be established after a disaster.
All hospitals establish protocols to ensure adequate sources of oxygen.

BREASTFEEDING

After the Hurricane

Families with newborns and infants faced many challenges after hurricane Maria. Families were unexpectedly displaced due to emergent life-threatening situations and those who lost their homes were housed by relatives or in government shelters. Most shelters had no guidelines on how to support and help newborns and postpartum mothers, no place to store milk, and limited access to clean and safe water. Breastfeeding in such an emergency becomes a lifesaving strategy, providing nurturing and protection to vulnerable young infants, due to overcrowding in shelters or relatives homes, the lack of electricity to store milk (Breast milk or formula), the initial lack of water from a clean source to ensure clean utensils and bottles for feeding and preparing formula, among others. Therefore promoting BF and safe infant feeding became a priority to which the MCAH staff responded developing and collaborating in multiple strategies. A campaign was developed by the MCAH staff and disseminated by radio (which was the only broadcast medium reliably available to the whole island) and local newspapers, during

December 2017 to April 2018, to promote BF as the safest way to feed infants in an emergency. The translation of the logo to English states “Protect your baby, feed him with maternal milk.” This was accompanied by a short message of how Breast Feeding (BF) protects infants in an emergency situation, advices mothers to remain well hydrated and to visit a pediatrician days after discharge to evaluate baby’s health status.

A radio show promoting BF after the disaster with the Secretary of Health as the main spoke person and the Pediatric Consultant was recorded and broadcasted emphasizing these messages.

Two months after the hurricane most of the population remained without electricity or safe water. Another strategy to reinforce BF, Water for Milk, was launched by the PR ACOG Section in collaboration with MCAH, PR AAP and Pan-American Health Organization. The PR ACOG Section distributed water filtration systems to pregnant and post-partum women through their obstetricians to ensure a supply of clean water to sustain hydration and maintain breastfeeding. MCAH staff visited shelters and communities throughout the island identifying pregnant women and mothers with newborns, offering education on the lifesaving benefits of BF during an emergency and providing support to BF mothers. During this recovery process the HVP nurses continued to visit their participating families in the community, and the distribution of the manual breast pumps and the orientation and support on how to use them to stimulate and maintain milk production as an essential aid supporting BF in the recovery from the disaster. In an island with an ongoing threat of repeated storms, promoting BF becomes essential part of every preparedness plan.

The MCAH Coordinator for the Breast Feeding Promotion Collaborative Group(BFPCG) served as a point of contact and facilitator providing orientation for non- profit and federal organizations of available resources and contacts in the BFPCG network, contributing in their recovery efforts to support BF and safe infant feeding. The group *Alimentacion Segura Infantil* (ASI, English translation Safe Infant Feeding) emerged as a recovery response group with a grant by Save the Children; a group of volunteer women and IBCLC, providing orientation and support to women in shelters and in the community, promoting breastfeeding and safe preparation of formula in disasters. The La Leche League (LLL) of Puerto Rico was another contact reached out by Medic Corps through the BFPCG coordinator. They received a grant to provide orientation and support to women in shelters and in the community, promoting breastfeeding and safe preparation of formula in disasters. Both groups also fostered re-lactation providing the support and supplies necessary for mothers to successfully reestablish breastfeeding after the disaster. The ASI group reached 74 municipalities and the LLL concentrated their efforts in the south and west of the Island. The LLL were able to help 150 women re-establish breastfeeding after the disaster. Both groups established BF support groups in municipalities and hospitals, where previously there were none available.

A conference on Pediatricians Role supporting Breastfeeding in the community was delivered in February 2018 in the PR Chapter of the AAP meeting, in which the Pediatric Consultant emphasized strategies to support BF initiation in the Hospital. After hurricane Maria (September 20, 2017) BF rates were sustained and BF in the first hour post-partum increased slightly. All the efforts in promoting BF contributed to sustaining the Ever-breastfed prevalence at 97% after the storm (see the following table reporting BF prevalence in 2016, 2017, 2018).

BREASTFEEDING; COMPARISON 2016, 2017, 2018

	2016 %	2017 %	1/2017 - 8/2017 prior storms %	9/2017 -12/2017 after storms %	2018 %
Ever BF*	94.8	96.6	96.4	97.0	96.3
Ever BF Exclusively*	47.4	49.6	49.3	50.3	50.2
BF at discharge**	90.3	91.8	91.9	91.5	91.7
Exclusively BF at discharge**	33.3	35.4	34.9	36.2	36.8
BF 1st hour after birth (cesarean section)§	36.3	40.2	39.0	42.4	39.5
BF 1st hour after birth (vaginal delivery)§	65.6	69.0	68.4	70.1	68.7
BF 1st hour after birth all deliveries§	52.1	55.5	54.6	57.3	55.2

*Everbreastfed data is obtained by the combination of breastfeeding the 1st hour after birth, at the time of discharge and at the registration in the Demographic Center of their region.
** Data reported by hospital.
§ Data is reported by mother/father at inscription
Source: Vital Statistics, Demographic Registry, PR Department of Health,
Prepared by: SMEISI, MCAH Program, PR Department of Health,
NOTE: 2018 data is preliminary

The results of the PR PRAMS-ZPER 2 survey (telephone interviews to mothers of babies born between November to December 2017 and when babies age 3 to 4 months old) confirmed that 95% of women reported initiating breastfeeding (ever-breastfed) and 59% were still breastfeeding when they completed the phone follow-up survey.

2017 PR PRAMS-ZPER 2 Results*

initiating breastfeeding (ever-breastfed)	95%
still breastfeeding when they completed the phone follow-up survey	59%
a visit from a lactation specialist	79%
problems with feeding their baby	6%
reported help learning how to take care of newborn	76%
reported having problems providing a safe place for your baby to sleep	8%
their baby had any health care visits with a doctor, nurse, or other health care worker since you left the hospital when your baby was born	99%
correct sleeping position for baby, upright	37%

*Data source: 2017 PR PRAMS-ZPER 2 Preliminary results, Babies born November to December 2017, surveyed by phone February to March 2018

The PRAMS-ZPER 2 implemented an innovative intervention developed to provide parents a short course on maternal and newborn post-partum care due to feedback from participants in previous PRAMS-ZPER. The course included orientation on the following topics: mood changes in mother, post-partum health care visit, signs and symptoms to watch in the post-partum mother signaling complications, orientation on BF and support, newborn hygiene, infant preventive health care visits, prevention of shaken baby syndrome, and safe sleep. The course was developed by the MCAH staff and delivered by the PRAMS-ZPER personnel. Postpartum stay in the hospital is an opportunity to support families to adapt in the transition process. Families benefit from guidance on issues relevant to the health of the mother and the newborn; an aspect the PNs of the MCAH program contribute to by visiting post-partum women and their family in the hospital.

2017 PR PRAMS-ZPER, Educational Material developed for family orientation on maternal and infant care and Zika prevention in post partum stay in hospitals.

Breastfeeding Promotion Strategies

Evidence supports BF's beneficial effect in decreasing the prevalence of childhood obesity, impacting chronic diseases, and the prevention of Sudden Unexpected Infant Death, therefore decreasing IM. For many years BF practices have been promoted regularly by the PRDOH. The MCAH provided support to the BFPCG by coordinating meetings and fostering collaborative efforts between its members. As a result of the efforts of the MCAH Division, with support from the BFPCG, the PRDOH has established public policies and hospital regulations that support the initiation of breastfeeding. These efforts have also supported laws that protect and support breastfeeding mothers. The BFPCG is composed of representatives of WIC, Women's Advocate Office, Patients' Advocate Office, Department of the Family, PR AAP, lactation experts, community based breastfeeding support groups (Proyecto Lacta, La Leche League, Breastfeeding Coalition) and mothers from the community. The inclusion of community-based partners (United Way of PR and *Alimentación Segura Infantil* - Safe Infant Feeding) in the collaborative work of this group has been instrumental in developing strategies to support breastfeeding in the community.

The BFPCG has focused its work on promoting and delivering education to the general population on the numerous benefits provided by choosing breastfeeding for infants, mothers, their families and the impact on their economy. Other areas of advocacy and orientation focus on the PR laws that protect and support BF. The members of the BFPCG share the goals of Healthy People 2020 to increase the prevalence of successful breastfeeding initiation in the hospital and exclusive BF upon discharge, and breastfeeding beyond 6 months. The group considers data on prevalence and rates of BF provided by WIC, the MCAH *Estudio de Salud Materno Infantil de Puerto Rico* (ESMIPR, English translation PR Maternal Infant Health Study), Vital Statistics and mPINC (CDC Maternity Practices in Infant Nutrition and Care Survey) scores to propose priorities and strategies. Most strategies are implemented collaboratively so as to have a collective impact on BF rates, promoting the adoption of this practice by mothers on the island. Some strategies are implemented individually by members of the group with support from the other

members. Other efforts by the BFPCG focused on working collaboratively to promote the implementation of evidence-based or best practice strategies, such as promoting the adoption of the Baby Friendly steps in hospitals, community support for breastfeeding moms during the postpartum period, and educating BF mothers regarding laws that protect breast milk extraction at work.

The mPINC is an instrument for maternal institutions to self-evaluate their progress in improving maternal care practices that support and promote breastfeeding. Efforts have continued to raise awareness among birthing hospitals in PR of the opportunity to participate in national data collection surveys, such as the mPINC, that pinpoint areas in need of improvement, among them the observance of local existing laws regarding BF rights. There has been a gradual increase in the number of PR birthing hospital that participate in the survey, and an improvement in scores reflecting positive changes in maternal infant practices. The mPINC score in 2011 was 60, in 2013 it was 61, and in 2015 it increased to 69(most recent score reported).

The BFPCG also continued to promote compliance with Administrative Order No. 336, requiring hospitals to implement a policy to establish a breastfeeding support program and rooming-in. This order emphasizes compliance with Law 156 amended in 2016 (assuring women may have a companion through labor and the postpartum period, rooming-in option, and BF rights, among others), and Law 79 of 2004 (banning hospital staff from giving breast milk substitutes to newborns without a doctor's order and the mother's informed consent). In August 2017, the MCAH Pediatric Consultant participated in an educational activity for WIC staff and presented the hospital compliance requirements of AO No. 336, to ensure they have the latest information to share with the pregnant women in their clinics. Knowledge of the hospitals' responsibilities empowers pregnant women to claim their rights.

Since 2017 Puerto Rico is participating in the Pregnancy Risk Assessment Monitoring System (PRAMS) which serves to evaluate impact of BF support in hospitals and in the community and factors that influence BF practices. Prior to the PR PRAMS, the MCAH staff obtained and analyzed data from the ESMIPR. The 2015-2016 ESMIPR obtained data from mothers at the time they registered their newborns at the Demographic Registry. Participation was voluntary; 38.5% of mothers who registered their babies in 2015 agreed to answer the survey. Follow up telephone interviews were done at 6 and 12 months after birth (response rate at 6 months 61.8%, at 12 months 45.5%). Results of ESMIPR 2015-2016 and 2017 PR PRAMS are compared to demonstrate changes in hospital practices providing data to help develop additional efforts to increase hospital compliance with AO 336.

BREASTFEEDING PROMOTION AND SUPPORT IN THE HOSPITAL POST-PARTUM

	ESMIPR 2015-2016 %*	PR PRAMS 2017 %**
Received information on BF from hospital staff.	75%	86%
Received orientation from a health care professional on the benefits of breastfeeding.	74%	88%
Had rooming-in.	58%	72%
Breastfed in the first hour post-partum.	46%	55%
Received support on how to breast feed.	50%	76%
Were taught to BF whenever the infant demanded.	55%	71%
Received a telephone contact number for BF support.	32%	45%
Received free formula upon discharge.	46%	44%
Baby fed in mothers hospital room.	na	89%
Had skin-to-skin contact in first hour.	na	75%
Sedation of Mother as a reason for not being able to BF in the first hour.	na	28%
Exclusively breastfed in the hospital.	34%	44%

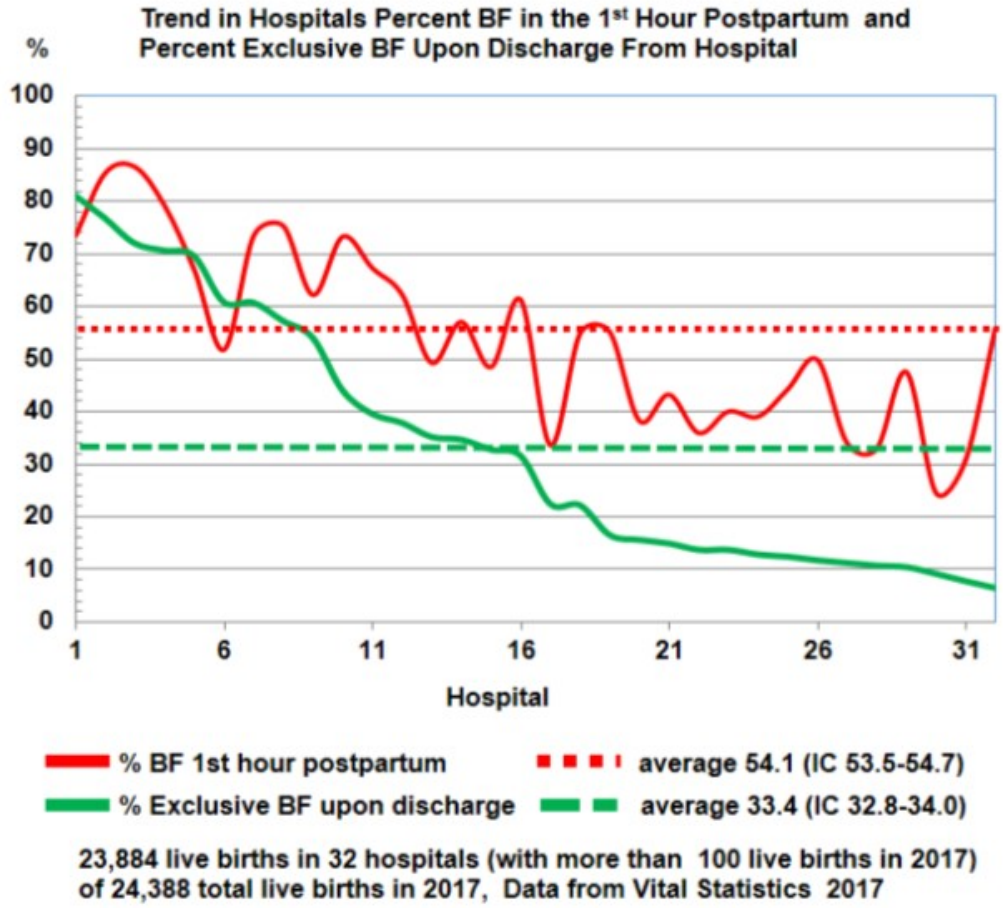
*Source: *Estudio de Salud Materno Infantil de Puerto Rico (ESMIPR)* August 2015 to July 2016, PR Maternal Infant Health Study by SMEISI. Infants registered between August 2015 to July 2016, mothers surveyed upon registration.
**Source: PR PRAMS 2017, Infants born between March to October 2017 and surveyed when the infants had an age between 2 to 8 months old.

Other results pertaining to BF, obtained from the 2017 PR PRAMS, are as reported in the following tables.

PR PRAMS 2017*		
Age of infant when responding to survey	% Breastfeeding	Change in percent from previous month
2 months old	88%	n/a
3 months old	66%	-22
4 months old	59%	-7
5 months old	48%	-11
6 months old	45%	-3
7 months old	37%	-8
8 months old	51%	+14

Source of Breastfeeding information	%
from my doctor	62%
from nurse / midwife / doula	63%
from breastfeeding or lactation specialist	70%
from support group	49%
from family / friends	66%
*Source: PR PRAMS 2017, Infants born between March to October 2017 and surveyed when the infants had an age between 2 to 8 months old.	

All the data obtained and analyzed is shared with the PR BFPCG, providing awareness of areas for the development of strategies to promote BF. Changes in hospital practices and support interventions are also reflected in BF rates. Puerto Rico Vital Statistics (VS) preliminary data obtained from the birth certificate revealed that in 2018 about 96% of mothers ever breastfed prior to registering their babies (versus 95.5 % in 2017) a sustained increase when compared to 81.5% in 2015. Of the women who reported ever breastfeeding, 49.8 % in 2018 reported exclusive BF prior to registration. In the first hour post-partum, 68.7% of mothers who delivered vaginally and 39.5% of mothers who delivered by cesarean section were able to breastfeed. Exclusive BF rates upon discharge from hospitals reflect the success of implementing support BF strategies. In comparing exclusive breastfeeding rates and 1st hour post-partum BF, hospitals with the highest percent of mothers allowed BF in the first hour tend to have the highest exclusive BF percent of mothers upon discharge as seen in the following graph.

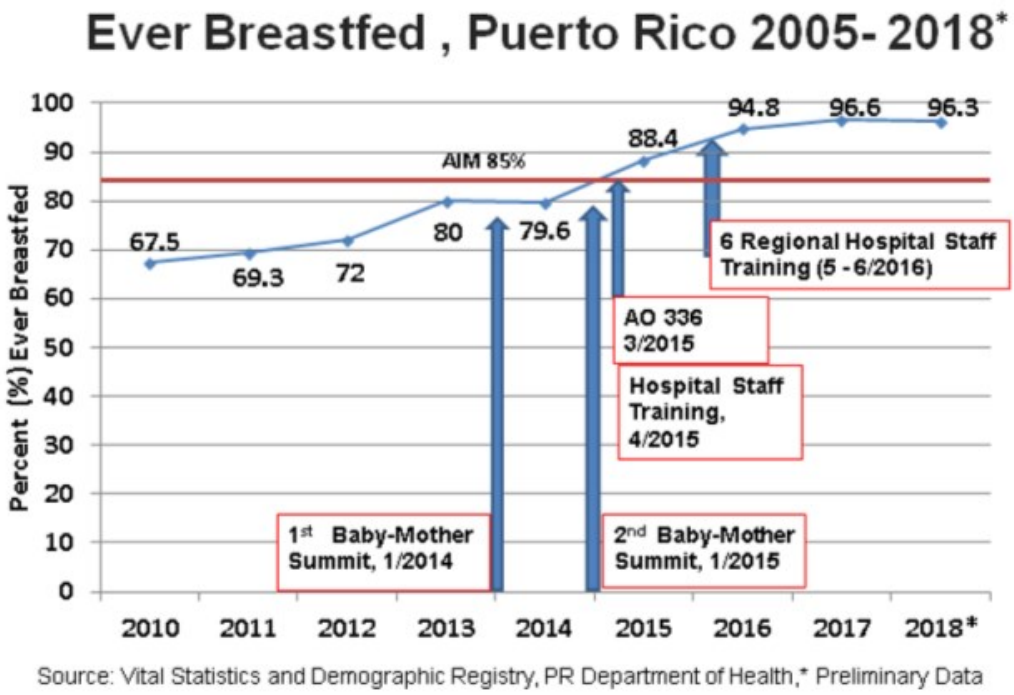


The 2018 CDC Breastfeeding Report Card among infants born in 2015 reported 26.5% exclusive BF at 6 months in Puerto Rico an increase compared to previous 2016 Report of 20.1% among infants born in 2013, surpassing the 2020 Healthy people goal of 25.5%.

	Among Infants Born in 2015+		PR PRAMS 2017-2018	Healthy People 2020
	US National average %	PR %	% born 2017	Healthy People 2020 %
Ever Breastfed	83.2	85.9*	93.5*	81.9
Breastfed up to 6 months	57.6	47	45	60.6
Breastfed up to 12 months	35.9	29.8	n/a	34.1
Exclusive BF up to 3 months	46.9	48.8*	n/a	46.2
Exclusive BF up to 6 months	24.9	26.5*	n/a	25.5
Fed formula first 2 days	17.2	19.6	n/a	14.2
Baby Friendly Hospitals	26.1	1.1	n/a	8.1

+Breastfeeding Report Card, National Immunization Survey, CDC, United States, 2018

* PR surpassed the HP 2020 goal



Source: Vital Statistics and Demographic Registry, PR Department of Health,* Preliminary Data

Data provided by the WIC program for the year 2017-2018 revealed that 58% of participating infants between the ages of 0 to <12 months of age were breastfed.

On July 31, 2017, the PRDOH began the official celebration of Breastfeeding week with a press conference to present the Governor's proclamation for BF week and the launch of the campaign *Lacta en Familia* ("Breastfeed in Family ") with a poster developed by an interdisciplinary team of MCAH staff. The poster features photos from the *Encuentro de mi Vida* (English translation Encounter of my Life) campaign with images of family members undertaking housekeeping shores while the mother breastfeeds, an image of a couple breastfeeding in the hospital post-partum, and a close up image demonstrating proper latch. Messages encouraging support for breastfeeding mothers were targeted to fathers and the mom's family. In the poster and the fifth video of the campaign the paternal and grandparent figures were emphasized. During the press conference the fifth video of the campaign was

released, with images of the newborn's first skin-to-skin contact with mom, paternal presence in the post- partum hospital room while mother breastfeeds, close up of proper latching, and family support at home helping with chores while mother breastfeeds. During the press conference grandparents and fathers from the community shared their experiences providing support for their BF daughters or wives. The press conference had the presence and support of all the members of the BFPCG, among them representatives of WIC. In the press conference breastfeeding moms were invited to share their pictures of family support for breastfeeding using #lactaenfamilia. There was a successful response and the campaign spread nationwide through digital news outlets and social media. The posters were distributed and placed in public places.

Other collaborators of the BFPCG held various activities throughout the island promoting BF and support for BF mothers, for which the regional and central MCAH staff provided support, during the Lactation month of August 2017. The LLL held diverse activities promoting BF throughout the Island. The PR BF Coalition had a week of lectures for the general public, culminating in their annual march through a shopping mall with the purpose of empowering BF mothers and promoting support for BF moms. Other BF promotion activities at the regions had collaboration from the regional MCAH staff in an effort to increase knowledge of the benefits of breastfeeding and the acceptance of this practice by the public.

Another strategy used to promote BF was the Prenatal Course. It is offered by regional HEs and CHWs to pregnant women and their relatives (refer to the table: Participants that completed 4 sessions of the Prenatal Course 2017-2018). The benefits of BF, BF preparation in the prenatal period, BF initiation in the hospital, resources available in the community for postpartum support, and laws and regulations that support BF in Puerto Rico are among the topics included in the course.

A total of 1,128 infants (less than 12 months of age) participated in the HVP during 2017-2018. Home Visiting Nurses provide breastfeeding support by scheduling a visit in the first week postpartum to the HVP participants. In this and subsequent visits, they evaluate latching and breastfeeding positioning and refer mothers for professional help and support in the community when problems requiring further intervention are identified. The HVP nurses encourage exclusive breastfeeding, at least during the baby's first 6 months of life. There was an increase in the

number of HVP participants reporting ever breastfeeding, to 75.9% in 2018 compared to 67% in 2016, and 28% continued to BF until 6 months (compared to 25% in 2016). Two thirds (63.7%) of HVP participants are adolescents between the ages of 11 to 22, and many continue to attend school after giving birth, requiring additional support to sustain BF beyond the first month.

The WIC program uses an evidence-based BF peer counselor support program which connects experienced BF WIC participants and new mothers. The WIC breastfeeding coordinator is an active member of the PR BFPCG and receives support of other members to present and implement the peer counselor BF program in hospitals and communities.

The MCAH Program Perinatal Nurses continued to distribute posters and brochures to birthing hospitals on current laws about women's and infants' BF rights in these settings, particularly Administrative Order 336, Law 156 amended in 2016, and Law 79 of 2004. The Perinatal Nurses also visit moms postpartum to promote breastfeeding in the hospital and offer orientation on resources that provide breastfeeding support in their community.

OTHER STRATEGIES IMPLEMENTED BY THE MCAHD TO DECREASE IM

Prevention of unintentional injury

The *Estudio de Salud Materno Infantil de PR* (ESMIPR, Maternal Infant Health Study of Puerto Rico) obtains data regarding safety measures and behaviors that mothers adopt to protect their children from unintentional injuries. The results obtained by telephone follow up survey done from 2016 to 2017, at 6 and 12 months after birth, are reported in the following tables.

Safety Measures at Home

Always uses car seat	99%
Knows the damage caused to the brain of baby by shaking them	94%
Has a an Emergency plan	92%
Keeps medication out of reach of their children	89%
Has no containers with water accessible to child outside the home	89%
Has covers over electric outlet	76%
Keeps detergents out of reach of their children	65%
Has no containers with water accessible to child inside the home	61%
Places the baby to sleep upright	28%

Results from the telephone interviews to participants of the ESMIPR survey, Infant Maternal Study of Puerto Rico 2016-2017

Lack of Safety Measures at home

Does not know the Poison Control Help Center telephone number	82%
Does not know CPR	64%
Plans to have a walker for the infant	61%
Places the baby to sleep on the side position	60%
Does not have Fire alarms at home	50%
Places bumpers , toys or other objects in the crib when placing baby to sleep	45%

Results from the telephone interviews to participants of the ESMIPR survey, Infant Maternal Study of Puerto Rico 2016-2017

The findings guide the selection of topics to emphasize in the Parenting courses and in the HVP interventions. Although sudden unexpected infant death has not been reported in PR, the risk behaviors reflected in this survey place safe sleep as an important topic in educational interventions. The HVNs provided orientation and distributed educational materials directed at reducing unintentional injuries to the participants of the HVP and to the community. The Prenatal and Parenting courses continued to promote injury prevention and providing orientation and recommendations on safety strategies, including: preventing shaken baby syndrome, safe sleep, safe toy selection, the Poison Control phone number and support they provide, and the proper use of car seats among others. The PNs also include orientations on safe sleep and prevention of unintentional injury in their orientation on newborn care to postpartum families.

Prevention of Shaken Baby Syndrome

The HEs and MCAH staff created a culturally appropriate interactive intervention on the management of crying babies, *¿Por qué lloran los bebés?* ("Why do babies cry?"). It teaches parents and caregivers strategies to manage crying and irritable babies to prevent Shaken Baby Syndrome (SBS). They incorporated the use of the SBS simulation doll to demonstrate the damaging effects of shaking a baby and to deliver the prevention message more effectively. Updated safe sleep recommendations were included in this course. This intervention was delivered to a total of 1,051 persons during 2017-2018.

Prevention of Forgotten Baby Syndrome

Due to the tropical temperatures in Puerto Rico, a baby forgotten in a car faces rapid dehydration and death. Therefore, education and strategies to prevent forgotten baby syndrome are also included in the HVP and the Prenatal and Parenting courses, including a brochure developed as support and reminder for the families.

Infant CPR and Safe Sleep

During 2017-2018 the HVP continued training of participating families on Infant CPR Anytime, a strategy proven to save lives. The Infant CPR Anytime training is combined with the delivery of Safe Sleep recommendations, complementing strategies aimed at decreasing infant mortality. The HVN used an infant manikin to teach Infant CPR Skills to the participating families, evaluating their performance by using observation guides and providing feedback to ensure competency. Infant CPR Anytime teaches parents and caregivers how to react and rescue an infant in case of choking or cardiorespiratory arrest. During 2017-2018 a total of 2673 persons, HVP participants and family

members received the training, with a 98% satisfaction with the training and usefulness upon evaluation by the participants.

Education on Premature Labor Signs and Symptoms

The MCAH Program staff continues to offer educational activities to participants, providers and the general population in an effort to make them aware of preventable causes of infant mortality, such as early recognition of signs and symptoms of premature labor. The HVNs and CHWs continue distributing magnetic pads with information on “Recognizing preterm labor: signs and symptoms” to participants in Ob-Gyn medical offices and through the HVP.

Perinatal/Infant Health - Application Year

The MCAH Program has identified decreasing Infant Mortality (IM) as a top priority for which it will continue to focus its efforts on strategies to decrease preterm births, increase the percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates, educate women on how to prevent Zika infection and high risk behaviors during pregnancy, and promote and support breastfeeding until infants reach at least 6 months of age. Strengthen disaster preparedness relevant to perinatal and infant care has been identified as an emergent need, and will also be addressed through multiple strategies by the MCAH Program.

During 2015-2016 the threat of the Zika epidemic, due to its teratogenicity and its threat on fetal and infant survival, became an emerging priority for the MCAH program. Transmission of Zika virus has been identified via sexual contact and through the mosquito bite of Aedes species, abundant in Puerto Rico all year round due to its tropical climate. The Zika virus surveillance data demonstrates a decrease in the overall population prevalence of Zika virus from an epidemic to an endemic status in 2017, but it remains a risk for pregnant women in PR. Therefore the MCAH program will continue to offer educational activities focused on the prevention of Zika virus infection during pregnancy, promote prenatal screening for the presence of Zika Virus and advocate for support services for pregnant women with positive results. Puerto Rico remains identified as a territory where travelers are recommended to take precautions to prevent Zika transmission by the CDC. The HVP will continue to deliver support and education to participants with high risk pregnancies and refer them to early prenatal care and support services in an effort to improve prenatal care and decrease infant mortality. Cases with positive Zika results are registered in the PRDOH. The fetus is closely monitored during pregnancy, and newborns are referred to the Pediatric Centers for close monitoring and screening. The Community Health Workers (CHW) will also continue including education on Zika virus prevention in the community.

The MCAH staff will continue collaborating with all efforts by the CDC and the PRDOH for research and management of this emerging condition, including analysis of the spread of the disease, and developing a profile of women affected and their offspring. MCAH will continue including Zika prevention education in all the courses (Prenatal and Parenting) and educational activities provided in the community. The educational intervention will continue to focus on how women can protect themselves and their families from the vector that transmits the Zika virus, from the sexual transmission of the virus, and how to eliminate mosquitoes in their surroundings.

The Puerto Rico Collaborative Improvement and Innovation Network (ColIN) for Infant Mortality reduction will continue to focus on the prevention of preterm and early term births. Prenatal Health Care Services Guidelines (PNHCSG) along with the Preventive Health Services Guidelines for women in reproductive age have been developed and will be presented to the Puerto Rico Health Secretary for his approval as a Public Policy of the Health Department. The PNHCSG includes emphasis on early identification of high risk pregnancies for adequate referral, such as women with a history of a previous premature birth to whom the service of home administration of the 17P (hydroxyprogesterone) may be offered. During 2019-2020 the PNHCSG will also be disseminated among the general public to promote early prenatal care.

The MCAH Program will also continue to encourage the implementation of the Hard Stop policy in all birthing hospitals in order to decrease elective labor induction prior to 39 weeks gestation in non-medically indicated cases. To accomplish this program will continue to promote the strategies recommended by ACOG for the implementation of the Hard Stop Policy, in compliance with the AO 366 in hospitals and in collaboration with the Hospitals Association and MOD.

The MCAH Program will continue to educate and increase awareness regarding premature birth with the distribution of a magnetic pad featuring warning signs and symptoms of preterm labor and the steps women should take if they suspect they are experiencing preterm labor. HVNs will continue to routinely evaluate their participants in an effort to identify the presence of risks related to premature and LBW deliveries and to provide education and individual orientations about the signs and symptoms associated with premature labor as well as information concerning the

birthing facility with Level III perinatal services near to their residence. The Perinatal Nurses will continue offering education to pregnant women on signs and symptoms of premature labor. The MCAH Program will continue to promote the use of a prenatal card that records pertinent obstetric history and information, and the benefit of carrying it at all times.

A new version of the multimedia campaign, *El Encuentro De Mi Vida* (The Encounter of my Life) was launched in 2018 to deliver the message that pregnancy lasts 40 weeks; good prenatal care improves outcomes and breastfeeding initiates in the hospital. The campaign will continue during 2019 as will the promotion of the web page. The information provided on the web page will continue to be updated by the MCAH staff, providing the latest recommendations based on evidence. Compiled data during the month of March 2019 reported: 1,233,000 estimated viewers of messages in free local television and 112,211 viewers on paid local television; 795,600 listeners in local radio; 2,365,000 newspaper ads; 423 clicks on advertisement banners in social media; 693,530 viewers in theaters and cinemas, and from August 2018 to march 2019 there were 3,950 unique visitors to the webpage. A poster presentation on the development and implementation of this campaign was presented and shared in the March 2019 AMCHP conference and has been included in the AMCHP toolkit for National Performance Measure 4 as a recommended practice for education. The BFPCG has also been included in the toolkit recommended as a Policy and Systems Approach.

The MCAH has joined the CDC LOCATe initiative, which aims to evaluate the levels of service in hospital maternal infant services. During 2018-2019 a report of LOCATe findings specific to each institution was shared in a second interview with each of the participant hospitals. In the 2nd interview, they received results of analysis; aggregate analysis by level of care, and linkage of PR LOCATe data with infant and mother data obtained via Vital Statistics correspondent to the institution. This visit provided the opportunity to have a conversation about the findings as well as to clarify any questions regarding the levels of care and provided the opportunity to improve data quality. With the information provided during the visits, combined with the Maternal and Neonatal Care Guidelines, hospitals had the necessary tools to re-evaluate their performance, improve their services and obtain a reclassification of the level of care according to the service provided. This allowed identification of the changes needed to promote perinatal regionalization to ensure adequate services for the population and adequate use of the existing resources, promoting the creation of inter-hospital agreements for high-risk patient referral. During this period of time some hospital changed owners or improved services, changing their initial classification of level of care as assessed according to PR LOCATe. As a result, 46% of hospitals had a reclassification of their level of maternal or neonatal care or both, either because of changes in services or because of correction in data entry or interview response errors. The following tables summarize the results of the LOCATe assessments.

Comparison of Classification in Levels of Maternal Care						
Level of Maternal Care	Self Assessment by Hospital Staff***		1st LOCATe Assessment*		2nd LOCATe Assessment**	
	n	%	n	%	n	%
Birth Center	0	0	1	3.8	1	3.8
Level I	1	3.8	20	76.9	10	38.5
Level II	9	34.6	5	19.2	14	53.8
Level III	6	23.1	0	0	1	3.8
Level IV	1	3.8	0	0	0	0
Did not know how to Self-Assess	9	34.6	0	0	0	0

*15.4% of the facilities self-assessment Matched 1st LOCATe Assessment
**30.8% of the facilities self-assessment Matched 2nd LOCATe Assessment
***Self Assessment, Hospital staff perception of level of services provided LOCATe classification of levels based on Maternal Care Recommendations by the American College of Obstetrics and Gynecology and Society of Maternal-Fetal Medicine

Comparison of Classification in Levels of Neonatal Care						
Neonatal Care	Self Assessment by Hospital Staff***		1st LOCATe Assessment*		2nd LOCATe Assessment**	
	n	%	n	%	n	%
Level I	2	7.7	3	11.5	3	11.5
Level II	12	46.2	21	80.8	13	50
Level III	9	34.6	1	3.8	8	30.8
Level IV	1	3.8	1	3.8	2	7.7
Did not know how to Self-Assess	2	7.7	0	0	0	0

*57.7% of the facilities self-assessment MATCHED 1st LOCATe Assessment
**61.5% of the facilities self-assessment MATCHED 2nd LOCATe Assessment
*** Self Assessment, Hospital staff perception of level of services provided LOCATe classification of levels based on Perinatal Care Guidelines by American Academy of Pediatrics and American College of Obstetrics and Gynecology

Differences for the classification of the level of maternal care by hospital staff self-assessment versus LOCATe were due to the lack of a maternal-fetal medicine specialist, and/or MRI 24/7, and/or Obstetrician on site 24/7, and/or anesthesiologist with experience in obstetric anesthesia in charge of the maternal anesthesia services. Differences

relating to the classification for the levels of neonatal care were due to the lack of a neonatologist, or of specific pediatric specialists as recommended in the guidelines. The findings will also be disseminated to support decision making in the public and private health systems. The post hurricane visit to the hospitals for LOCATe also served to identify the challenges faced during and after the storms, and to request hospitals to share their revised protocols for disaster preparedness and management so as to develop a master guideline for hospitals to evaluate their individual plans and modify according to their needs. In 2019-2020, CDC will continue state and jurisdictional analysis of data, linking VS and insurance data with LOCATe data to evaluate birth outcomes and maternal complications according to levels of care.

The Puerto Rico Fetal Infant Mortality Review (PR FIMR) Committee will continue evaluating cases, identifying barriers to optimum maternal and newborn care, and sharing the findings and recommendations with stakeholders (leaders of the Hospital Association, professional groups such as the local ACOG and AAP Chapter, March of Dimes, other government agencies, and MCAH Regional Boards). The FIMR will continue to focus on evaluating infant deaths in the high-risk families served by the MCAH Home Visiting Program (HVP) in an effort to identify risk factors of this vulnerable population and to propose strategies to improve their outcomes. The Committee will also continue to focus on fetal deaths in HVP participants to attempt to identify risk factors contributing to the high prevalence in Puerto Rico of 10.7 fetal deaths/1,000 births (VS 2017), and strategies to address them.

The PR MCAH program has trained the HVP nurses on Infant CPR Anytime as a strategy to decrease infant mortality. The HVNs train participant families on how to perform Infant CPR Anytime and educate families on Safe Sleep practices beginning in the second trimester of pregnancy. A refresher on Infant CPR Anytime is done in the first month of the infant's life. Even though no Sudden Unexpected Infant Deaths have been reported in PR in the last 3 years, it is of concern that only 29% of the mothers who participated in the 2015-2016 ESMIPR (preliminary data) reported placing their baby to sleep on their back, as recommended for safe sleep; 59% reported laying them on their sides, 2% prone, and 9% in any position. Therefore, it is necessary to continue to educate on safe sleep recommendations that are included in the Parenting and Prenatal courses, "Why do babies cry?" workshop, and other community education interventions.

The PR MCAH staff will continue to support the initiation of BF and continuance of exclusive BF beyond 6 months of age by diverse means. The BFPCG will develop recommendations for hospitals to include BF strategies as part of their preparedness and disaster plan and will recruit the collaboration of the Hospital Association for their dissemination and implementation. The BFPCG will continue to promote BF as a lifesaving measure in a disaster, which must be included in all disaster preparedness plans. With the experience acquired after the hurricane disaster, the MCAH staff in collaboration with the WIC program will actualize the guidelines for Safe Infant Feeding after a disaster which provides guidelines to promote and support BF as a life-saving strategy for infants and safe management of formula. The Pediatric Consultant, Dr. Cindy Calderon will be presenting at the 2019 City Match conference sharing the experience of the FIMR identifying recommendations to improve preparedness in the NICU units and the experience promoting BF after a disaster.

The data obtained by WIC, the Demographic Registry, PR PRAMS, Immunization Survey and mPINC will reveal prevalence and trends of BF in PR. The results on BF practices are vital to enable evaluation so as to be able to propose and implement achievable strategies aimed at increasing its successful initiation and exclusive BF continuance up to the minimum age of 6 months old.

The MCAH Division will continue to provide training to its staff (HVNs, CHWs, and Perinatal nurses) with the skills and knowledge to help achieve successful initiation and continuation of exclusive BF up to at least 6 months of age in the population they serve. They will acquire the skills to reinforce one-on-one orientations on BF related issues to HVP participants starting in pregnancy, to encourage the adoption of this beneficial infant feeding practice, with special emphasis in exclusive BF for their offspring's first 6 months of life as a minimum.

During 2019-2020, the PR HVP will evaluate and adopt strategies recommended by the Home Visiting Quality

Improvement ColIN in an effort to improve its effort and impact in supporting BF strategies. The MCAH staff will continue to promote knowledge of existing laws that protect the rights of BF mothers in public and in the workplace at the community level and distribute posters promoting laws that protect the right of mothers to breastfeed in public places.

For Breastfeeding Week in August 2019, the DOH will emphasize the importance and lifesaving benefits of BF in a disaster and the need to provide support to BF mothers as a priority during disaster preparedness planning. A poster will be developed by the MCAH staff in collaboration with the DOH communication office and presented in a press conference, with testimonies of mothers who were relieved that they were able to provide breast milk to their infants in mist of all the chaos and challenges due to the storm disaster. This campaign will be launched with the participation of collaborators such as the PR ACOG, PR AAP, WIC, and BFPCG, among others. Messages pertaining to preparedness for hurricane season by Breastfeeding their babies will be shared in social media and families will be invited to join the campaign and share their experiences of breastfeeding after the storm.

The MCAH staff will also continue to promote changes in the hospitals to provide support to mothers so as to successfully initiate BF in the postpartum period. Therefore, it will continue to promote hospital compliance with Administrative Order No. 336 (AO #336) which requires hospitals to establish BF support policies. As part of the hospital visit for LOCATe during 2018-2019 the MCAH staff has also provided hospital with their performance statistics on ever-breastfed and exclusive Breastfeeding upon hospital discharge compared to the overall rates of the other hospitals in the Island. This has provided the opportunity to share recommendations to improve their performance and strategies to promote; safe sleep, orientation to mothers of the risk in using informally donated breast milk, the need to provide breast milk to preterm babies, and the use of the web site www.encuentrodemivida.com with their prenatal patients. MCAH will continue to raise awareness among birthing hospitals across the island of the opportunity to participate in national data collection surveys, such as the mPINC, that provide information pinpointing areas in need of improvement to support successful initiation of breastfeeding in the hospital.

The Puerto Rico Breastfeeding Promotion Collaborative Group (PR BFPCG), coordinated by the PR MCAH Pediatric Consultant, will continue to work with the Pan-American Health Organization (PAHO) representative in PR in the implementation of a National Plan for Obesity Prevention in Puerto Rico, promoting the successful initiation of BF and exclusive BF upon discharge from hospitals, and sustained exclusive breastfeeding for at least the first 6 months of life. The PR BFPCG and PAHO will recruit the Puerto Rico Hospital Association to promote the Baby Friendly Hospitals Initiative, implement the steps proven to achieve a successful BF process, self-assess their performance, and improve the quality of their maternal infant services. In collaboration with the PAHO, “Infant feeding Recommendations for 0 to 24 months old” will continued to be promoted. These guidelines strongly recommend supporting exclusive BF for the first 6 months of life.

During 2019-20 the PR BFPCG, will continue to promote support for BF in the workplace. Two members of the BFPCG have joined the recently developed Workplace Support Community of Practice by the United States Breastfeeding Committee, in representation of the group. This will provide the opportunity for them to share PR efforts and laws to support BF mothers at work and to learn strategies from other states. The MCAH will continue to provide support to all collaborators of the PR BFPCG such as: the WIC, Peer Counselors Program in Hospitals, La Leche League community support programs, Puerto Rico Breastfeeding Coalition, Movement of Breastfeeding Mothers, Proyecto Lacta, initiatives of the PR AAP Chapter, among others. The MCAH staff developed an online interactive module on laws that protect and support BF mothers to be made available to all government employees as an alternative to complete their required CME credits on ethics. During 2019 the regional MCAH Health Educators have delivered presentations of the laws that support and protect breastfeeding mothers to the personnel of the PR Family Welfare Agency and will continue until all their personnel are covered.

Breast milk is especially beneficial to premature babies. It plays an important role in protecting them from necrotizing enterocolitis, among other benefits. There are no milk banks in Puerto Rico, but due to the fiscal crisis in the island

and the cost involved in setting up a milk bank, it is not feasible at this moment. Priority will be placed on promoting strategies that increase BF prevalence and support for mothers of premature babies. The PR BFPCG will encourage hospitals to adopt policies that support mothers of premature babies and provide the opportunity to express and store breast milk to feed their preemies during their hospital stay. MCAH staff will continue to provide education to the public regarding the dangers of feeding infants human milk obtained by informal milk donation, as evidenced by parental request through social media, without the proper screening of donors to decrease the risk of contamination or transmission of disease. An educational brochure has been developed to share this important information.

The Home Visiting Program will continue to strengthen the nurse interventions with families to promote infant and maternal well-being. They will provide orientation and support promoting BF, oral health care, developmental stimulation, parental guidance, preventive health, physical activities and prevention of Zika among many other topics. These interventions begin in the prenatal period and extend until the infant reaches their second birthday. The service will continue to be delivered to high risk and vulnerable families, connecting them with the resources in their community.

The prenatal course will continue to encourage BF by including information relevant to pregnant women on the benefits of BF, strategies for successful initiation, the hospitals' obligation to provide support for BF mothers, and topics relevant to optimum prenatal care and preparation for delivery.

Child Health

Linked National Outcome Measures

National Outcome Measures	Data Source	Indicator	Linked NPM
NOM 14 - Percent of children, ages 1 through 17, who have decayed teeth or cavities in the past year	NSCH	Data Not Available or Not Reportable	NPM 13.2
NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health	NSCH	Data Not Available or Not Reportable	NPM 13.2

National Performance Measures

NPM 13.2 - Percent of children, ages 1 through 17, who had a preventive dental visit in the past year
Indicators and Annual Objectives

NPM 13.2 - Child Health

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			75.7
Annual Indicator	75.7	75.7	72.3
Numerator	519,746	519,746	433,883
Denominator	686,290	686,290	600,429
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2016	2016	2017
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	72.3	72.3	72.4	72.4	72.5	72.5

Evidence-Based or –Informed Strategy Measures

ESM 13.2.1 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) screened for high risk for caries and referred for early oral preventive services in Puerto Rico by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		5	85
Annual Indicator	0	0	73.5
Numerator			626
Denominator			852
Data Source	N/A	N/A	HVP Participants Records
Data Source Year	N/A	N/A	2017-18
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	73.6	73.7	73.8	73.9	74.0	74.1

ESM 13.2.2 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) at high risk for caries who received early oral preventive services in Puerto Rico by September 2020-2025 (ongoing)

Measure Status:	Active

Annual Objectives					
2020	2021	2022	2023	2024
Annual Objective	18.2	18.3	18.4	18.5	18.6

State Performance Measures

SPM 2 - Percent of children with a preventive services visit in the last year

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		6.6	79.5
Annual Indicator	79.4	79.4	85.8
Numerator	357,484	357,484	307,621
Denominator	450,190	450,190	358,453
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2016	2016	2017
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	85.8	85.8	85.9	85.9	86.0	86.0

State Action Plan Table

State Action Plan Table (Puerto Rico) - Child Health - Entry 1

Priority Need

Improve Children Health and Wellbeing

NPM

NPM 13.2 - Percent of children, ages 1 through 17, who had a preventive dental visit in the past year

Objectives

1. Maintain at 72.3% the percent of children, ages 1 through 17, who had a preventive dental visit in Puerto Rico by 2020 (Baseline: 72.3%, BRFSS 2017).

Strategies

1. Continue the use of the caries risk screening tool for the early identification of infants at high risk and early referral for preventive oral care in the Home Visiting Program.
2. Promote establishment of a dental home for preventive oral health visits in all children.
3. Promote healthy habits that protect oral health in communities.
4. Promote the use of fluoride varnish in children at high risk for early childhood caries.
5. Promote the use of caries risk assessment in Early Head Start.

ESMs	Status
ESM 13.2.1 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) screened for high risk for caries and referred for early oral preventive services in Puerto Rico by September 2017-2021 (ongoing)	Active
ESM 13.2.2 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) at high risk for caries who received early oral preventive services in Puerto Rico by September 2020-2025 (ongoing)	Active

NOMs

NOM 14 - Percent of children, ages 1 through 17, who have decayed teeth or cavities in the past year

NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health

State Action Plan Table (Puerto Rico) - Child Health - Entry 2

Priority Need

Improve Children Health and Wellbeing

SPM

SPM 2 - Percent of children with a preventive services visit in the last year

Objectives

1. Maintain at 85.9% the percent of children 1 to 11 years old with a preventive medical visit in Puerto Rico by 2020 (Baseline: 85.9%, BRFSS 2017).

Strategies

1. Promote Pediatric Preventive Health Care Guidelines among general public, academia, health professionals and health insurance companies.

2. Continuously update the Puerto Rico Pediatric Preventive Health Care Guidelines following the recommendations by Bright Futures of the American Academy of Pediatrics and the United Sates Preventive Task Force.

3. Promote developmental screening in early childhood.

2017-2018 was a challenging year as a consequence of the devastation caused by the hurricanes that hit Puerto Rico causing disruption of the electrical grid and damage to the infrastructure. A study funded by Save the Children, Angel Ramos Foundation, *Instituto de Desarrollo de la Juventud* (Youth Development Institute), and Massachusetts United Fund on The Impact of Hurricane Maria on Puerto Rico Children raises an alert of the need to address emotional wellbeing and mental health post the stress caused by the disaster. The study consisted of a survey of 705 households with children younger than 18 y/o carried out from July to September 2018 by *Estudios Técnicos, Inc.* It was complemented by a study by the University of Puerto Rico, in which they visited five municipalities from October to November of 2018 and collected qualitative information from around 60 people in each municipality (www.juventudpr.org/en/about-us/library/?libroId=20511). The populations identified as most vulnerable and impacted by the aftermath of hurricane Maria were the lowest income families, children under the care of grandparents, and children with special medical care needs. It also identified that the degree of preparation for the event was less efficient in low income families, most municipalities had no plan for children in a disaster, and children living in poverty were more likely to experience a worsening economic situation in their homes, with 3 of every 10 children economically worse than previously.

Preparation For The Event

Had a generator	25%
Had a cistern	33%
Households had a prior plan to respond to the disaster	48%

ECONOMIC DIFFICULTIES AFTER THE STORM

They faced difficulties in having access to food in order to provide the daily meals of the children	43%
They could not supply any of the children's daily meals as a result of the hurricane	20%
Households reported the loss of clothing and personal effects	36%
Loss of income in the home	31%
Reduction in hours of employment	27%
Loss of employment	20%
Families lost their vehicles;	13%
Families said their financial situation declined, by instability and difficulties in paying for power and water, buying food, making cell phone payments, buying clothing and personal effects, buying school supplies	32%

*Source of data: Study of the Impact of Hurricane Maria on Puerto Rico's Children, December 2018, www.juventudpr.org/en/about-us/library/?libroId=20511

IMPACT OF THE STORM
GENERAL FINDINGS IN HOUSEHOLDS
WITH CHILDREN BETWEEN 0 AND 18 Y/O*

Stayed at home during the storm	76%
Stayed at relatives home during the storm	18%
Average days prior to being able to return home	68 Days
Damage to homes	80%
Were victims of flooding	40%
Immediately after the storm lost electricity	99.7%
Average of days before recovery of electricity	103 days
Immediately after the storm lost cell phone signal	92%
Average of days before recovery of cell phone signal	69 days
Immediately after the storm had no tap water	85%
Average of days before recovery of tap water	55 days

*Source of data: Study of the Impact of Hurricane Maria on Puerto Rico's Children, December 2018, www.juventudpr.org/en/about-us/library/?librold=20511

Children younger than 5 y/o were out of day care an average of 92 days, and 7% of children in day care presented behavioral changes associated to hurricane stress. A majority of children between the ages of 5 to 17 (79%) are in the public education system. After the storm they were out of school an average of 78 days, and when returning they had modified hours due to lack of basic utilities. Forty-four percent (44%) of parents or caretakers observed behavioral changes after the storm. The impact caused by the interruptions in academic routines for minors, especially for special education students or students with other disabilities, affected their behavior and sense of appreciation and commitment to school; 23% of these children displayed changes in behavior at school, while 12% had problems focusing at school. These preliminary results reflect the issues faced by families with children lacking the resources to handle stress, tension or trauma situations; they were severely affected by the hurricane and the long period of difficulties it left in its wake, which in turn greatly affected their already complicated economic situation.

OBSERVED BEHAVIORAL CHANGES
BY PARENTS OR CARETAKERS
OF CHILDREN BETWEEN 0 AND 18 Y/O

Anxiety	23%
Fear	19%
Sadness or discouragement	16%
Disturbing memories related to the hurricane	15%
Nervousness	15%
Difficulty to concentrate/focus	13%
Bad mood	12%
Excessive sense of warning	10%
Lack of enthusiasm	9%
Insomnia	6%
Loss of appetite	6%

*Source of data: Study of the Impact of Hurricane Maria on Puerto Rico's Children, December 2018, www.juventudpr.org/en/about-us/library/?libroId=20511

After the disaster and in the initial recovery phase a priority in the MCAHD, as advocates for the pediatric population, was to identify emerging needs and propose strategies to address them. Immediately after the storms the MCAH staff assumed multiple responsibilities to support the recovery response and protect the wellbeing of the vulnerable pediatric population. Recovery plan teams had to be reminded that children are not small adults; therefore their needs must be considered when implementing mass rescue and recovery strategies.

The MCAH Pediatric Consultant contributed in the response team created as a collaboration between the MCAHD, the PR AAP Chapter, the Pediatric Hospital Foundation, and the Pediatric Department of the PR School of Medicine, helping identify the urgent needs of the pediatric population, actively supporting recovery organizations on the island and in the mainland, and collaborating in the development of strategies to mitigate the effects of the storm. Among the prompt responses created by this team were visits to official and community-created shelters to assess needs and offer support (medications, first aid supplies, tap water, etc.); identification of needed medical supplies and creation of a list of needs to guide donations from the mainland; organization of the distribution of medication and other basic supplies by priorities in the temporary distribution center created in the Pediatric Hospital; visits to shelters to offer medical services and distribute medication and facilitate communication; networking with other pediatric organizations to develop mitigation plans and provide health care services. A guide on the Identification and Management of Common Health Conditions in Children After a Disaster as an instrument to guide community leaders was developed and distributed throughout the island. The guide provided community leaders with basic information on common health conditions that may emerge in overcrowded situations such as in shelters, or in the recovery phase after a disaster, and recommendations on how to manage them. Training sessions on information provided by the guide were also offered in multiple workshops throughout the island to community leaders in collaboration with United Way of PR and the PR AAP Chapter.

TRAINING SESSIONS: ON THE IDENTIFICATION AND MANAGEMENT OF COMMON HEALTH CONDITIONS, AND THE PREVENTION OF ACCIDENTS AFTER A DISASTER
Community Leaders Training: Train the Trainer • Prevention of unintentional injuries. • Identification and management of common conditions in children after a hurricane • Participation of 173 leaders from 96 community non for profit organizations

Recovery and Mitigation Efforts after Hurricanes Irma and María, Collaboration with United Ways of PR and PR AAP Chapter

The Pediatric Consultant also represented the DOH in the Children Task Force (CTF) created in the recovery phase to promote collaboration in the identification of emerging needs and the development of strategies to address them. The CTF was composed of representatives of local and federal government agencies, community leaders, and not-for-profit organizations and held weekly meetings. The MCAHD Pediatric Consultant contributed to organizations that arrived on the island by providing information on the status and needs of the pediatric population, resources available, links to local agencies and organizations, and information on cultural characteristics of the population to help maximize their recovery efforts.

The HVP nurse in Culebra, an outlying island municipality, demonstrated her leadership role by becoming the main liaison for the mitigation and recovery efforts directed to families, due to her knowledge and established relationship with the community. Most of the HVPs played a similar role in their communities. The leadership role and the knowledge of the MCAH population by the MCAHD staff proved to be instrumental in the recovery and mitigation efforts, providing support to the MCHA population after the storm. In the recovery phase, MCAHD staff continued their efforts to provide services needed to have an impact on families, communities and the health care system, in order to sustain and improve the health and wellbeing of Puerto Rico's children, youth, and their families. As the recovery phase progressed the MCAHD reinstituted all its initiatives and efforts aimed at informing and educating families and the public about the unique needs of the pediatric population and foster changes to benefit this population. The MCAHD continued conducting ongoing assessment of the emerging health needs to drive priorities for achieving high quality health care access and to continue to establish the medical home model and ensure continuity of care.

Collaboration with diverse partners, including families, community based organizations, private sector and other government agencies, was a key to advancing a shared vision for leveraging resources, integrating and improving systems of care, promoting quality public health services and developing supportive policies. The Pediatric Consultant was elected vice-president of the PR Chapter of the AAP in June 2017, strengthening the collaboration with this organization that pursues similar goals. The Pediatric Consultants work in the MCAHD was spotlighted in an article published in AAP News, April 10 2019, *How public health work can extend pediatricians' reach,* (www.aappublications.org/news/2019/04/10/chapters041019).

The MCAHD continued to develop and implement varied strategies to achieve the national and state performance goals relevant to the Child Domain and contribute in the recovery phase and preparedness for future events.

Promoting preventive health visits

After the hurricane, many pediatricians closed their offices due to structural damage or flooding; others decreased their office hours due to the extended period without electrical power, which required the use of electric power generators. The cost of diesel to maintain the generators increased their overhead while their incomes decreased due to a reduced flow of patients to their offices. Many families postponed preventive health care visits, due to higher

priorities to other challenges after the storm; lack of basic needs such as water and electricity, decreased income, and loss of a safe roof over their heads. Other families had poor access to transportation or lived in isolated communities due to damage to roads and bridges.

The impact of the storms increased the fiscal challenges the pediatric health care workforce has been confronting the recent years. Since 2015 a number of pediatricians have closed their offices in response to the economic difficulties created by the migration of the population (young families with children) to the mainland and difficulties in the reimbursement from health insurance companies. Many have moved away from the Island or have joined an emergency room or intensive care unit as employees to ensure a sustained income. As reported by the PR Health Insurance Administration (PRHIA), for 2017-2018 there were 1,917 Pediatricians (including pediatric subspecialist), 2,593 Family Physicians, and 14,661 General Physicians contracted for services in the GHP (Government Health Plan). The GHP served a population of 424,939 in the pediatric age range under EPSDT (0 to 21 years old).

The DHHS Assistant Secretary for Preparedness and Response (ASPR) provided support to the PR AAP Chapter and the National AAP, with the collaboration of MCAHD, in evaluating the needs of pediatricians and health care services for the pediatric population in PR after the hurricane. A series of regional meetings were coordinated to provide pediatricians information on opportunities to overcome their losses and how to recover their practices, in order to motivate them to remain in Puerto Rico. Orientations were provided on how to process insurance claims for damages and loss of income, how to apply for loans to help in the recovery process and incentives, and the National Health Service Corps (NHSC) loan repayment assistance to support qualified health care providers willing to work on the island. Generators were distributed by FEMA and Small Business Administration loans were offered to primary care pediatricians. Pediatric health services slowly recovered, with some areas lagging behind due to the overwhelming damage to infrastructure. Some areas remained without electric power for 7 months, and the recovery of the infrastructure remains slow.

The Puerto Rico Preventive Pediatric Health Care Service Guidelines (PR PPHCSG) steer primary health care providers to deliver high-quality preventive health care that will have an impact on child health and well-being. The PR PPHCSG improve the provision of primary health care services of infants, children, and adolescents by promoting the use of universal and selective screenings by age, complete history-taking and physical exam, and the delivery of anticipatory guidance. The guidelines recommend the evaluation of nutritional habits, physical activity, BMI, oral health, development status, signs of depression and risky behavior, and the use of specific validated screening instruments to help in an early identification and timely intervention. They emphasize the role of anticipatory guidance for effective prevention by providing the opportunity to share strategies to improve healthy lifestyles and to educate parents on changes and needs of children in each stage.

The guidelines encourage providers to identify risk factors as early as possible for prompt evaluation and intervention that will allow children to achieve their full potential. Common conditions which may be identified by following a scheduled itinerary for preventive care services include obesity and children at risk for obesity, developmental delays and risk for dental caries. Provider compliance with the PR PPHCSG fulfills the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) requirements for the Medicaid-served population, established as a public policy by the PR DOH. EPSDT also serves as a guideline for preventive medical services for the rest of the pediatric population. During 2017-2018, the contracted health insurance companies continued to reinforce the use of PR PPHCSG as EPSDT guidelines in pediatric preventive health care services provided to the GHP population.

Nearly all mothers (99%) participating in the *Estudio de Salud Materno Infantil de PR* (ESMIPR, PR Maternal Infant Health Study) follow-up surveys at 6 and 12 months in 2017 reported their children had a primary care physician and had visited them for preventive visits. In similar findings, in the preliminary data of the PRAMS-ZPER survey of 2017, 99.1% of mothers responded in the affirmative when asked if their baby had "any health care visits with a doctor, nurse, or other health care worker since you left the hospital when your baby was born."

During 2017-2018, 28 % of the insured population in the <1y/o age range and 11% in the 1 to 11 y/o age range had at least one preventive visit billed, according to the Insurance Commissioner's Office (ICO) data. A disparity is observed when comparing preventive visits billed between PI (private insurance) and GHP in the <1 y/o age range (24% versus 76%) and in the 1 to 11 y/o age range (31% versus 69%), as reported by the ICO (with at least one billed preventive visit). Pediatricians have shared their difficulty in preventive visit being recognized and paid by private insurance in > 2 y/o, which will require documentation and investigation prior to establishing improvement efforts. Another observation is that as children grow older there is a tendency for fewer children to have at least one preventive visit. This different pattern of outpatient visit utilization between the privately insured and the GHP insured brings up the concern of its possible impact on the quality of care and the cost of care between both sectors. Disparities are summarized in the following table.

BILLING FOR PREVENTIVE VISITS 2017-2018†	AGE RANGE FOR PREVENTIVE VISIT BILLING	
	Total billed for Preventive visits* 0 to 11 months	Total billed for Preventive visits 1 to 11 y/o
Children in Private insurance with at least one visit	1,694	9,559
% of insured with PI	24%	31%
Children in GHP insurance with at least one visit	5,298	21,024
% of insured with GHP	76%	69%
total with preventive visit billed	6,992	30,583
Total insured	24,987	266,648
% of Total Insured with at least one preventive visit	28%	11%

†Source: ICO, Claims Data 2017-2018.
*Z00.110 Health supervision for newborn under 8 days old OR Z00.111 Health supervision for newborn 8 to 28 days old
**Z00.121 Routine child health exam with abnormal findings OR Z00.129 Routine child health exam without abnormal findings

In 2017, 71% of parents with children between the ages of 1 and 11 y/o stated that their child was in excellent or good health and 86% reported their child had a preventive service visit in the last year PR Behavioral Risk Factor Surveillance System, (BRFSS). This difference may reflect a lack of proper use of codes for billing preventive visits by providers, or a misconception of parents of what is a preventive visit versus an urgent visit to an outpatient clinic. MCAH staff strives to increase this %, therefore we continue to advocate the dissemination and implementation of PR PPHCSG. Participants of various initiatives received information promoting the recommended Preventive Pediatric Visit schedules by age. The Parenting course and the Prenatal course promote compliance with pediatric preventive visits and provide orientation on the purpose of these visits. The HVNs provided information regarding the pediatric preventive visits to the 3,633 families reached during 2017-2018.

INSURANCE BY AGE AND TYPE 2017-2018*

	Total insured with PI	% insured with PI	Total insured with GHP	% insured with GHP	Total insured in age range
0 to 11 months	9,852	39%	15,135	61%	24,987
1 to 11 y/o	120,201	45%	146,447	55%	266,648
0 to 11 y/o	130,053	45%	161,582	55%	291,635

*Data Source: Insurance Commissioner Office

The uninsured population between 1 to 11 years of age for 2017-2018 is 8,048 (2.2%).

Promoting physical activity and preventing risk for obesity

Nutritional choices were limited for a period following the storm. Many people depended on donations and food boxes distributed to the population during the recovery phase. Children had the opportunity to play outdoors and use their outdoor recreational toys, for there was no electricity, limited internet services and television, and many schools remained closed for a prolonged period. In many communities and shelters children could be observed playing and riding bikes, increasing outdoor physical activities. When the MCAH staff reinstituted the interventions, they continued to encourage increased physical activity and healthier nutritional choices in an effort to decrease the risk of obesity.

PHYSICAL ACTIVITY IN CHILDREN 6 TO 11 Y/O*

Time dedicated to physical exercise daily	Percent
No exercise	3%
< 20 min a day	1%
20 to < 60 min a day	5%
60 to <120 min a day	18%
120 to < 180 min a day	15%
180 or >	51%
does not know	1%

* Data Source; 2017 BRFSS results and INTERNATIONAL DATABASE 2018

During 2017-2018, participants of the HVP and the Parenting courses continued receiving information of the updated AAP recommendations encouraging daily physical activity and limiting exposure to television or other passive digital media for infants, toddlers and children. Parents also received orientation on the obesity risk for their children when they consume high-calorie snacks with low nutritional value. The AAP's recommendation to limit juice intake to less than 4 ounces a day in toddlers, 6 to 8 ounces a day in children, and no juice before 1 year old was reinforced. The Parenting course, directed at parents of children from birth to 5 years, includes messages encouraging physical activity and making healthier nutritional choices for their families.

The MCAH staff continued to promote healthy nutritional habits and compliance with the culturally and linguistically

adapted My Plate recommendations during home visits and in community based activities. The staff also continued to encourage the exchange of water instead of high-calorie sweetened beverages in purchased meals. Law 256 of 2015 requires food outlets to offer consumers the option to exchange soda for bottled or filtered water in combo meals at no extra charge. Brochures developed with culturally appropriate simple language reinforce the messages delivered during orientations to families in the community, in the Parenting courses, the Prenatal courses, and in the HVP. The following tables summarize the number of participants in the Responsible Parenting Courses during 2017-2018.

PARTICIPANTS THAT COMPLETED 4 SESSIONS OF THE RESPONSIBLE PARENTING COURSE (0 TO 5 Y/O) 2017-2018*			
Delivered by	Maximum # of participants	Total # of participants who completed 4 sessions	% completed 4 sessions
HE	216	178	82.4
CHW	993	762	76.7
Total	1,209	940	77.8

* Complete course consists of 4 sessions

PARTICIPANTS THAT COMPLETED THE RESPONSIBLE PARENTING COURSE (6 TO 11Y/O) 2017-2018**	
Delivered by	# of participants (one session)
HE	319
CHW	1,823
Total	2,142

**Complete course consists of a single session

Additional orientations related to nutrition and physical activity was delivered to 1436 participants by the CHWs and HEs in educational activities in the community during 2017-2018.

Short and simple physical activity breaks *(Pausas Activas)* are offered in all courses promoting active lifestyles and the adoption of physical activities in daily routines.

The PR PPHCSG emphasizes calculating BMI and its percentile, history of physical activity and nutritional habits of children during their preventive visits, reminding primary care providers of the importance of including nutritional and physical activity advice when delivering anticipatory guidance, therefore promoting the prevention of obesity in the pediatric population.

The MCAH continued collaborating in the implementation of the Puerto Rico National Plan for the Prevention of Obesity with other PRDOH Programs, government agencies and the Pan American Health Organization. During 2017-18 the group reevaluated objectives and strategies, implementing modifications so as to achieve the prevention of obesity in the pediatric population. The Puerto Rico National Obesity Prevention Plan has been a Public Policy of the PR Government since 2016 which includes promoting BF, following the My Plate recommendations, increasing access to areas that promote physical activity and proposing policies and laws that support the prevention of obesity.

An increasing trend in the percent of children ages 2 to 5 receiving WIC services who have a BMI at or above 85th percentile has been observed in PR, from 16.3% in 2015, to 17.7% in 2017and 18.6% in 2018.

BEHAVIORS THAT INCREASE THE RISK OF OBESITY IN CHILDREN PARTICIPANTS OF PR WIC (1 TO 5 Y/O)

Behaviors	Percent
Repeatedly use of drinks that contain sugar other than milk	17%
Do not follow dietary guidelines	16%

Data provided by PR WIC Program 2017-2018, total children (1 to 5 y/o) participants in the WIC program 80,327

The data related to behaviors that increase the risk of obesity points toward the need to continue educational interventions. New research reviews have focused on the need to implement strategies to prevent obesity at early ages, beginning with the promotion of exclusive breastfeeding and the delay in the introduction of solids until 6 months of age. The development of recommendations for introduction of solid food in infants requires knowledge and understanding of the cultural values and rituals, food resources and nutritional knowledge of the population. Considering the previous factors and the latest recommendations of the AAP and the World Health Organization (WHO) on infant nutrition, a committee of specialists in infant nutrition, convened and coordinated by the MCAHD, developed recommendations for best practices in the introduction of solid food for infants adapted to the Puerto Rican culture and in compliance with WIC guidelines. These recommendations also included orientation on implementing perceptive feeding. Perceptive infant feeding is a parental skill to observe hunger and satiety signals prior to feeding baby, versus feeding a previously determined volume on a set schedule. Members of the task force included the MCAH Pediatric consultant (coordinator of the group), a nutritionist from the PR WIC program, infant nutrition specialist Dr. Rafael Escamilla from the School of Public Health at Yale University, representative of the World Health Organization (WHO) and the Pan American Health Organization (PAHO) in Puerto Rico Dr. Raul Castellano, nutritionist Sofía Pérez from PAHO, neonatologist Dr. Maribel Campos, and nutritionist Dr. Cristina Palacios from the Human Development Department of the University of Puerto Rico Graduate School of Public Health.

A review of literature and data pertaining to infant feeding practices in PR was studied and discussed prior to developing the recommendations. The preliminary recommendations were presented and discussed in a workshop in May 2017. During this workshop a group of stakeholders, among them pediatricians, nutritionists, nurses, experts in breastfeeding and infant nutrition, and WIC staff shared their feedback on the recommendations and proposed further modifications. A final version of infant feeding recommendations from 0 to 24 months of age and perceptive feeding has been approved and adopted as public policy by the Secretary of Health in 2018.

An extract of the original document

Recomendaciones para la introducción de alimentos en niños de 0 a 24 meses de edad	
Edad	
0 a 6 meses	La lactancia materna y la leche humana exclusiva es el estándar y norma de alimentación y nutrición para infantes, a menos que sea contraindicado. No ofrecer sustitutos de leche humana (ej. agua, jugo, alimentos sólidos). Para amamantar o alimentar al infante con leche humana, se debe realizar a demanda considerando las señales de hambre y saciedad del infante. El establecer horarios estrictos no es necesario. Un aproximado de 8 a 12 alimentaciones por día se considera adecuado para suplir las necesidades del infante. En los casos en que la madre destete o descontinúe la leche humana, debe alimentar al infante con fórmula para infantes fortificada con hierro. Si la madre toma la decisión informada de no alimentar con leche humana desde el nacimiento del infante, debe ofrecer fórmula para infantes fortificada con hierro.
6 a 8 meses	Continuar con la leche humana como la alternativa óptima de alimentación. Complementar 2 a 3 veces al día con alimentos preparados en casa como carnes, aves, yema de huevo, cereales, vegetales suculentos, frutas, en consistencia que progrese de colados, puré a majados humedecidos y molidos finamente. El propósito de añadir alimentos preparados en casa es suplir zinc, hierro y proteínas, entre otros nutrientes. También se le puede ofrecer alimentos comerciales preparados para infantes con la consistencia apropiada por etapa del desarrollo en consistencia progresiva. Introducir gradualmente cada alimento nuevo, que debe ser de un solo ingrediente y probado de 3 a 5 días para poder identificar tolerancia. Se le debe ofrecer por lo menos de 10 a 15 veces antes de concluir que el alimento no es aceptado. Progresar del uso de la botella al vaso de entrenamiento para ofrecer alimentos líquidos como el agua o la fórmula para infantes.

Promoting On-schedule Immunizations

After the storms, another challenge that had an impact on child well-being was access to immunizations. There was loss of vaccines due to the prolonged lack of electricity to maintain the recommended temperatures, and the closure of vaccination centers in the areas of the Island with the worst infrastructure damages. Additional challenges for

immunization were getting all preventive immunizations in needed numbers to PR, limitations of vaccines available and distribution, limitation for the storage of vaccines that require refrigeration due to lack of electricity, vaccination access for remote communities and family priorities for basic needs above preventive services like immunizations. Influenza vaccination season was also interrupted by the storm. To mitigate this situation the DOH developed a flu immunization campaign. The MCAH staff joined the campaign in November and December 2017, when vaccines began to be replaced and redistributed throughout the Island to centers which had the capacity to store them at the appropriate temperatures. As reported to the PR Secretary of Health by the CDC Senior Liaison Coordinator, in December 15 2017, a total of 61 mass flu vaccination clinics had been established throughout the Island, and 93 VFC sites were functional providing and ordering vaccines. Thirty-six(36) VFC sites had an assessment of which, 7 sites (not for profit) were referred to FEMA as potential recipients of generators and 6 sites (for profit) were referred to Americares as potential grant recipients to purchase generator. The other 23 sites assessed were referred to PRDOH VFC Coordinator to follow up on issues related to data logger temperature reading, pending vaccine orders and pending on assessment of vaccine viability. Total amount of estimated wasted vaccine of VFC was 49,000 doses which represent $2,300,000.

In January 2018, there were105 providers for VFC sites ordering vaccines versus 224 providers previous to the storm, as reported by the PR AAP Chapter Presidents Dr. Yasmin Pedrogo in the conference *Coming Out of the Dark: Lessons from Long-Term Recovery in Puerto Rico,* February 2018.

Distributors of vaccinations from the mainland hesitated to send vaccines requiring refrigeration, such as the varicella vaccine, to PR until the electricity was fully reestablished in the island. The intervention and collaboration of the PR AAP Chapter and AAP headquarters leadership was required to overcome this hurdle. PR had sustained very good prevalence of immunizations; however, 51 days after the storm most of the infants between 2 and 4 months were not vaccinated. The HVP nurses, in their interactions with vulnerable families, identified barriers to immunization, helped them identify resources in their community to overcome them, or referred them as necessary to complete their children's immunization on schedule. Ninety six percent (96%) of children had up-to-date immunization coverage on discharge from HVP (data for 2017-2018).

Spread of misinformation and myths through social media also continued to influence many parents to resist immunizing their children. A recent study by the CDC (National Center for Immunization and Respiratory Diseases, NIS, ChildVax View Interactive, 2014-2016) revealed a decrease in the on-schedule vaccination of infants before 24 months of age, with a catch up by 24 months. This reflects the trend among parents to postpone vaccination until children reach school or day care, where vaccination is mandatory. This trend is not unique to PR and is observed in other states such as Florida and California. During 2017-2018 the PR MCAH staff (HVNs, HEs and CHWs) continued to promote on-schedule immunization, with emphasis on the protective effect of immunizations in the vulnerable period between birth and 2 years old, in the Responsible Parenting Courses, Prenatal Course and in the HVP. The following table present vaccine coverage in Puerto Rico as reported in multiple data sources.

VACCINE COVERAGE OF 19 to 35 MONTHS OLD POPULATION
REGISTERED IN THE PUERTO RICO IMMUNIZATION REGISTRY (PRIR)
JULY 2017 TO JUNE 2018

Vaccine series completed	Total number between 19 and 35 months old with vaccine series registered for each series	Percent vaccine coverage
4+DTAP,3+HIB, 1+MMR,1+VAR,3+HEPB,4+PCV	19,904	48%
4+DTAP,3+HIB, +1MMR,1+VAR,1+PCV	22,649	54%
4+DTAP,3+HIB, +1MMR,1+VAR,3+HEPB,4+PCV , 3=IPV	19,904	48%
4+DTAP,3+POLIO,1+MMR, 3+HIB,3+HEPB	25,969	62%

Data Source: Puerto Rico Immunization Registry (PRIR)
Total population between 19 and 35 months old registered in PRIR for 2017-2018 : 41,719

ESTIMATED VACCINATION COVERAGE AMONG CHILDREN
ENROLLED IN DAY CARE CENTERS AND HEAD START CENTERS,
PUERTO RICO FOR 2015-2016 AND 2016-2017

# of immunizations/ doses received	Estimated vaccination coverage			
	2015-16		2016-17	
	Day Care Centers	Head Start	Day Care Centers	Head Start
4 DTaP	89%	99%	87%	99%
3 Polio	96%	99%	95%	100%
3 HIB	93%	98%	92%	97%
1 MMR	93%	99%	91%	100%
3 HEP B	96%	99%	95%	99%
1 VAR	93%	99%	95%	100%
4 PCV 13	75%	82%	74%	79%

Source: CDC, National Center for Immunization and Respiratory Disease, Schoolvax View Interactive, 2016.
Retrieved from: https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/data-reports/coverage-dashboard/2016-17.htm

In 2017 the Secretary of Health implemented a public policy to make Human Papilloma Virus (HPV) immunization mandatory for all 11-year-olds of both sexes, as a requirement for the 2018-2019 school years.

Preventing Unintentional Injuries

As previously stated, children had the opportunity to play outdoors and use their outdoor recreational toys, for there was no electricity, limited internet services and television, and many schools remained closed for a prolonged period. In many communities and shelters children could be observed playing and riding bikes, increasing their outdoor physical activities. The accumulated rubble in the communities after the storm represented additional danger

for these children. Many were displaced from their homes to shelters or sheltered in relatives' homes, in overcrowded situations.

The concern for the safety of these children prompted the development of a train-the-trainer educational intervention on the Prevention of Unintentional Injury in the recovery phase for community leaders. This educational intervention was developed and delivered by the collaborative efforts of the MCAH Pediatric Consultant with PR AAP Chapter colleagues and the United Way of PR. Six educational activities were offered in 5 regions of the island. In post training evaluation by the participants, 97% expressed satisfaction with the activity, 90% stated they were prepared to provide orientation to others in the community, and 89% perceived the information provided was beneficial for the recovery and mitigation phase of the disaster. The MCAH consultant also collaborated with the recovery and mitigation support orientation on Identification and Management of Common Health Conditions After a Disaster and Prevention of Unintentional Injury provided by the Early Head Start and Head Start Region 2 to all staff of this agency in Puerto Rico and the Virgin Islands in November 2017. The MCAH Pediatric Consultant collaborated with members of the PR AAP Chapter and United Way of PR in the development of a multimedia campaign on the prevention of unintentional injury during the recovery phase, emphasizing four areas of major concern in the recovery phase: use of adequate protective equipment for bicycles, skateboards and skates, precautions when using electric power generators, gas burners to cook, and candles for illumination.

MCAH also collaborated with United Way and PR AAP Chapter in the development of a multimedia campaign educating families on consuming water from a safe source after a disaster.

Another significant collaboration with the PR AAP is in their efforts to help improve preparedness plans relevant to the health and wellbeing of children.

PR Pediatric Mortality Rate for 2017 was 11.4 per 100,000 children ages 1 to 11 years, a decrease compared to the Pediatric Mortality Rate in 2016 of 13.8 per 100,000. The unintentional injury death rate was 2.8 per 100,000 (1-11 y/o). It continues to be the first cause of death in this population. The following tables report the specific causes for 2017.

Cause of Death from January 1 To September 10,* 2017 Ages 1 to 11 y/o**			
Cause of Death	Details	ages	n
Malignant neoplasm	3 sepsis, 3 brain tumors	1,2,3,9	6
Septicemia	Congenital Heart Disease, Disseminated Intravascular Coagulation, GM2 gangliosidosis, Glycogen storage disease	1,4,10,7	4
Other ill-defined and unspecified causes of mortality	under investigation	1,1,3,9	4
Pedestrian accident	intracranial injury	3,5,10	1
Motor vehicle crash	injury to trunk		3
Accidental drowning and submersion		8,11	2
homicide	open wound	9	1
Down syndrome	unspecified	3	1
Pneumonia or respiratory condition	Scoliosis, Infantile Cerebral Palsy, Respiratory Syncytial Virus	1,4,6	3
Asphyxia	Foreign Body	6	1
Congenital malformation	Post surgery, Marfan Syndrome	1,1	2
Encephalitis	unspecified	7	1
Trauma to trunk	under investigation	3	1

** Hurricane Irma hit PR September 10, 2017; and Hurricane Maria September 20 ,2017
**Source: Vital Statistics, Demographic Registry, PR Department of Health, 2017 Final Data
For age range 1 to11 y/o for 2017, total deaths 30; 70% of deaths.
Death rate 11.4/100,000 between ages 1 and 11 for 2017

Cause of Death from September 11* To December 31, 2017 Ages 1 to 11 y/o**			
Cause of Death	Details	ages	n
Other ill-defined and unspecified causes of mortality	under investigation	1,2,5	3
Homicide	assault open wound	2,9	2
Injury secondary to storm	Intracranial injury, trauma to head	6	1
Motor vehicle crash	Intracranial injury, trauma to head, car occupant	7	1
Pedestrian accident	intracranial injury	3	1
Myoneuronal disorder	Foreign body in respiratory tract	1	1
Secondary pulmonary hypertension		2	1
Muscular dystrophy	Cardiac arrest	8	1
pulmonary collapse	asphyxia	9	1
Sepsis	congenital anomalies, diabetes insipidus	10	1
** Hurricane Irma hit PR September 10, 2017; and Hurricane Maria September 20 ,2017 **Source: Vital Statistics, Demographic Registry, PR Department of Health, 2017 Final Data For age range 1 to11 y/o for 2017, total deaths 13; 30% of deaths. Death rate 11.4/100,000 between ages 1 and 11 for 2017			

Causes of Death (1-11y/o) Due to Unintentional Injury 2017
Before and After Hurricane María *

Before Hurricane Maria January to August 2017	N	Percent (%)
Motor vehicle crash	4	57.1
Accidental drowning and submersion	2	28.6
Other and unspecified non transport accidents and their consequences	1	14.3
Total deaths before	7	100.0
After Hurricane Maria September to December 2017		
Motor vehicle crash	1	33.3
Unintentional injury: Other land transport	1	33.3
Other and unspecified non transport accidents and their consequences	1	33.3
Total deaths after	3	100.0

*Source: Vital Statistics, Demographic Registry, PR Department of Health, 2017 Final Data

The Prenatal and Parenting courses continued to promote injury prevention providing orientation and recommendations on safety strategies, including safe toy selection, the Poison Control phone number and support they provide, and the proper use of car seats, among others. The MCAH personnel continued disseminating the latest NHSTA and AAP car seat guidelines and recommendations for adequate protective car seat selection and use according to the age and weight of the child. MCAH staff also continued to promote compliance with local laws that require children be restrained while riding in a car, and the use of approved safety helmets correctly when riding

a bicycle, motorcycle or other open motorized vehicles. In 2017, five (5) fatalities related to incorrect use of car seats or seat belts were reported: 3 in the 0 to 8 y/o range and 2 in the 9 to 17 y/o range.

Besides the parenting courses the CHW and HE delivered orientations on parenting skills and injury prevention specific for different age ranges.

TOPICS DELIVERED BY MCAH STAFF 2017-2018			
Topics	HE	CHW	Total Participants
Parenting 0-1 y/o stage	802	1,232	2,034
Prevention of unintentional injury 0-1 y/o stage	299	1,409	1,708
Parenting 1-2 y/o stage	97	1,068	1,165
Prevention of unintentional injury 1-2 y/o stage	68	1,430	1,498
Parenting 2-3 y/o stage	555	1,400	1,955
Prevention of unintentional injury and discipline 2 to 3 y/o stage	na	1,017	1,017
Parenting 3-5 y/o stage	210	2,544	2,754
Prevention of unintentional injury and discipline 3-5 y/o stage	790	3,102	3,892
Safe Toys	na	149	153
Prevention of unintentional injury	451	na	451
Pediatric Preventive Health Care Visits	na	288	299
Infant feeding, Introduction to solid food	na	115	117

The MCAH staff continued to collaborate with the Emergency Medical Services for Children (EMSC) Advisory Council's efforts towards improving the emergency response infrastructure in Puerto Rico and establishing a well-coordinated, well equipped and up to date Emergency Response System that complies with the latest recommendations of the National Pediatric Readiness Project (NPRP). In 2017-2018, emphasis has been given to pre-hospital management of pediatric emergencies, the use of the Broselow System to deliver pediatric emergency care, and improved patient transfer for critical care. MCAH staff also collaborated in the revision and update of the PRDOH hospital regulations and requirements, incorporating the AAP guidelines as a mandate for all hospitals that provide pediatric emergency care.

Promoting developmental screening, early developmental stimulation and emotional wellbeing

Day care centers are an important resource for families with young children, providing significant support to families. Their services were also adversely affected by the storms. A survey to determine the status of day care centers on the Island was carried out by the Educational Research Center of the University of Puerto Rico under the oversight of Dr. Annette López from November 2017 to February 2018. This survey shed light on the status and recovery efforts of day care centers after the storms. There was response from 197 day care centers, in 59 of the 78 municipalities, including the island municipality of Vieques. No responses were received from day care facilities in municipalities with poor access to communication. The following table summarizes the most relevant findings.

Results of Day Care Centers Survey
Status and Recovery Efforts After 2017 Storms
November 2017 to February 2018 (197 participating centers)

59 of 78 municipalities represented
Population served 0 to 5 years old
25% not for profit
82% no electricity 46% could not afford a generator
51% no tap water
13% lack of access to health care services for families (clinics or immunization)
66% structural damage 42% loss of educational materials or equipment
48% altered operations: 40% operated partially 8% closed
94% lost enrollment: 80% due to family emigration, 40% unable to pay, loss of family income
50% lost employees: 34% migrated to mainland 31% decreased personnel due to loss of income in Day Care
Needs Identified: 69% training on how to manage emotional impact 45% strategies to improve communication 45% strategies to improve creative expression 11% training on managing child abuse

Data Source: Preliminary Results of Survey by Educational Research Center of the University of Puerto Rico

Most of the centers expressed they had used all their savings to make short term repairs and to sustain operations and that they are not prepared for another such event, nor are they ready to help their enrolled families prepare. In response to the needs identified in the community, MCAH collaborated with the PR Chapter of the AAP and United Way of PR by developing and offering a series of trainings in April 2018. A mitigation strategy to provide families with the tools to help their children overcome the trauma of the storm was established using the coloring Book *Trinka y Juan en un día de mucho viento y lluvia* ("Trinka and Juan in a Windy and Rainy Day"). The book is authored by Chandra Ghosh, sponsored by SAMHSA and HHS, and in collaboration with the National Child Traumatic Stress Network. Through train-the-trainer sessions, day care staff learned to use the book to teach parents how to better understand their children's and their own reactions to the stress caused by the storm and how to mitigate its effects on their emotional wellbeing. This tool and the training have continued to be shared through different forums by the MCAH staff.

TRAINING SESSIONS: ON A MITIGATION STRATEGY TO PROVIDE FAMILIES WITH THE TOOLS TO HELP THEIR CHILDREN OVERCOME THE TRAUMA OF THE STORM

Train the trainer for leaders of not for Profit Day Care Centers

- Trinka and Juan a tool to help families and their children overcome the trauma of a hurricane
- Participation of 340 representatives of 105 day care centers
- Participation of 173 leaders from 96 community non for profit organizations

Recovery and Mitigation Efforts after Hurricanes Irma and María, Collaboration with United Ways of PR and PR AAP Chapter

www.nctsn.org/resources/trinka-y-juan-en-un-dia-de-mucho-viento-y-lluvia

Stress and other social determinants have an impact on wellbeing of children. The early identification of developmental delay is necessary for a timely diagnosis and intervention. The earlier a needed intervention is instituted, the better the outcome, with an optimum developmental progression attained. Most cases of developmental delay are not identified until the children start school, due to a lack of appropriate developmental screening. During 2017, PRHIA data reflected 2.9% of children between ages of 0 to 4 y/o had a developmental screening billed. This may not reflect the actual number of screenings, because physicians may not include it in their billing statements due to the lack of recognition and payment by insurance companies. The use of developmental screening tools by primary care physicians may increases early detection of atypical patterns of development. MCAH staff continued to advocate for the use of developmental screening tools by primary care physicians as recommended in the PR PPHCSG and the inclusion of this topic in their continued medical education activities. The Physician Regulatory and Licensing Board has sustained the requirement of at least 6 CME hours in the topic of autism spectrum disorder for pediatricians, prompting multiple educational sessions on this topic. This has provided additional opportunities to promote awareness of the Early Intervention Program and the use of autism and developmental screening instruments as recommended in the PR PPHCSG. In the parenting courses they receive information on the development patterns of children. Parents and caregivers benefit from education on the typical and atypical patterns of development to help them identify children at risk and share knowledge of resources in the community to evaluate and refer as needed.

The HVP infants and pediatric participants are screened periodically using the Ages and Stages Questionnaires (ASQ-3) and the Ages and Stages Social Emotional Questionnaire (ASQ:SE-2) in the home setting in an effort to

identify delays, teach parents how to stimulate maximum development, and refer for further evaluation and early intervention if needed. During 2017-2018, 1,128 infants (<12 months old) and 1,586 children (12 to 24 months old) participated in the HVP. A total of 1,409 ASQ-3 or ASQ: SE-2 screenings were performed, of which 103 (7.3%) were positive or were identified with some concern requiring a referral. The following table specifies referrals required and disposition.

ASQ-3 and ASQ:SE-2 HVP 2018		
	n	%
Infants/pediatric total screenings	1409	100
Low risk screening results	1306	92.7
High risk screening results	103	7.3
Referrals required due to screening results or parental concern	103	100
Early Intervention	88	85.4
Pediatric Centers	8	7.8
FASES	3	2.9
Children with special medical needs	1	1.0
Pediatrician	2	1.9
Zika Program	1	1.0
Referral disposition	103	100
Referral completed	84	81.6
Referral not completed	12	11.7
Refused the referral	1	0.1
Did not qualify for services referred to	6	6

Evidence supports the importance of brain stimulation in early childhood to attain optimum brain development, which can lead to higher education, better jobs, and better quality of life. Sixty nine percent (69%) of mothers participating in the ESMIPR in the follow up survey at 6 and 12 months reported reading books to their babies. HVNs teach parenting skills in their interventions, including strategies parents can use in their day-to-day interactions to stimulate development. The educational materials of *Crianza Justo a Tiempo* (Spanish version of Just in Time Parenting) from eXtensions were adopted after authorization by Anne Mims Adrian, PhD, eXtension Director of Programs at Auburn University (www.articles.extension.org/pages/70394/crianza-justo-a-tiempo) as an additional tool to prepare the HVNs to teach parenting skills. A guide for HVNs that specifies topics and screenings for each home visit was developed (Guía de *temas educativos e intervenciones postparto*). Culturally adapted brochures at a basic reading level on socio-emotional development, parenting skills and other topics were developed to help strengthen the interventions. Incentives related to the topics are used to reinforce the information.

The Parenting courses also presented information to participants on typical patterns of development as well as signs of delays, so they can identify any deviations early and reach out for help. The course also promoted the use of nurturing and positive parenting skills to stimulate optimum child development.

Quality child care has an impact on the wellbeing of young children. The MCAH staff evaluated and submitted recommendations in the development of the regulation aimed at improving child care services, including supportive settings for breastfeeding mothers, adequate physical activity for age, optimal nutritional selection, activities that stimulate development, and safety, among others, in response to Law 173 of August 2016. The MCAH advocated for the establishment of this law and offered its recommendations in public hearings. The law established the Department of the Family as the entity responsible for developing and establishing the regulations, licensing day care centers, and developing guidelines.

MCAH staff continued to collaborate as member of the Normative Policy Council for Head Start and Early Head Start

of the Child Care Program of the Department of the Family of Puerto Rico. This provided the opportunity to offer resources developed by MCAH, such as the Parenting and Prenatal courses, among others, to the population they serve, and to collaborate in the development of their policies.

Promoting oral care

The main strategies used by the MCAHD to address oral health were to provide information and education on the importance of preventing early childhood caries, identify children at higher risk for early childhood caries for referral to the dentist, educate on nutritional habits and behaviors that decrease the risks for dental caries, promote visits to the dentist at early ages, educate on the protective effect of sealants in young children and promote their use, and advocate for GHP coverage for visits and preventive procedures.

In the WIC Program, 2.2% of children (1 to 5 y/o) were identified with oral health issues (2017-2018 data). During 2017-2018, data provided by the ICO revealed that 14% of the insured population between the ages of 1 and 11 y/o had caries requiring dental procedures, and 64% had a preventive dental visit. The PRHIA reported that 6.6% of patients aged 5 to14 received protective sealant on at least one permanent molar. In the 2017 BRFSS survey, 68%of parents with children between the ages of 1 and 11 y/o reported their child had a preventive dental visit in the past year.

Billing for Dental Services 2017 by Age Group*

Age range	PI	GHP	Total dental visits	Total insured population	Percent insured population with dental visit
<1 y/o preventive visits	305	469	774	24,987	3%
1 to 11 y/o preventive visits	67,191	102,215	169,406	266,648	64%
1 to 11 y/o Visits for procedures related to caries	13,515	24,327	37,842	266,648	14%

*Source: ICO, Claims Data 2017-2018.

PREVENTIVE DENTAL VISIT AS REPORTED BY PARENTS BY AGE GROUP IN 2017*

Age Range	Preventive Dental Visit	Population	Percent (%)
<1 y/o	0	26,299	0%
1 to 2 y/o	11,530	53,797	21%
3 to 5 y/0	61,616	91,490	67%
6 to11 y/o	171,904	213,166	81%
1 to11 y/o	245,050	358, 453	68%

*Source from 2017 BRFSS

The College of Dental Surgeons of Puerto Rico and the School of Dental Medicine of the University of Puerto Rico, in a press conference in August 2018, informed the positive impact the implementation of the PR Government Health

Plan had in preventing dental decay in the pediatric population, with an increase in the use of sealants from 16.4% to 37.4% in 12 y/o children. A study by Elias-Boneta et al. reported a decrease in caries prevalence among 12 years old to 69% in 2011 from 81% in1997, and a higher percentage of the filled component of the mean Decayed, Missing, and Filled Surfaces (DMFS) (67% as opposed to 50% in 1997), which is interpreted as evidence of greater access of the pediatric population to dental services with the GHP. (Elias-Boneta et al. (2016). Persistent oral health disparity in 12-year-old Hispanics: a cross-sectional study. *BMC Oral Health 16*(1), DOI: 10.1186/s12903-016-0162-7)

Poor oral health can have adverse effects on school performance and quality of life. Positive oral health enables children and adolescents to speak, eat and socialize without experiencing pain, discomfort or embarrassment, improving their learning and school attendance. Reaching and educating children and adolescents helps them to gain knowledge about oral health, develop positive attitudes toward oral hygiene, healthy eating habits, and regular dental visits.

A mother with history of dental caries and inadequate oral care increases the risk of development of caries in their offspring by transmitting S*treptococcus mutans* to them, even before their teeth erupt. Pregnant women and caretakers of infants need to be educated about the transmission of *Streptococcus mutans* and its relation to an increased risk of developing dental caries in infants, as well as the role of proper hygiene in decreasing the transmission. The fact that during 2017-2018, data provided by ICO reported that 10% of insured pregnant women had caries requiring dental procedures signals the existing need to educate pregnant women and caretakers of infants. Oral health education and promotion of preventive measures were delivered to participants through the Prenatal and Parenting courses. Additional 377 oral health educational activities were provided in the community by HEs during 2017-2018.

MCAH staff promoted messages directed at increasing the number of parents and children that adopt healthy oral habits. They continued to increase awareness among parents with elementary school children that dental sealants are covered by the GHP and encouraging them to request this service. The HVNs and CHWs distributed educational materials concerning the importance of protective sealants to reinforce their orientations. Promoting dental sealants, particularly among low income parents, is important since they are the group less likely to have a dental sealant application and are at a higher risk for dental decay, as reported in the medical literature.

The PR PPHCSG includes recommendations for preventive dental visits twice a year since early infancy and throughout childhood and adolescence. They also emphasize the need of caries risk assessment in early infancy, with first teething, for an effective preventive intervention and referral to a dental home. Data provided by PRHIA and ICO shows that during 2016 and 2017 only 0.05% of patients between the ages 0 and 5 y/o had fluoride varnish preventive treatment performed by a pediatric dentist. In Puerto Rico, the use of fluoride varnish by primary care practitioners is currently not practiced. Most pediatric dentists do not apply it because not all insurance companies reimburse it, and it is an off-label use without Federal Drug Administration (FDA) approval. Some do apply it and do not bill the insurance company.

The MCAH Program has maintained communication with the Pediatric Dentist Society of Puerto Rico (PDSPR) to build an optimal oral health workforce that ensures access and availability of services in PR and enhance the public awareness of evidence-based preventive strategies for improving oral health. The MCAHD continued to advocate for the inclusion of oral health care in early childhood and pregnancy in professional training and CME activities.

In regard to availability of dental services, according to the Puerto Rico Office for the Regulation and Certification of Health Professionals / Medical Licensing and Discipline Board, the number of professionals certified as active pediatric dentists in 2016 was 81, representing a ratio of 22.6 pediatric dentist/100,000 children in the 0 to 8 year age range. The concentration of pediatric dentists in the larger metropolitan areas limits access due to limited transportation.

There continues to be reluctance of general dentists to provide services to children between 0 and 8 years old,

because of their lack of skills to manage this population, and a lack of equipment to monitor sedated children when required, a safety measure for optimum delivery of services. This reflects the crisis that PR is facing with the migration of professionals to the mainland due to economic deterioration on the Island. A report published online by the Kaiser Family Foundation, Health Care in Puerto Rico and the U.S. Virgin Islands: A Six-Month Check-Up after the Storms (www.files.kff.org/attachment/Issue-Brief-Health-Care-in-Puerto-Rico-and-the-US-Virgin-Islands-A-Six-Month-Check-Up-After-the-Storms ; April 2018, S Artiga, C Hall, R Rudowitz, and B Lyons) raises concern of decreased workforce in the dental and medical profession due to young professionals and health care providers continuing to migrate away from the islands after the storm. This has prompted the need to advocate and increase awareness of the inclusion of pediatric oral health care in the training of general dental health care providers and in the CME activities for dentists in the School of Dental Medicine at the University of Puerto Rico and in the College of Dental Surgeons. Collaboration has continued with the director of the Oral Health Promotion Program to identify strategies to increase and promote referrals for dental home from the first tooth (6 to 12 months of age) and the early identification of infants at high risk of dental caries for referral to dentist.

During 2016-17 an Early Childhood Caries (ECC) risk screening for infants at 6 and 12 months was established in the HVP following a Quality Improvement Strategy implemented in one region. In 2017-2018 this QI strategy was progressively implemented in all MCAH regions. HVNs received training on oral care of pregnant women and children, use of the screening instrument to identify infants at high risk for caries, and appropriate referrals as needed. They also received training on strategies to share with parents on how to decrease the risk of dental decay in their infants. The MCAH Pediatric Consultant adapted the Caries-risk Assessment Form for 0-3 Year Olds published by the American Academy of Pediatric Dentistry (AAPD) to the HVP population and added a management plan and referral section.

I008-rev083118

DEPARTAMENTO DE SALUD
DIVISIÓN MADRES, NIÑOS Y ADOLESCENTES
PROGRAMA DE VISITAS AL HOGAR

CERNIMIENTO DE RIESGO DE CARIES

de expediente: _____ Fecha de nacimiento del infante: mm/dd/aaaa

Apellidos del infante: _____ Apellidos de la madre: _____

Enfermero/a visitante: _____ Fecha de evaluación oral: mm/dd/aaaa

Visita: ☐ 6 meses ☐ 12 meses ☐ Otra, especifique: _____

A. HISTORIAL PERTINENTE A RIESGOS PARA CARIES EN INFANTE	Marque la respuesta que corresponda		Intervenciones sugeridas
1. La madre o cuidador/a primario tiene historial de caries en los últimos 12 meses.	⚠ Sí o no sé	No	2, 9, 10
2. Hermanito/s tiene/n historial de caries.	⚠ Sí o no sé	No o N/A	2, 9, 10
3. La madre o cuidador/a primario tiene dentista.	Sí	⚠ No o no sé	2, 9, 10
4. La madre o cuidador/a ha visitado al dentista los últimos 6 meses.	Sí	⚠ No o no sé	2, 9, 10
5. Uso continuo de botella o taza de entrenamiento (*sippy cup*) con líquido que no sea agua (ej. jugo, leche, etc.).	⚠ Sí o no sé	No	6, 8
6. El/la infante o la madre consumen tres o más meriendas que contienen azúcar al día.	⚠ Sí o no sé	No	5, 7
7. Le da al bebé un biberón que contiene jugo o leche cuando lo acuesta de noche.	⚠ Sí o no sé	No	4
8. Niño/a con necesidades especiales de atención médica.	⚠ Sí	No	1-10
9. El/la niño/a se cepilla los dientes dos veces al día con pasta dental que contiene fluoruro, o no tiene dientes, pero su cuidador/a le limpia la boca con una gasa o paño suave dos veces al día.	Sí	⚠ No o no sé	1, 3

CLAVE

Cernimiento de **alto riesgo**

Al menos una contestación marcada con ⚠ se categoriza como **ALTO RIESGO DE CARIES** y por tanto se cataloga como un **cernimiento de caries positivo**. El infante requerirá referido para una evaluación por un dentista comenzando a los seis meses de edad (o cuando presente las primeras denticiones a partir de los seis meses de edad). Aunque el infante no tenga dientes, se clasifica como alto riesgo si tiene una contestación marcada con ⚠.

Cernimiento de caries de **bajo riesgo**

Si no hay ninguna contestación marcada con ⚠ se clasifica como **BAJO RIESGO DE CARIES** y por tanto se cataloga como un **cernimiento de caries negativo**.

IX08-rev083118 CERNIMIENTO DE RIESGO DE CARIES # de expediente: _____

B. RESULTADO DEL CERNIMIENTO DE RIESGO DE CARIES

1. Indique el resultado a partir de las contestaciones:
   - ☐ Cernimiento de caries de **alto riesgo**
   - ☐ Cernimiento de caries de **bajo riesgo**

2. Indique qué acción tomó. ***Escoja una opción.***

ALTO RIESGO

- ☐ Referido al dentista. Indique fecha del referido: _____ mm/dd/aaaa
- ☐ Referido del infante a dentista pediátrico pospuesto hasta que surjan los primeros dientes.
- ☐ No requiere referido, niño/a ya visita al dentista. Fecha última visita: _____ mm/dd/aaaa

BAJO RIESGO

- ☐ Esperar a referir antes de cumplir el año, y repetir el cernimiento a los 12 meses.
- ☐ Referido al dentista por edad (12 meses aunque no tenga dientes)
- ☐ No requiere referido, niño/a ya visita al dentista. Fecha última visita: _____ mm/dd/aaaa

NOTA: Todo infante que no sea clasificado de alto riesgo debe referirse para una visita al dentista al cumplir el año de edad, y a partir del primer año debe continuar visitando al dentista dos veces al año.

3. Indique en el dibujo qué diente/s tiene presente.

Indique el número de dientes: _____

☐ No tiene dientes todavía

C. PLAN DE CUIDADO ORAL CON INTERVENCIONES SUGERIDAS

Indique las intervenciones sugeridas al/la cuidador/a del infante. ***Marque todas las que apliquen.***

- ☐ 1. Limpieza de la boca con una gasa o paño suave dos veces al día.
- ☐ 2. Orientación para evitar que hermanos/as y padres o madres compartan cucharas y utensilios con el bebé.
- ☐ 3. Cepillado dos veces por día, usando pasta dental con fluoruro (una cantidad de pasta dental con fluoruro apropiada para su edad, del tamaño de un grano de arroz) y evitando enjuagar con agua.
- ☐ 4. Quitar gradualmente el biberón de noche o al acostarse.
- ☐ 5. Evitar meriendas que contengan azúcar (cariogénicas).
- ☐ 6. No ofrecer jugo a menores de 1 año. Limitar el jugo a 4 onzas al día. Tomar el jugo de una vez y evitar estar tomando sorbos durante todo el día.
- ☐ 7. Limitar las comidas que contengan azúcar (cariogénicas).
- ☐ 8. Promover tener solo agua en biberones y en vasos con boquilla (*sippy cups*) durante el día.
- ☐ 9. Recomendar que los padres, madres, hermanos/as o cuidador/a visiten al dentista
- ☐ 10. No limpiar el bobo del bebé con la boca.

The global aim is to promote oral hygiene and preventive oral care dental visits in early infancy to decrease the incidence of early childhood caries. The preventive management plan incorporated promotion of oral hygiene, healthy habits and nutrition to prevent caries in infants and toddlers. It emphasized the avoidance of sugary foods for children, since it is customary in PR to put sugar in children's milk and/or give sodas to infants and children, and the weaning of milk bottles when putting children to bed. Early identification of at-risk infants provides the opportunity for early referral to a dental home and to teach the families preventive measures. During 2017-2018, 65% of participants in the HVP stated they had a dental care provider during pregnancy and 23% of infants and 67% of toddlers were reported to have a dental home for oral care. During 2017-2018 HVNs screened 1,338 participants between the ages of 6 and 24 months old. Two thirds (64%) were found to be at high risk for early childhood caries (ECC) (63% of infants < 12 months and 65% of children 12 to 24 months old). Of these, 75% were referred to a dentist because they already had a first erupted tooth or they did not have a dental home; however, only 18%

completed the referral.

The modified infant caries risk assessment was also adopted by the PR MIECHV program, *Familias Saludables*.

A Pediatric Dentist Directory that includes hours, services offered and medical insurance plan accepted by dentists (pediatric and general) that offer services to infants and children was completed, but will require updating by region and identification of gaps in services provided by these providers to the early childhood population. The purpose of improving the directory is to ease the referral process for this population and improve dental care access.

The Public Policy implemented that requires children to have an oral evaluation certificate prior to school registration is an effort to promote preventive dental visits. HS and EHS also promote oral health since infancy, and reported that in 2017 32,600 children in PR had continuous access to dental care in Head Start.

The MCAH Program has evaluated the needs experienced by families with children during and after the storm in an effort to identify gaps in the systems that provide services to this population and in the preparation plan of families for disaster events. The MCAH staff will continue to collaborate in the development of recommendations to improve preparedness and recovery plans of the DOH and other emergency response agencies with emphasis in advocating for the needs of children with the lessons learned from the hurricane disasters. The MCAH staff will also continue to collaborate with the PR Chapter of the AAP in all its efforts to improve preparedness and response to disasters in the community. Important issues and recommendations relating to child safety, family unity, child care, mental health support, nutrition and health care after a disaster will be shared to contribute to a better response in future events.

Promoting Oral Care

Oral health contributes to overall health and wellbeing. Cavities remain the most prevalent chronic disease of childhood, and have an impact on oral health throughout life. Therefore, promoting oral health from infancy will contribute to the individual's development in subsequent years and life stages (school years, adolescence, early adulthood, adulthood and older adulthood). During the month of June 2017 train the trainer was delivered to a group of stakeholders in the Caguas region on the use of the Caries Risk Assessment to identify infants at higher risk of caries, interventions to decrease the risk and appropriate referral to a dental home. Among the stakeholders that participated there were representatives of EHS and HS, Primary Health Clinics, HVP nurses, preschool teachers, and day care center personnel. The MCAHD will continue to implement multiple strategies to promote good oral hygiene and regular preventive dental check-ups. The Program will continue to deliver orientation on dental decay and oral disease to families, children, adolescents, pregnant women and the general public in an effort to increase awareness of the risks to overall health and wellbeing and how preventive oral hygiene, healthy oral habits, GHP coverage, preventive dentist visits. The MCAHD will continue to update knowledge and train the HVP staff in oral care in pregnant women, WRA, infants and children to increase their skill in delivering information and evaluating risks.

The Pediatric Consultant is a collaborator with the PR Territorial Dental Officer from the Health Promotion Division and other oral care stakeholders in a group working on improving oral health outcomes. In this first stage, a needs assessment will be developed to identify gaps and propose strategies to overcome them in 2019-20. The MCAH staff will continue to contribute with EHS and HS advocating for strategies that help identify infants at high risk for ECC and adequate referral for a dental home and changes in behavior so as to provide protection.

During 2018 the PR Pediatric Preventive Health Care Services Guidelines (PR PPHCG) were updated, adding the most recent Bright Future recommendations of Early Childhood Caries Risk Screening (ECCRS) of infants and early referral. Therefore the MCAH Program will continue disseminating the PR PPHCG, and preventive dental visits twice a year (after the eruption of the first tooth) for infants, children and adolescents. The Program will collaborate with Early Head Start and Head Start in the implementation of the screening for caries risk and referral in early childhood.

The Program will advocate for the adoption of fluoride varnish as a preventive strategy for infants and young children at high risk for caries. This is a cost effective strategy recommended by the AAP Bright Futures (recommendation reaffirmed in 2017).

All educational activities will continue to be delivered through workshops, presentations, work groups, and one-on one education. The Prenatal courses will continue to include education on oral care and to encourage a dental visit during pregnancy as part of every woman's prenatal care plan. Dental visits during pregnancy are extremely important, as oral health status is linked to birth outcomes such as low birth weight and prematurity, and the oral health status of mothers is a determinant for early childhood caries in their offspring. The HVNs will continue to educate pregnant participants about the importance of dental care to prevent premature labor and to decrease the risk of caries in their offspring, and will continue to refer pregnant participants to visit the dentist as part of their

prenatal care. The HVP will continue to administer the caries risk assessment to infants and refer participants to preventive dental visits. Because 65% of the participants of the HVP are adolescents and all are referred to the dentist, they also contribute to improve the outcomes of oral health in the adolescent population. They will continue to provide orientation to families to decrease risk of caries by adopting good oral hygiene practices and modifying high risk behaviors.

The Positive Parenting Courses (for parents of children 0 to 5 years old and 6 to 11 years old) will also continue to include education on the risk for dental caries. Participating parents will receive strong advice to instill healthy oral habits in their children from early childhood, as well as information regarding GHP coverage for dental visits for their children, and how to request this service.

The MCAHD will continue collaborating with the Pediatric Dentist Society of Puerto Rico (PDSPR) to advocate for dental services provided at very early ages, since eruption of first tooth. It will also advocate for continued dental coverage in the PR GHP, at a time when cuts to services due to the financial crisis are being considered. The MCAHD will strengthen work in the area of oral health with existing partners to better coordinate educational and oral care services and referrals. More importantly, it will encourage the involvement of families in promoting healthy oral habits, establishing a dental home, and oral health literacy in communities.

The Metropolitan Region MCAH Regional Board will continue to focus their collaborative efforts on promoting strategies for oral health in infants, children, adolescents, pregnant women and women in reproductive age.

Promoting Preventive Health Visits

During 2018, the updated PR Pediatric Preventive Health Care Services Guidelines (PR PPHCSG) were approved as a DOH Public Policy. The promotion of the PR PPHCSG in pediatric health services will continue to be advocated by the MCAHD at all levels: providers, providers training programs, providers associations, community, families and parents. Disseminating the PPHCSG to the general public empowers parents on what to expect in preventive visits. The content of the guides also needs to be known by academia, health care professionals, and the insurance companies, so each can do their part to support their implementation and improve the quality of preventive services. The MCAH staff will continue to encourage including the use of the PR PPHCSG in the continuing medical education of providers, especially by pediatricians' professional associations in PR.

In their interventions, the HVNs, CHWs, PNs and HEs will continue to educate parents and promote scheduled preventive visits and screenings as recommended in the guides. The importance of preventive health care services for the wellbeing of children will continue to be emphasized in the Positive Parenting Courses (0 to 5 years old and 6 to 11 years old).

The MCAH Program will continue to evaluate the use of clinical preventive services by the population in an effort to identify gaps and strategies to overcome them in collaboration with other stakeholders: agencies and professional organizations.

Promoting Physical Activity and Preventing Risk for Obesity

MCAH staff will continue to encourage the inclusion of strategies that help improve nutritional habits and increase the time dedicated to physical activity of children according to ages, in an effort to decrease the risk of obesity.

The MCAH staff will continue to educate participants regarding physical activity, breastfeeding, healthy nutrition and compliance with the My Plate recommendations, which were recently adapted culturally and linguistically, during their home visits and in community based activities.

The Positive Parenting Course for ages 0 to 5 will continue to stress healthy nutritional choices and daily physical activity for children and their families. The Positive Parenting Course for ages 6 to 11 will include AAP

recommendations for children ages 6 and older, to place consistent limits on the time spent using media, the types of media, and to make sure media use does not take the place of adequate sleep time, physical activity and other behaviors essential to health. Parents will also receive orientation on the obesogenic effect of consuming high-calorie snacks with low nutritional value and the AAP's recommendation to limit juice intake to less than 4 ounces a day in toddlers, 6 to 8 ounces a day in children, and no juice before 1 year old. The MCAH staff will also continue to promote the exchange of water instead of high-calorie sweetened beverages in purchased meals as mandated by Law 256 of 2015. Brochures developed with culturally adapted simple language will reinforce the messages delivered during orientations to families in the community, in the Positive Parenting courses, the prenatal courses, and in the Home Visiting Program.

The Secretary of Health approved the final recommendations developed for Infant and Young Child Nutrition (0 to 24 months), and they have been adopted as public policy by the DOH. In 2019-20 these recommendations will be disseminated among health care providers for use in anticipatory guidance to families with infants. These recommendations will also be used to stimulate families to adopt better eating habits, develop skills in perceiving infant satiety and hunger cues, and learn the proper introduction of solid foods in infancy. MCAHD will collaborate in the development of educational materials at an appropriate literary level and culturally sensitive for the population we serve and will help in the dissemination through its programs and courses. The Pediatric Consultant will participate in the National Early Child Nutrition Stakeholders Meeting on Supporting Optimal Environments for Early Childhood Nutrition in Washington, DC in July 2019, representing the PR DOH and contributing the experience in PR developing the recommendations for Infant and Young Child Nutrition (0 to 24 months).

Promoting On-Schedule Immunization

An emerging public health event in 2019 has been the spread of measles outbreaks in multiple states. To address this, the PR MCAHD is providing accurate and reliable information to families and promoting immunization as recommended in the CDC itinerary through educational initiatives in the community. The staff is vigilant for the identification of any cases of measles in the population they serve, and informed on what actions to implement in order to protect the health of the most vulnerable and recommend strategies to deter further spread of the disease. The Title V Program Staff, as part of the DOH, is alert and ready to collaborate in case an outbreak of measles occurs. MCAH also has a collaborating partnership with the Immunization Division of the DOH and will provide support in vaccination campaigns. The last measles outbreak in PR began in July 1984 and continued into March 1985. In this outbreak, 81.9% were under 15 months old, therefore non-preventable; 16.7% had histories of adequate vaccination, and 1.4% had a medical contraindication to the measles vaccine. As experienced in the 1984 outbreak, the immunization law of PR requiring all children enrolled in day care and in school to have an immunization certificate proving updated vaccines prior to registration, means that the populations at greater risk are the children between 0 and 15 months of age unimmunized to measles . The majority of children enrolled in day care centers and schools are adequately covered (see the data presented in the following tables). The National Immunization Survey reported the vaccination coverage for 1 dose of MMR in children between the ages of 19 and 35 months to be 89% in 2017 (NIS, CDC, 2017).

NUMBER AND PERCENT OF CHILDREN WITH ONE OR MORE DOSES OF MEASLES, MUMPS AND RUBELLA (MMR) BY AGE GROUP, PUERTO RICO, 2017-2018

Year	Dose & antigen	Age group	Population n	Vaccines administered n	Percent vaccinated
2017	≥1 MMR	19 - 35 months	77,355	63,314	81.8%
	≥1 MMR	6 mo. - 6 y/o	227,272	183,394	80.7%
	≥2 MMR	7 - 17 y/o	578,894	549,619	94.9%
2018	≥1 MMR	19 - 35 months	42,787	35,517	83.0%
	≥1 MMR	6 mo. - 6 y/o	206,231	165,667	80.3%
	≥2 MMR	7 - 17 y/o	561,630	530,084	94.4%

Source: Puerto Rico Immunization Program, Puerto Rico Immunization Registry (PRIR)

ESTIMATED VACCINATION COVERAGE AMONG CHILDREN ENROLLED IN KINDERGARDEN, PUERTO RICO FOR 2015-2016 AND 2016-2017

# of immunizations/ doses received	Estimated vaccination coverage	
	2015-2016	2016-2017
5 DTaP	92%	92%
4 DTaP	98%	98%
4 Polio	95%	96%
3 Polio	99%	99%
2 MMR	95%	96%
2Varicella	94%	96%
3 Hepatitis B	99%	99%

Source: CDC, National Center for Immunization and Respiratory Disease, Schoolvax View Interactive, 2016. Retrieved from: https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/data-reports/coverage-dashboard/2016-17.htm

The DOH success in implementing strategies to mitigate an outbreak in 1985 will serve to achieve a prompt and efficient response if necessary. Puerto Rican population mobility to cities with reported outbreaks such as New York City, increases the risk for a measles outbreak on the island, requiring vigilance for cases.

During 2019-2020 HVNs, HEs, PNs and CHWs will continue to promote immunization on schedule, with emphasis on updated schedules for children under 24 months of age. The HVN's have continuous access to vulnerable families and are able to identify barriers to immunization, such as those related to the vaccination system in the health care centers. This information will continue to be shared with the Puerto Rico Immunization Program (PRIP), enabling them to propose strategies to overcome them. The topic of immunization is also included in the Positive Parenting Course. VOCES is a nonprofit organization that offers education about immunizations to health care workers and the general population. The MCAH staff will continue to collaborate with them in their annual conference, and providing advice for the development of strategies to promote immunization and educational interventions.

Preventing Unintentional Injury

The HVNs will continue with one on one education and provide written materials to participants directed at reducing unintentional injuries. The HEs will continue to deliver a course on unintentional injury focused on promoting prevention of in-home injuries, firearm safety, car seat placement and use, safe sleep, protective play gear, safe toys, prevention of forgotten baby syndrome, and drowning prevention, among others. The Prenatal Course and the Positive Parenting Course will continue to educate on injury prevention and safety recommendations, including preventing shaken baby syndrome, safe sleep, safe toys and the proper use of car seats, among others. The MCAH personnel will continue providing and disseminating through educational activities for parents and communities the latest NHSTA and AAP revised car seat guidelines and recommendations for adequate protective car seat selection and use according to the age and weight of the child. In addition, staff will continue to promote compliance with local laws that require children be restrained while riding in a car and the use of safety approved helmets when riding a bicycle, motorcycle or any other moving vehicle. These efforts will be directed at decreasing the rate of deaths to children caused by motor vehicle crashes.

The MCAH staff will continue to collaborate with the Emergency Medical Services for Children (EMSC) Project in advocating for an improved emergency response infrastructure and a well-coordinated, well equipped and up-to date Emergency Response System in Puerto Rico that complies with the latest recommendations of the National Pediatric Readiness Project (NPRP). MCAH staff will also advocate that the PR DOH Hospital regulations and requirements incorporate the AAP guidelines for hospitals that provide pediatric emergency care.

The MCAH staff, in collaboration with the Hospital Association and the EMSC, will continue to promote that hospitals comply with Administrative Order 357 (November 2016) which requires all hospitals to change their measurements for pediatric patients to the metric system and to change their weighing equipment to measure only grams and kilograms. In 2018-20, strategies to encourage pre-hospital management of pediatric emergencies will continue to be emphasized, promoting the use of the Broselow System to deliver pediatric care in emergency situations, the use of proper pediatric equipment in rescue and emergency interventions, and improved patient transfer for critical care.

Child Abuse and Neglect

Child abuse and neglect is a priority identified. The rate of child maltreatment in Puerto Rico is 8.7/1000 for 2017 (birth to 17 y/o) a decrease compared to 9.5 in 2015. It ranks 28th among the 52 US states and territories (data source Child Maltreatment 2017 Report of the US Department of Human Health Services Administration for Children and families www.acf.hhs.gov/sites/default/files/cb/cm2017.pdf).

Maltreatment Cases for Puerto Rico 2017

Type of maltreatment	Frequency	Percent
Medical Neglect	479	8.4
Neglect	3,373	58.9
Other	24	0.4
Physical Abuse	1,389	24.4
Psychological Maltreatment	2,966	51.8
Sexual Abuse	143	2.5
Total Maltreatment Types	8,383	146.3
• 5,729 total child victims of maltreatment, representing a rate of 8.7/1000 children between the ages of 0 to17 y/o.		
• 11% of child victims with drug abuse caregiver risk factor		
• 29% of child victims caregiver risk factor, with financial problem		
• 29% of child victims caregiver risk factor, with a domestic violence		
• 6 child fatalities for a Child Fatality Rate of 0.91/100,000 Children		
• Puerto Rico 0 to 17 y/o population total 656,796		
Data source: Child Maltreatment 2017 Report of the U.S. Department of Human Health Services Administration for Children and families , www.acf.hhs.gov/sites/default/files/cb/cm2017.pdf		

The HVP, the Positive Parenting Course, and the Interactive Intervention on Management of Crying Babies are strategies in the MCAHD aimed at teaching parents skills that contribute to decreasing child abuse and neglect. The Pediatric Consultant has been appointed to the PR Children's Justice Act (CJA) Committee. In this capacity, she contributes to attain the goal to improve the system that provides the investigative, administrative, and judicial handling of cases of child abuse and neglect in a manner which reduces the additional trauma to the child victim and the victim's family, which also ensures procedural fairness to the accused, and in compliance with the recently enacted Federal Family First Act. The HEs and MCAH staff will continue to deliver the interactive intervention on the management of crying babies to teach parents and caretakers skills to prevent Shaken Baby Syndrome (SBS). The SBS simulation doll will be used to help convey the message. The recommendations for Safe Sleep are included in this course, which will continue to be offered to caretakers and families in the community. The HEs delivered the Parenting Courses in April 2019 to caretakers of abused children, participants in the Biopsychosocial Program that provides treatment and support to these children. The Program will continue to collaborate with this initiative.

Promoting Developmental Screening and Early Developmental Stimulation

The HVP provides the opportunity to have an impact on the health and wellbeing of young children and their families. The HVP Manual, protocols and forms were completely revised in 2017-2018. Training of HVNs on the modified HVP protocol will be completed and the adoption of the revised forms will be fully implemented in 2019.

The revised HVP protocol focuses on updated priorities and objectives of Title V and emphasizes delivering education on parenting skills, developmental screening and early stimulation at home, complying with pediatric preventive visits for participating families with infants and children (including dental visits), strategies for child discipline according to age, promoting breastfeeding, encouraging healthier nutritional choices, increasing physical activity among all family members, and preventing unintentional injuries. The HVP staff will continue to receive

updated training on all topics pertaining to the Title V objectives chosen in Puerto Rico to strengthen their skills for working with families.

A parenting best practice is for parents and caregivers to learn the typical and atypical patterns of development so they can help identify at-risk children who can benefit from early intervention. To follow this recommendation, HVNs will continue administering the Ages and Stages Questionnaires (ASQ-2) and ASQ: Social Emotional (ASQ:SE-2) in the home setting in an effort to identify delays, teach parents how to stimulate maximum development, and refer for further evaluation and early intervention, if needed. HVNs have the opportunity to teach parents the importance of early stimulation and strategies to apply in their day-to-day interactions. The HVNs will also use the *Justo a Tiempo* educational materials to guide them in teaching parenting skills. HVNs and other MCAH staff will continue to offer educational activities and distribute educational materials on socio-emotional development, parenting skills, and related topics. The Positive Parenting course will continue to deliver and disseminate nurturing and positive parenting skills, including how to identify typical developmental milestones.

Adverse Childhood Experiences (ACE) studies have demonstrated the relationship between having been exposed to adverse events in childhood, such as physical or psychological abuse, neglect, witnessing violence, and the development of chronic health conditions in adulthood. In contrast, resilience has been proven to have a protective effect on ACE. The ACE questionnaire has been included in the revised Home Visiting Program Manual.

During 2017-18, the HVNs received training on mental health and emotional wellbeing and learned how to administer and interpret several related scales, including the ACE and the Cambridge Worry Scale, as a complement to the Edinburgh Postnatal Depression Scale and other screening instruments already in use. The HVNs were also trained on Psychological First Aid tools to provide support to individuals and families after a traumatic event, including post-hurricane trauma. The HVNs will receive ongoing training and supervision to ensure they ask these questions in a sensitive manner. Additional training will reinforce the negative effects of ACEs on health, and offer strategies to promote resilience among participants and their families.

MCAH staff will continue to endorse the use of screening tests by primary care physicians and as recommended in the PR PPHCSG guidelines. The Survey of Wellbeing in Young Children is an alternative test for screening different aspects of child development and wellbeing that has been adopted by many states. This test is among those recommended by the AAP, does not require a license for use, and is available in Spanish. In an effort to increase primary care physician screening for developmental delays, the SWYC has been added as alternative screening test in the PR PPHCSG update.

In 2019-20 the MCAHD will collaborate with the AAP and United Way of PR promoting the development of a reach out and read initiative in pediatric offices and day care centers. The goal is to identify funds that enable donations for baby books that cover topics such as oral health and safe sleep to parents with infants, at the earliest age possible, with the purpose to promote parent infant interaction and reading. Possible venues to donate the books could be in pediatric offices and day care centers.

Promoting Quality Child Care

Quality child care also has an impact in the wellbeing of young children. The MCAH staff will continue to collaborate and advocate for the development of public policies and regulations that call for the improvement of child care services, such as: supportive settings for breastfeeding mothers, adequate physical activity according to age, optimal nutritional selection, activities that stimulate development, and safety, among others. During 2019-20 the MCAH staff will continue to work in partnership with United Way, Association of Child Care Centers and Head Start/Early Head Start on strategies that empower community leaders and child care center staff to deal with the effects of natural disasters on the population. This includes preparedness for the hurricane season, developing plans for an adequate response during a disaster, and mitigating the effects of trauma after a disaster strikes.

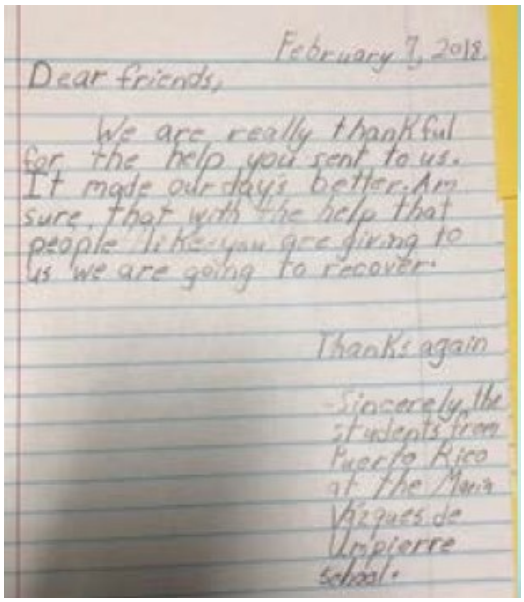
During 2018-19 the MCAH staff has taken part in another collaborative project to address poverty in children due to its implication for the wellbeing of the pediatric population. This collaboration is led by the *Instituto de la Juventud* and Save the Children. The main goal is to improve the economic situation of youth between the ages of 16 to 21, especially those with young children. MCAH staff will continue collaborating in this project for 2019-2020, developing and implementing strategies to improve access and quality of early childhood day care centers for these young parents.

The United Way of PR has instituted the Children Friendly Cities Award in 2019, were 3 top municipalities in PR were selected after evaluating over 25 that participated submitting an application to compete. The competition is based on services and investments that the municipality directs to early childhood. The MCAHD supported the initiative by participating in the awards ceremony in 2019 and will participate in the evaluation process for 2020.

Child Emotional Wellbeing

Due to the impact on emotional wellbeing on children and families by the storms the MCAH program will continue to present the coloring book *Trinka y Juan en un día de mucho viento y lluvia* as an instrument to help families understand behavioral responses and strategies to mitigate it. MCAH staff and the HVN will continue to foster the development of resilience in the participant families, awareness of the effects of adverse childhood events and how to prevent them in their children. The HVN will also continue to administer the Ages and Stages Questionnaires: Social Emotional (ASQ:SE-2) at to participating children of the HVP at scheduled intervals, teach parents how to promote healthy emotional development, and refer children that require further interventions based on the results of the screenings.

Letter written by a 5th grader.



Adolescent Health

Linked National Outcome Measures

National Outcome Measures	Data Source	Indicator	Linked NPM
NOM 16.1 - Adolescent mortality rate ages 10 through 19, per 100,000	NVSS-2017	26.7	NPM 10
NOM 16.2 - Adolescent motor vehicle mortality rate, ages 15 through 19, per 100,000	NVSS-2015_2017	4.0	NPM 10
NOM 16.3 - Adolescent suicide rate, ages 15 through 19, per 100,000	NVSS-2015_2017	1.4	NPM 10
NOM 18 - Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling	NSCH	Data Not Available or Not Reportable	NPM 10
NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health	NSCH	Data Not Available or Not Reportable	NPM 10
NOM 20 - Percent of children, ages 2 through 4, and adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)	NSCH	Data Not Available or Not Reportable	NPM 10
NOM 20 - Percent of children, ages 2 through 4, and adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)	WIC-2014	13.9 %	NPM 10
NOM 20 - Percent of children, ages 2 through 4, and adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)	YRBSS-2017	11.2 %	NPM 10
NOM 22.2 - Percent of children, ages 6 months through 17 years, who are vaccinated annually against seasonal influenza	NIS-2016_2017	40.3 %	NPM 10
NOM 22.3 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the HPV vaccine	NIS-2016	75.8 %	NPM 10
NOM 22.4 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the Tdap vaccine	NIS-2016	91.2 %	NPM 10
NOM 22.5 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the meningococcal conjugate vaccine	NIS-2016	89.2 %	NPM 10
NOM 23 - Teen birth rate, ages 15 through 19, per 1,000 females	NVSS-2017	24.2	NPM 10

National Performance Measures

NPM 10 - Percent of adolescents, ages 12 through 17, with a preventive medical visit in the past year.
Indicators and Annual Objectives

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			76.1
Annual Indicator	76	76	72.3
Numerator	179,519	179,519	174,840
Denominator	236,100	236,100	241,976
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2016	2016	2017
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	72.3	72.3	72.4	72.4	72.5	72.5

Evidence-Based or –Informed Strategy Measures

ESM 10.2 - The percent of youths in schools and communities reached with the PR Youth Health Literacy Toolkit that increase their awareness regarding how to use the health care system (pre-post survey) by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		50	60
Annual Indicator	59.9	59.3	84.7
Numerator	85	64	72
Denominator	142	108	85
Data Source	PR Youth Health Literacy Pre-Post Survey	PR Youth Health Literacy Pre-Post Survey	PR Youth Health Literacy Pre-Post Survey
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	84.8	84.9	85.0	85.1	85.2	85.3

State Action Plan Table

State Action Plan Table (Puerto Rico) - Adolescent Health - Entry 1

Priority Need

Improve adolescent health and wellbeing

NPM

NPM 10 - Percent of adolescents, ages 12 through 17, with a preventive medical visit in the past year.

Objectives

1.Maintain at 72.3% of adolescents 10 to 19 years old with a preventive medical visit in Puerto Rico by September 2020 (Baseline: 72.3%, BRFSS 2017).

Strategies

1. Empower youths to adopt healthy behaviors and ensure a healthy and productive present and future life through Positive Youth Development (PYD) based projects by CAHP Staff.

2. Train CAHP and MCAH staff to implement the Puerto Rico Youth Health Literacy Toolkit (PR YHLT) with YHPP and other groups of youth to increase youth capacity to make informed and healthy decisions relating to health care.

3. Develop a web page based on the "Nivel Máximo" multi-media campaign directed to youth, parents/caretakers and general public to increase awareness of the importance of the annual adolescent healthcare visit.

4. Develop Puerto Rico Youth Friendly Healthcare Services Guidelines (PR-YHFG) by MCAH in collaboration with youths, health care providers, legal advisors and youth organizations to be adopted by youth healthcare service providers in an alliance with MCAH to increase adolescents annual healthcare visits.

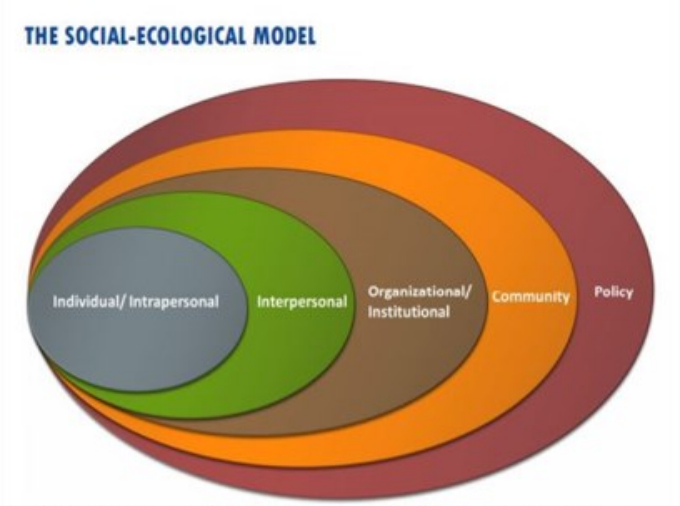
5. Create the PR Youth Guide for transitioning to adult healthcare services to assist all youths and young adults (including LGBTT and YSHCN) as they transition from pediatric child/adolescent centered care to adult centered care services in Puerto Rico by MCAH with the collaboration of CSHCN staff, youths, parents, caring adults and pediatric and adult health care service providers.

ESMs	Status
ESM 10.1 - The percent of youths participating in MCAH PYD Youth Health Promoters Project (YHPP)who express an increase in their PYD core assets in a survey at the end of each project year (baseline survey at the beginning of the project) by 2018-2012	Inactive
ESM 10.2 - The percent of youths in schools and communities reached with the PR Youth Health Literacy Toolkit that increase their awareness regarding how to use the health care system (pre-post survey) by September 2017-2021 (ongoing)	Active
ESM 10.3 - The percent of youths participating in 2nd year YHPP that identify the importance of attending the annual health care visit as the main media campaign message in a survey after looking an example of the media campaign by September 2017-2021 (ongoing)	Inactive
ESM 10.4 - The number of HRSA-Funded Health Centers (HRSAFHC) that adopt PR Youth Friendly Healthcare Service Guidelines by September 2019- 2021 (ongoing)	Inactive
ESM 10.5 - The PR Youth Guide for transitioning to adult centered healthcare services will be completed by September 2019	Inactive

NOMs
NOM 16.1 - Adolescent mortality rate ages 10 through 19, per 100,000
NOM 16.2 - Adolescent motor vehicle mortality rate, ages 15 through 19, per 100,000
NOM 16.3 - Adolescent suicide rate, ages 15 through 19, per 100,000
NOM 18 - Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling
NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health
NOM 20 - Percent of children, ages 2 through 4, and adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)
NOM 22.2 - Percent of children, ages 6 months through 17 years, who are vaccinated annually against seasonal influenza
NOM 22.3 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the HPV vaccine
NOM 22.4 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the Tdap vaccine
NOM 22.5 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the meningococcal conjugate vaccine
NOM 23 - Teen birth rate, ages 15 through 19, per 1,000 females

Adolescence is the distinct period of bio-developmental change in a person's life that bridges childhood and adulthood. It denotes a set of developmental transitions beginning with the onset of puberty and ending during the mid 20's, characterized by the maturation of the body, intensification of capacity for learning, and emergence of personal identity. From a social vantage point of view, the developmental tasks of adolescence include taking responsibility for oneself and forming relationships with others. This period of development maturation is underpinned by unique changes in brain structure and function (National Academies of Sciences, Engineering, and Medicine. 2019. *The Promise of Adolescence: Realizing Opportunity for All Youth*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25388).

MCAH view adolescence as a fundamental period within the life course and adolescent health outcomes as grounded in broad social, economic and environmental factors underlying their health opportunities and inequalities. Adolescents behave based on how they understand the world around them and they create these understandings through social interactions. Given this comprehension, the best theoretical perspective to explain learning and change in the health concept is a social ecological one. The Socio Ecological Model (SEM) is MCAH's framework for understanding the multiple levels of the social system and the interactions between adolescents and environment in program planning, partnerships and capacity strengthening. The priority to improve adolescent health and wellbeing in Puerto Rico is approached through a combination of strategies at all levels of SEM five hierarchical levels: 1. Individual, 2. Interpersonal, 3. Community, 4. Organizational and 5. Policy/enabling environment; while embracing youth as valuable assets and nurturing them in their journey towards adulthood through a paradigm change of positive and healthy development.



Source: Max, J. L., Sedivy, V., & Garrido, M. (2015). Increasing our impact by using a social-ecological approach. Washington, DC: Administration on Children, Youth and Families, Family and Youth Services Bureau.

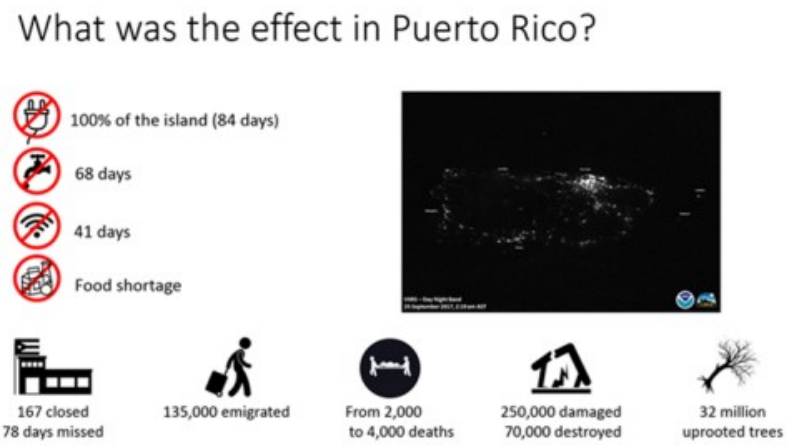
MCAH selected **National Performance Measure (NPM) 10: Percent of adolescents' ages 12 through 17, with a preventive medical visit in the past year** as short/medium term indicator of heath care/quality access to address MCAH adolescent health priority. During adolescence and early adulthood years, the annual healthcare visit provides an optimum scenario for youth's to understand and assume individual responsibility for their health, and receive necessary guidance towards healthy lifestyles while building a strong connection with her/his healthcare provider. To increase the percent of adolescents having their annual health visit, five (5) strategies and 10.2 ESM: *The percent of youths in schools and communities reached with the PR Youth Health Literacy Toolkit that increase their awareness regarding how to use the health care system (pre-post survey) by September 2017-2021*

(ongoing) were established.

Since PR is not included in the National Survey of Children's Health (NSCH), MCAH contracted PR Behavioral Risk Factor Survey (BRFSS) in 2015 to collect data to assess NPM 10. The 2016 results revealed 76% parents/guardians of 12-17 y/o reported they had a preventive medical visit in the past year and 66.5% indicated their children were in very good or excellent health (NOM#19). 2017 BRFSS parents informed 72.3% had a preventive medical visit and 61.9% were in very good or excellent health. This decrease could be related to post hurricane's effects.

In 2018, MCHB selected NORC at University of Chicago to perform MCH Jurisdictional Survey. It will provide PR and other territories data for NPMs. NORC surveyors will interview 200 families and PR 2020 MCH Jurisdictional Survey data will be used as a new baseline for NPM 10.

As mentioned in previous domains, September 2017 brought PR the landfall of two potent hurricanes. On September 6, the eye of Category 5 Hurricane Irma passed over our offshore islands, Vieques and Culebra, and several NE municipalities. Two weeks afterwards, Category 4 Hurricane Maria crossed PR from SE to NW. By taking out the power grid and telecommunication towers all over the Island, Hurricane María left Puerto Rico in the dark, without communication and the loss of basic infrastructure, including MCAH's San Juan Central Office.



Adolescent domain initiatives and projects planned for 2017-18 had to be modified in accordance with the events: schools remained closed for two to five months for structural damages, lack of electric power/water or their use as shelters. Others shortened their hours schedule while communications and ground transportation remained unstable. In addition, the hurricane's aftermath resulted in the loss of approximately 2,000 to 4,000 dead loved ones, emigration of family members, friends and healthcare professionals and the massive damage to structures and nature.

Keeping attuned with the understanding that children and youth are especially vulnerable to the long term negative outcomes of natural disasters given the disruption to their primary systems of social support e.g. families, communities and schools (Bonano GA, Brewing Cr, 2010), MCAH moved quickly to identify interventions to work with youth's emotional health and empower them with a sense of hope and security.

This narrative summarizes 2017-18 report for adolescent health domain:

1. Empower youth through Positive Youth Development (PYD)

Positive Youth Development (PYD) is the leading approach towards youth health and wellbeing in MCAH's Comprehensive Adolescent Health Program or Servicios Integrales de Salud al Adolescente (SISA, Spanish Acronym). PYD is an intentional process of providing all youths the support, relationships, experiences, resources and opportunities to become successful and competent adults. Addressing young people's positive development

facilitates their adoption of healthy behaviors and helps to ensure a healthy and productive adult life. SISA's mission is to optimize the development of the physical, mental, social and spiritual potential of all PR adolescents facilitating them to assume the responsibility to acquire healthy lifestyles to reach a better quality of life. SISA team has one Regional Coordinator (SISA RC) in each DOH's seven (7) regions and a Central Office with YHPP Coordinator, PYD Coordinator/YAC Facilitator and Associate Director. SISA team meet monthly to share experiences in working with youth, follow up administrative work and receive continued education (CE). During 2017-18 CE themes included PYD, music and movement with youth, substance use, and teen brain development. To address mental health in adolescents, the MCAH Psychologist Consultant offered a youth trauma informed care workshop, and in November 2017 Caribbean Central University offered a 4 hour Psychological First Aid (PFA) training to increase capacity related to youth mental health after the hurricanes. ***Youth Health Promoters Project (YHPP)*** and the ***Youth Advisory Council (YAC)*** for the Department of Health are two PYD that SISA implements with youth.

Youth Health Promoters Project (YHPP) is SISA's PYD public school based initiative in collaboration with PR DOE. A group of 15 to 25 voluntary students per school meet twice a month for 3 consecutive years (6^{th} to 8^{th} grade) as they become youth health promoters. YHPs meet with SISA RC and school liaison to learn about health, human rights, healthy relationships, puberty, sexual health, brain development, among others. They also create health promotion activities to share with peers, family and community. Youth from diverse socioeconomic backgrounds and capabilities are encouraged to participate, including YSHCN. "Healthy Youth in Action" ("Jóvenes Saludables en Acción", in Spanish) is the name of the 15 meetings per year's YHPP Curriculum.

2017-18 DOE academic year started in August with YHPP in 67 schools of 60 municipalities including Vieques and Culebra offshore islands. A special event had been planned by SISA to fully engage DOE school personnel with YHPP on September 2017. The CE workshop included dynamic activities about PYD and YHPP's objectives, content and activities. YHPs agreed to share their experiences and accomplishments to the 140 invited school personnel.

Due to Hurricanes Irma and Maria the event with DOE school personnel was cancelled and the YHPP implementation schedules that had been agreed for each school in August, had to be modified. Schools were closed from two to 5 months and when they opened, most had modified school hours due to lack of basic utilities at school and home.

Disasters such as hurricanes are challenging events and traumatic experiences, particularly for youth. SISA Team decided YHPP's Curriculum needed a pause to work first with youth's experiences and emotions after the event.

Although communication was almost inexistent, with trees and traffic poles down, roofless homes, fallen bridges and flooded areas, SISA RCs traveled with MCAH teams within their regions to evaluate damages and needs as well as to provide assistance in shelters, schools and homes where people struggled without power, food and water. SISA RCs are committed social workers that advocate for youth health and wellbeing through different initiatives. On this occasion, they had the special task to look for youth and their families to provide needed assistance or referrals and keep the information flowing to SISA Central. Their commitment was evident as some of them left their damaged or destroyed homes to provide relief and hope. More than 700 families were touched by SISA RCs in their visits to shelters and community centers during the next two months after the event. They offered individual and group orientations about handling stress and emotions, personal hygiene, use of mosquito repellents to prevent ZikaV, self-esteem, and emotional support among others. They also shared information about ¡Anímate!, a Crisis Counseling Project created by PR Mental Health and Substance Abuse Administration (ASSMCA, in Spanish) for referrals after the hurricane and promoted ASSMCA's Psychological Help Line (Línea PAS, Primera Ayuda Social).

In the meantime, *Hope after Hurricanes Debriefing Climate Impacts* session of Our Climate Curriculum by Alliance for Climate Education (ACE) was assessed by MCAH psychology counselor and SISA Central as an excellent tool to work with YHPs after the devastating effects of both hurricanes. ACE is a nonprofit organization that educates young people on the science of climate change and empowers them to make action since 2008. They developed this

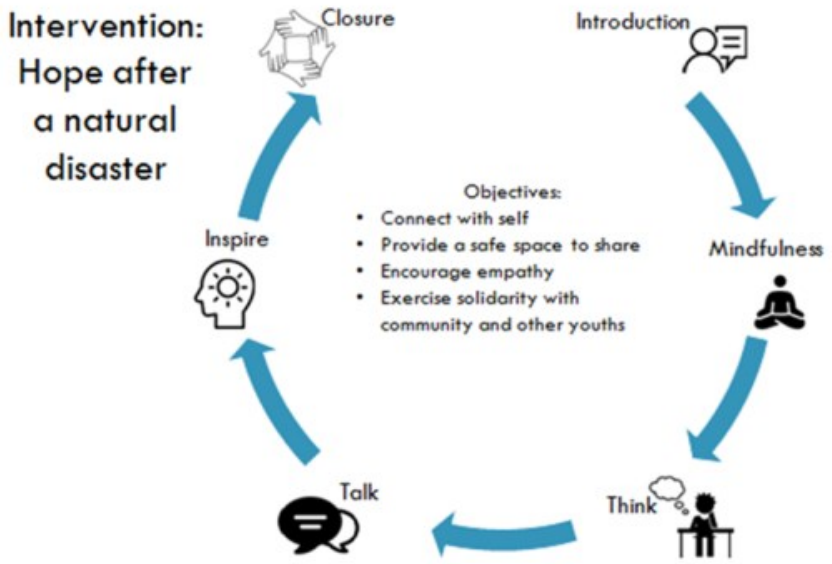
exercise for classrooms whose communities have been impacted by Hurricanes Harvey and Irma to allow students to share their experiences and emotions, and experience solidarity by connecting with others. For this session, ACE took elements of Trauma Pedagogy, Psychological Debriefing and Critical Incident Debriefing structured interventions to help support those affected by a critical incident through discussion, writing and storytelling. ACE allowed SISA to translate, pilot and adapt the exercise for its use with YHPs, and it was agreed that the messages of hope developed by youth in PR could be shared to be to be posted in ACE social media spaces.

Considering that each SISA RC had felt the effects of the hurricanes at home and as first responders, it was decided to take care of their emotional needs first, by offering them *Hope after Hurricane* (*HAH*) translated intervention. During SISA's October Team meeting, MCAH psychology counselor facilitated *HAH* to: 1. promote self-awareness by processing their experiences; 2. demonstrate its implementation; and 3. get their feedback before its use with YHPs. Providing a safe space to process emotions for the first responders was essential before having them implement *HAH* with youth.

The Youth Advisory Council (YAC) received *HAH* at their November's meeting and some adaptations were made. Advisors brought up the positive things they had acquired after the event and a question, "What positive things do you remember?" was added to the youth handout. It was considered of importance for youth to identify the positive, as it touches upon resiliency. A mindfulness activity to begin and a closing activity were added.

The final *HAH* Intervention included:

1. Introduction 	Introductions and brief facts about the hurricane's path through PR for youth to have a sense of scale of impact
2. Mindfulness 	Sitting in a circle, the group does a grounding exercise (toes to head) to individually have the experience of a quiet moment of reflection and to connect within
3. Think 	A one page handout is distributed to be answered individually in words or drawings about: a. Experience: What did you experience? b. Impressions: What were your first thoughts? What did you do? What did you see, hear, smell, and touch? c. Emotion: What were you feeling? How did you feel? d. Experiences after the event: What did you feel afterwards? What positive things do you remember?
4. Talk 	Ask volunteers to share his/her story and normalize the reactions
5. Inspire "Message of Hope" 	Tell them other youths have being through this event and ask what message of hope they could give them. Ask each to write down the ideas and how to deliver them on the other side of the handout. Discuss the ideas and plan together an activity to share the messages of hope
6. Closure "Stones" 	Ask each to select one small stone from a pile in the center of the circle, place it close to her/his heart to connect with it and write a word on it that conveys a message to share or keep as a symbol of connectedness, stability, strength & endurance



A total of 742 YHPs in 53 schools received *HAH* and 604 completed handouts were collected from all over the island. Written guardian consent was needed to be part of the intervention. Some groups met afterwards to develop and share the messages of hope in special activities they created, for example: collages on school bulletin boards, banners at school entrance and individual "Hearts of Hope" notes. On December 2017, one YHP group decorated a Christmas tree with "messages of hope ornaments" written by each school's classroom. This activity was filmed by an ACE representative that came to PR to meet YHPs, see the adapted implementation and share their activities through ACE social media. Other YHP groups filmed individual or group messages. One YAC advisor filmed YHP's *HAH* and their messages of hope that were later included in *HAH* video.

HAH 2017: Drawings to ventilate, stones with messages of endurance and videos with messages of hope

HAH 2017: Hope for youth messages are shared at schools

SISA RCs reported *HAH* allowed youths to better understand and respond to their own emotions and increased a feeling of personal control and solidarity. It is important to note that youth identified needing additional professional support were referred through the school liaison personnel to DOE health professionals for evaluation and follow up. Some students were sad and anxious due to the losses of homes, family members, pets or friends and had not shared their feelings.

A follow up questionnaire was designed and administered to YHPs four months after HAH with two questions 1. "Do you think it should be offered to other youth? (Yes/No), and 2.Why? Youth insight's from HAH and follow up questionnaire were compiled and had been analyzed by MCAH Staff to better understand how youth coped and to develop strategies to address youth mental health needs after any natural disaster.

The impact of hurricane María on families with children in PR was surveyed in the study "The Impact of Hurricane Maria on Puerto Rico Children" (www.juventudpr.org/en/about-us/library/?libroId=20511) funded by Save the Children, Angel Ramos Foundation, *Instituto del Desarrollo de la Juventud* and Massachusetts United Fund. The study and its results were described in the child health domain. The summary of the 705 surveyed households with children younger than 18 y/o revealed that the lowest income families, children under care of grandparents and children living in poverty were the most vulnerable and impacted after the hurricane. Forty-four percent (44%) of parents or caretakers observed behavioral changes in their children after the storm. These results reflect issues that families lacking resources face to handle stress, tension or trauma.

On the other hand, DOE approached South Carolina Medical University to conduct a survey to determine the magnitude of disaster exposure and mental health outcomes on Puerto Rican youth after Hurricane María. The school-based survey was administered to each public school student at all PR schools between February 1 and June 29, 2018 (5 to 9 months after Hurricane Maria). Of the 226,808 students eligible to participate, 96,108 students completed the survey from grades 3 to 12 across all PR. "Disaster Exposure and Mental Health among Puerto Rican Youths after Hurricane Maria" was published in *JAMA NetworkOpen.2019:2(4); e192619.doi.10.1001/jamanetworkopen.2019.2619*.

Results from a public school based survey administered to 96,108 students (3rd to 12th grade) in PR DOE schools	
Saw houses damaged	83.9%
Had a friend or family member leave the island	57.8%
Reported damages to their own homes	45.7%
Experience shortage of food or water	32.3%
Perceived their lives to be at risk	29.9%
Still had no electricity 5 to 9 months after the hurricane	16.7%

Source of data: Disaster Exposure and Mental Health among Puerto Rican Youths after Hurricane Maria April 2019: https://jamanetwork.com/

In overall, 7.2% surveyed youths (6,900) reported clinically significant symptoms of Post-Traumatic Stress Disorder (PTSD) and the frequency of elevated PTSD symptoms across sex yielded a significant difference with girls (8.2%) more often than boys (6.1%). A similar analysis of differences in depression was also significant with girls displaying higher mean SD scores (2.72) than boys (2.37). The study concluded that Hurricane María exposed PR youth to high levels of disaster related stressors, and youth developed high levels of PTSD and depressive symptoms.

The results of these studies acknowledge the magnitude of natural disasters and mental health symptoms in exposed youths. It is also illustrative of the need to respond quickly to any disaster event as SISA did through YHPP's HAH Intervention.

Each SISA-RC rearranged YHPP meetings from December 2017 to June 2018 in accordance to school's availability to offer the most important themes from Years 1 thru 3. They used YHPP theme guide to decide which meetings should be completed by the end of 2017-18's school year. The quantity of YHPs for this FY diminished as some moved to other schools or out of PR with their families after the hurricanes.

YHPP 2016-17 Curriculum Themes		
Year 1	**Year 2**	**Year 3 (in process)**
-YHPP Pre Survey -Team work -What is health -Youth Health Promotion -Human rights -Effective Communication -Interpersonal relationships -Growth and development -My body is changing (physical, mental, social, emotional and brain changes in adolescence)	-Sexual Health: pregnancy, STIs -Communication / non discrimination -Plan, do and assess a health promotion activity -Annual health visit: 6 areas of health, wheel of health, HEADSS model, what to do before, during and after a health visit, design a youth friendly health services clinic -Assess adolescent health campaign video	-My body is changing (changes in adolescence continuation) -Plan, do and assess a health promotion activity -My whole day: nutrition, physical activity, sleep, relationships, use of time -Brain development -Our steps as YHPs -YHPP Post Survey

In spite of the challenges to implement YHPP during 2017-18, **1,159 were active YHPs in 67 schools of 60 municipalities.** YHPs created **30 health promotion activities** reaching **2,599 peers** and **110 adults**. Some activities themes were: personal hygiene, sexuality, changes during adolescence, physical activity, wheel of health, human rights, teen pregnancy prevention (TPP), six areas of health, annual health visit, bullying prevention, healthy relationships, suicide prevention, pet abuse prevention, substance abuse effects in the brain, non-discrimination and dating violence prevention through different strategies: individual orientations, drama, videos, power-point

presentations, oral dialogues within classrooms, collages and mural art.

2017-2018 YHP's health promotion activities at schools

SISA's PYD Coordinator and MCAH evaluator developed an instrument to measure the PYD core assets or 6 C's (competence, confidence, connection, character, caring, and contribution) of YHPs at the end of each year. The validated survey was offered in May and August 2017 for the first time. The collected data of each YHP group in the 1st year YHPP is baseline to compare with next year's until the group finishes the Project. If a group was in the 3rd year or ending for other reason during 2017, the results represent PYD assets that year. For those in 1st and 2nd year, results in the following year will be compared and analyzed.

A new challenge came across YHPP on May 2017 when DOE notified they were closing 300 schools island wide for economic reasons, some with YHPP. Due to the change, SISA RCs had to end prematurely the Project in affected schools and the YHPP Post Survey had to be administered after only one or two years in the Project. This fact will be taken into consideration in YHPP's Evaluation.

***Youth Advisory Council* (YAC)** continued meeting monthly with YAC's Facilitator to provide input on health and wellbeing initiatives, be a bridge between DOH, youth and communities, and be youth representatives locally and abroad. YAC members are 14 to 21 y/o from PR municipalities with diverse capabilities including YSHCN.

On August 2017, the PR Title V Block Grant Review was held locally and two YAC advisors participated as observers for the first time in PR Title V history. They had the opportunity to be with MCAH and CYSHN staff to better understand Title V and their importance as youth representatives. They were able to meet Region 2 MCHB and PR HRSA personnel, and to talk about YAC's journey and activities. On April 2018, YAC reviewed adolescent domain's 2016-17 report and provided input for 2018-19's Plan.

The landfall of both hurricanes presented YAC new challenges. Before the events they shared information about emergency preparedness in their social media. After it was over and communications were restored, YAC Facilitator reached them to assess each one's personal and family status and provide needed support. Although most families had been affected by the winds and floods they were recovering and ready to do volunteer work. During October, four (4) advisors volunteered within UPR Pediatric Hospital Foundation's Collection Center organizing donated medical, emergency and personal care items to deliver them to hospitals, healthcare providers and centers in need. Other volunteered in their hometowns collecting and distributing clothes, food and water or helping to clear roads and debris. In December, three (3) advisors and two (2) parents traveled through winding roads to represent YAC in a visit to rural mountaintop town of Las Marías. YAC had collected food, clothes and household supplies they distributed along with messages of hope and solidarity to the severely affected families.

YAC meetings were reestablished in November where they received *HAH* translated intervention. YAC decided to film the messages of hope from each one of them. Also, one advisor volunteered to film YHP's groups *HAH* and their messages of hope with the idea of integrating them with YAC's in the production of a 4 minute's *HAH* video.

Five (5) advisors represented YAC as speakers in the Association of Maternal & Child Health Programs Annual Conference (AMCHP 2018) "Staying Focused: The Enduring Commitment of Maternal and Child Health (MCH) to families and outcomes". YAC abstract "*What motivates youth to be part of the solution in MC(YA)H programs?*

Understanding what continues to engage the PRYAC in the PRDOH" was selected as a workshop. YAC created it with statistics, a dynamic timeline (Creating YAC, Engaging in Public Health, and Working with Our Community), and a presentation. The audience included state adolescent health coordinators and MCH personnel willing to develop a YAC in their state or territory. The workshop gave them the opportunity to understand how they were selected, how they felt in the activities and what has kept them engaged.

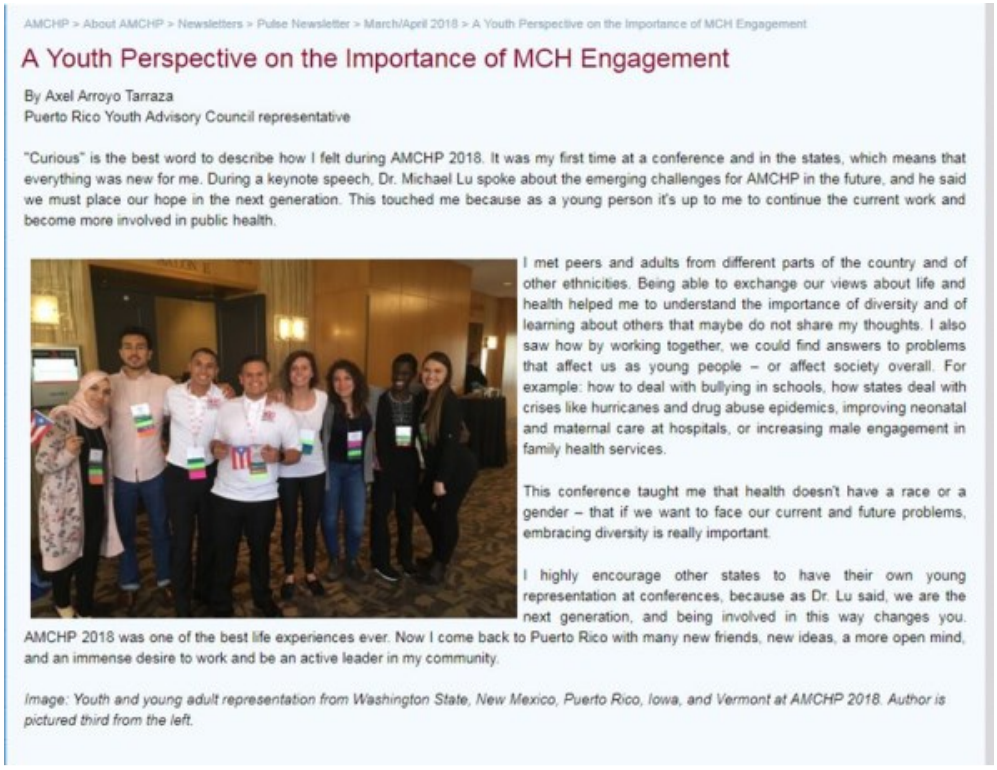
AMCHP 2018: YAC and audience get together after *"What motivates youth…"* workshop.

During AMCHP 2018, the 4 minute's HAH video was shown in the opening plenary as a prelude to a panel on natural disasters and MCH. The video, narrated and produced by YAC depicted HAH intervention and messages of hope created by YHPs and YACs. The audience connected with it and the five (5) YAC representatives were asked to the stage to receive congratulations and emphatic messages. HAH can be seen at https://www.facebook.com/CAJPR/videos/444262375995760/

AMCHP 2018: AMCHP's CEO congratulates PR YAC representatives for HAH video

Advisors attended concurrent and plenary sessions, and Region 2 meeting where they stressed the importance of including youth in next AMCHP Annual Conferences.

AMCHP Pulse published "A Youth Perspective on the Importance of MCH Engagement" written by one of the advisors' experience in AMCHP 2018.



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A Youth Perspective on the Importance of MCH Engagement

By Axel Arroyo Tarraza
Puerto Rico Youth Advisory Council representative

"Curious" is the best word to describe how I felt during AMCHP 2018. It was my first time at a conference and in the states, which means that everything was new for me. During a keynote speech, Dr. Michael Lu spoke about the emerging challenges for AMCHP in the future, and he said we must place our hope in the next generation. This touched me because as a young person it's up to me to continue the current work and become more involved in public health.

I met peers and adults from different parts of the country and of other ethnicities. Being able to exchange our views about life and health helped me to understand the importance of diversity and of learning about others that maybe do not share my thoughts. I also saw how by working together, we could find answers to problems that affect us as young people – or affect society overall. For example: how to deal with bullying in schools, how states deal with crises like hurricanes and drug abuse epidemics, improving neonatal and maternal care at hospitals, or increasing male engagement in family health services.

This conference taught me that health doesn't have a race or a gender – that if we want to face our current and future problems, embracing diversity is really important.

I highly encourage other states to have their own young representation at conferences, because as Dr. Lu said, we are the next generation, and being involved in this way changes you. AMCHP 2018 was one of the best life experiences ever. Now I come back to Puerto Rico with many new friends, new ideas, a more open mind, and an immense desire to work and be an active leader in my community.

Image: Youth and young adult representation from Washington State, New Mexico, Puerto Rico, Iowa, and Vermont at AMCHP 2018. Author is pictured third from the left.

Improving youth mental health, especially after disasters, continued to be an important theme for YAC. The American Academy of Pediatrics' (AAP) PR Chapter asked their collaboration to address this issue and an AAP representative with two pediatric residents presented YAC some youth depression screening tools. YAC selected CARLOS, the Spanish version for HPQ 9 survey as the most appropriate to use with PR youths. Eight YAC representatives offered "Screening youth for depression with CARLOS Tool" to 40 pediatricians in AAP February 2018 Assembly. It included a dynamic exercise about building effective youth-doctor relationship and HAH video to emphasize the importance of screening youth especially after a natural disaster.

February 2018: YAC's "Screening youth for depression using CARLOS tool" to AAP PR Chapter members

Five (5) YACs worked with Anthropologist and other MCAH staff, CSHCN personnel and family representatives to develop a Family Inclusion Workshop (FIW) and received a TOF to co-facilitate it. By April 2018 MCAH and CSHCN personnel from all regions had received it. The advisors had the opportunity to explain how they work as equal partners with MCAH personnel and demonstrated they have the capacity to be included in planning and implementation processes with adults.

As the two years term for YAC 2016-2018 was coming to an end, advisors reviewed the selection process they went through and decided to replicate it. To provide continuity to YAC's work, MCAH decided to accept the application of advisors less than 19 years old for another two years term. Six (6) advisors applied for a new term and 6 other participated as reviewers in the selection of the new ones with adults from DOH, CBOs and a YAC advisor's mother. The admission period was announced and 56 applications were received by June. The selection process included: 1. Applications checked for completion; 2. Reviewers used an evaluation matrix to select 40 candidates; 3. Selected candidates were observed and evaluated by youth and adult reviewers as they performed a series of dynamic team-work experiences to finally select 19 youths. YAC 2018-20 was constituted by 25 advisors: 19 new advisors and 6 from YAC 2016-18.

September 2018: YAC 2016-18 and YAC 2018-20 transition meeting

The transition from YAC 2016-18 to YAC 2018-20 was done in September 2018's YAC meeting to welcome new advisors and integrate them with the 6 YAC's from 2016-18. Youth parents and family members from both YACs were part of the meeting. YAC 2016-18 advisors designed and led the agenda: 1.Registry, 2. Welcoming by MCAH Director, 3. Grounding exercise, 4. Power point presentation by YAC 2016-18 of mission, vision and activities done, 5.YAC to YAC transition (Bylaws and activities), 5. YAC parents meet new parents, 6 Written evaluation of youth

health promotional video “Alcanza tu Nivel Máximo” by youth and parents, 7. Delivery of 2016-18’s YAC Certificates and AAP Recognition, 8. Official welcoming to new YAC members through “Stones” activity and installment of YAC 2018-20, 9.Closure and evaluation.

In 2017-18 YAC participated in other activities. Due to their interest in the development of friendly and respectful health services for all youth, three advisors visited LGBTTQ HOPE Clinic to know first-hand their specialized work with Trans youth and 10 advisors received a LGBTTQ Health and Services Workshop by Caribbean Central University. YAC representatives also participated in PR Free Tobacco Summit and AAP PR Chapter “Disasters Physician Role” meeting.

2. Develop PR Youth Health Literacy Toolkit (HLT) to increase youth capacity to make informed and appropriate decisions relating to health care

Health literacy differs from health knowledge, education and promotion although it is often assumed that it is a product of the latter two. Health literacy is defined by CDC as the degree to which an individual has the capacity to obtain, communicate, process and understand basic health information and services to make appropriate health decisions. Capacity is the potential a person has to do or accomplish something. Health literacy skills are those skills people use to realize their potential in health situations. Young people need to be empowered to make informed and appropriate decisions about health, including attending the annual health care visit and participate in treatments. Enhancing health literacy through school based interventions have the great potential for improving the access and interpretation of health information and guide youth towards making wise health decisions.

SISA RCs continued empowering youth with HLT adaptation in YHPP’s Year 2 Meetings #8 to #12 in available schools after the hurricanes. The meetings included: 1. Six areas of health, 2. Wheel of Health and Identify youth health needs, 3. HEADSSS Model, 4. Why youth go and don’t go to the doctor, 5. What to do before, during and after a health visit, and 6. Design a youth friendly clinic. Afterwards, YHPs reached 337 school peers with 4 activities directed to share their knowledge about health and the annual health visit. YAC also received HLT and offered feedback and suggestions.

ESM 10.2 *The percent of youths in schools and communities reached with the PR Youth Health Literacy Toolkit that increase their awareness regarding how to use the healthcare system (pre and post surveys)* was measured and assessed in 2017-18 by MCAH evaluator using YHPP Year 2’s #8 to #12 meeting pre and posttests about youth health literacy and annual healthcare visit. Both surveys include seven quantitative questions and the post includes 5 additional open statements for a qualitative part. During 2017-18, 37 schools were in 2nd year YHPP and from that amount only nine (9) schools were able to fulfill the required meetings due to Hurricanes. A total amount of 108 completed pre and post surveys from the nine (9) schools were analyzed and compared to 2016-17’s pre and post results in the report “Awareness of Youth Health Promoters with Respect to Utilization of Healthcare Services System in 2017-18” by MCAH evaluator. Evaluation results suggested there was consistency in the increase of awareness in 2016-17 (59.9%) and 2017-18’s (59.3%) results. The 2017-18’s results revealed: 1. Youth had an increase in all post test results but there was a statistically significant increase in 5/7 premises of awareness of preventive health and the annual preventive visit; 2. Youth depend on parents to access preventive health services; 3. Questions #3 and #6 should be only one “Should you go to the doctor annually even if you are not sick?”; 4. Question # 5 needs to be separated into two (information and services); 5. Themes with increases not statistically significant were: 1. Feeling confident when talking to your doctor; 2. Knowing the information and services a doctor can offer.

On June 2018, MCAH evaluator presented the evaluation results to SISA Team. Results were discussed and some changes were agreed to improve 2018-19 implementation: 1. Question #3 was eliminated and #5 split in two; 2. Meeting contents were reviewed to give details about the services and information a doctor can offer; 3. SISA Coordinators will emphasize the importance of the annual health visit; 4. A friendlier version of preventive services booklet will be created to share with youth and parents; 5. A parent workshop about annual health visit importance and services provided will be created.

3. Increase awareness of the importance of Youth Annual Health Visit:

***PR Pediatric Preventive Health Care Services Guidelines (PPHCSG)*:** A panel of experts reviewed recommendations from AAP, 4th Edition of Bright Futures, US Preventive Taskforce, and data related to PR prevalence of disease in the pediatric population to update PR PPHCSG. The section on adolescence healthcare services provides health care providers tools for early identification, evaluation and intervention strategies while promoting healthy youth lifestyles. A simplified format for youth and parents will be designed with YAC suggestions as friendly brochures or social media products to promote youth annual health visit. DOH Secretary signed updated PPHCSG on October 2018.

Multimedia campaign: During 2017-18 a "Compilation of YHPs Opinions about the Annual Health Visit - 2017 Report" summarized the information provided by 17 YHP's groups in Year 2 meetings about friendly healthcare services. The report was shared with the Advertising Agency for its use to guide them in designing the new youth health media campaign. They presented the draft of the promotional video and the multimedia campaign plan to MCAH on August 2018. The new campaign uses a "comic-strip like" format and contains messages of healthy youth lifestyles. It promotes the annual health visit, biannual dental visit, healthy eating and movement while discourages the use of tobacco, substances and cell phones while driving. The video was shown to YAC advisors and their families in the transition meeting. Their commentaries about the photos used and the fast paced spoken messages were gathered and sent to the agency for adjustments. The adjusted video was approved by MCAH in 2018-19.

YHPs opinions in regards to youth healthcare visit, the office or clinic and its personnel are summarized in the following tables:

Why youth go to the doctor?	Why youth do not go to the doctor?
1. The doctor is good and cheerful	1. Don't like injections
2. Gives me candy	2. Long waiting hours
3. Be absent from school	3. Doctor only talk to the parent
4. Check health and illnesses	4. Don't like doctor check "private parts"
5. Verify vaccines	5. Bored in waiting room
6. To alleviate pain	6. Bothered by small kids crying
7. Treat a chronic condition	7. Parents don't or can't take them
8. Because is ill	8. Do not have money to pay
9. Need medication refills	9. Fear, shame
10. Parents obligate them to go	10. It is a waste of time
11. To be healthy	11. They are not sick

How should it look?	Characteristics to be a friendly place?
1.Beautiful, big, clean and orderly waiting room / air conditioning	1."Professional", respectful personnel, know how to treat youth, good humored
2. Have TV, electronic games, Wifi, Netflix, theater-like, internet access, computers	2.Able to see the doctor without the parent if youth want
3. Separate area for small children	3. Written health information available
4. Walls painted in bold colors, youthful decorations not only small kids	4. Doctor explains in simple words what you have or need to do
5. Comfortable chairs, youth size	5. Close to my home, accessible & parking
6 Have plants	6. After school hours and week ends
7. "Good" Music	7. Appointments by internet
8. Table games	8. Kind and sensible - understand when youth feel afraid
9. Have a parents area	9. Free service or low cost
10. Sexual health Info., condoms, pads	10. All services in the same place
11. Healthy snacks but also candies	11. Confidentiality and private spaces
12. Movies that are not cartoons	12. Short time to wait

Educational activities to youths and adults about adolescent health/ wellbeing:

Youth educational activities: SISA-RCs offered 46 educational activities to 1,252 10-19 y/o (not YHPs) at schools and other locations about: managing emotions and stress, prevention of dating violence, self-esteem, healthy personal relationships, sexual abuse prevention, TPP, personal hygiene, teen growth and development, sexual and reproductive health, and teen brain development.

Regional HEs offered educational activities island wide to 3,231 10-19 y/o and 451 adults about the following youth health and wellbeing themes:

MCAH Educational Activities in groups offered to Adolescents 10 to 19 years old, PR 2017-2018	
Themes	***By HE***
Unintentional injuries prev.	515
Nutrition and Physical Activity	38
Teen Sexual/ Reproductive Health	601
STI Sexual Transmitted Infections	330
Healthy Life Skills for adolescents	20
Teen growth and development	307
Healthy Personal Relationships	118
Women Health	12
Tobacco/ drugs prevention	102
Oral health	356
Shaken Baby Syndrome	485
Childbearing, labor & postpartum	128
Breastfeeding	33
Baby and Childcare	103
Growth/Dev screening in early child	37
Babies CPR Anytime workshop	46
TOTAL	3,231
MCAH Educational Activities offered to teen parents/guardians	
Teen healthy life skills for parents	451

Adult educational activities about teen health were offered by SISA RCs reaching 287 adults with 13 educational activities about: teen sexuality, adolescent development, family planning, teen health and wellbeing, stress management, suicide prevention and teen birth rates. HEs touched 451 teen parents/guardians with teen healthy life skills.

Understanding Adolescence (UA) workshop provides adults an opportunity to acknowledge the changes in adolescence and realize the importance of taking youth to their annual healthcare visit. During 2017-18 SISA RCs offered nine (9) UA to 121 parents/caregivers, school personnel and professionals. The workshop includes a timeline dynamic with life events and ages, and a power point presentation about the developmental tasks of adolescents, teen brain development and PYD.

Immunizations and adolescent health and wellbeing*:* During 2017-18 the percent of adolescents, ages 13 to 17 who received vaccinations decreased from 2015 and 2016. After the hurricanes, there was a loss of vaccines due to prolonged lack of electricity, closed vaccination centers due to infrastructural damages, limited amount of vaccines to be distributed, limited access to remote communities due to roads and bridges damages and family priorities for basic needs above vaccination. Although DOH developed a flu immunization campaign and massive flu vaccine clinics after the hurricanes, the percent of children 6 months through 17 years who were vaccinated against seasonal influenza in 2017-18 reached only 12% (PRIR 2017-18 Report).

Vaccine coverage per age groups registered in the Puerto Rico Immunization Registry (PRIR)	Percent vaccine coverage		
	2015	2016	2017-18
Seasonal Influenza vaccination (6 mo. to 17 y/o)	37.2	40.3	12
At least 1 dose of HPV 13-17 y/o (both) *	72.6	75.8	100
At least 1 dose of HPV 13–17 y/o (females)	77.4	80.4	NA
At least 1 dose of HPV 13–17 y/o (males)	66.1	71.1	NA
At least 1 dose of Tdap 13-17 y/o	82.5	91.2	30
At least 1 dose of Meningococcal conj. 13-17 y/o	87.9	89.2	29

Data Source: Puerto Rico Immunization Registry (PRIR)

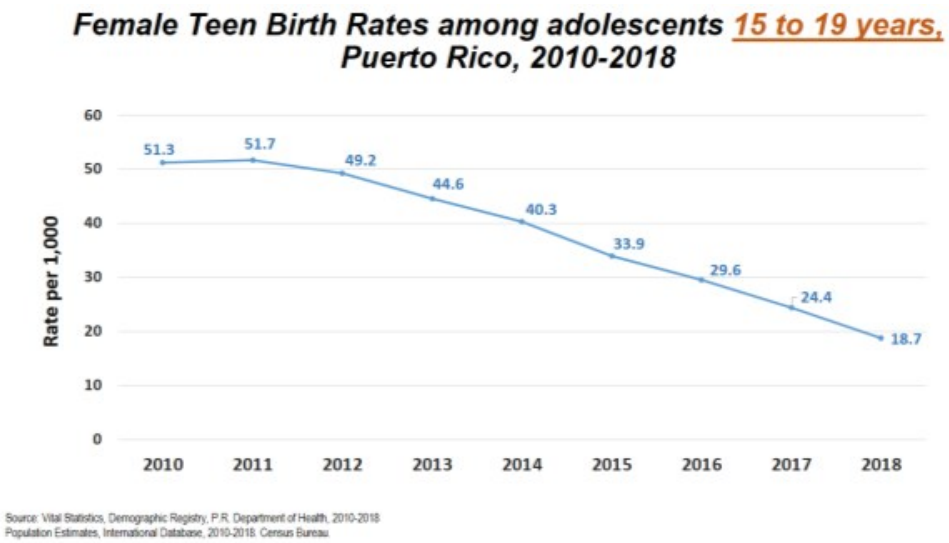
During 2017 the DOH Secretary implemented a public policy to make HPV immunization mandatory for all 11 y/o beginning in 2018-19 school year, providing one year to educate parents and youth about this new requisite for school registry.

Childbearing during adolescence is a challenging event and the annual youth health visit can provide an adequate space to answer teen's questions about sexual and reproductive health and receive counseling.

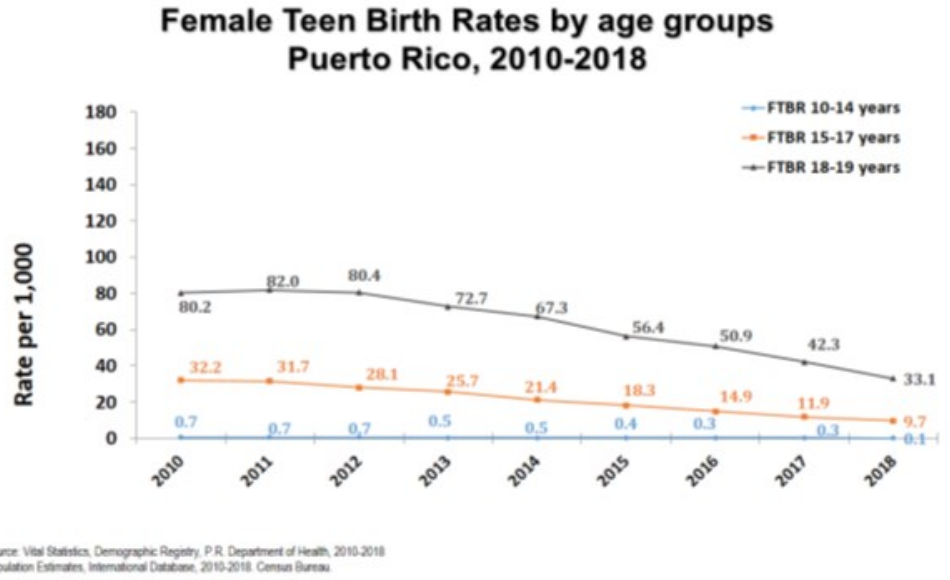
Pregnant and parenting teens had an additional burden after the hurricanes, taking care of a pregnancy or newborn baby in severe adverse circumstances. Some had to move to shelters or with relatives. They also had to overcome having limited amounts of food, water and the hardships of living in crowded conditions. As most long term effects of the stress experienced by pregnant moms and their babies after an event like this are unknown, several studies are under way in the University of PR Medical Campus.

After the event, MCAH Regional Teams with Home Visiting Program (HVP) nurses and CHW moved to shelters and homes to continue promoting healthcare related to pregnancy and parenting, repellent use to prevent mosquito borne infections and provide information of disaster's related diseases like leptospirosis. Please see perinatal health domain for details.

Teen Birth Rates: MCAH updates female teen birth rates (FTBR) annually for 15-19 year/olds and for each youth group (10-14, 15-17 and 18-19 y/o) in PR and its municipalities. The PR 2018 final data 15-19 y/o TBR of 18.7 per 1,000 represents a 23.4% decrease from 2017 (24.4/1,000) and a 64% decrease from 2011 (51.7/1,000) that was the highest in the past 8 years.



Tendency TBR graphs for age groups provide useful insight to address teen sexual and reproductive health with youth in schools and other scenarios. The continued decrease in PR TBRs for each age group (10-14, 15-17, and 18-19) is evident in the graph:



MCAH Primary TPP efforts include YHPP curriculum that emphasize human rights, sexual and reproductive health, annual healthcare visit and other themes that YHPs use to develop peer activities in their schools. SISA-RC and HE also reach students and adults to increase awareness about the effects of childbearing at an early age.

PR Abstinence Education Program (**PR-AEGP**) and Personal Responsibility Education Program (**PR-PREP**) continued their EBPs as soon as the implementation sites were available after the hurricanes.

PR-PREP strategies seek to increase youth knowledge and responsibility for their sexual and reproductive health and rights and decrease teen pregnancy and STD rates. During 2017– 2018, culturally adapted EBP ¡Cuídate! was offered for its 5th year to youths in public middle schools and public housings. A total of 347 youth (12–16) in five (5) PREP municipalities completed it with a retention rate of 77.8%. Mean age was 13 years old and 50.7% were females. As reported in the entry survey: 91.9% were heterosexual, 3.2% something else/not decided, and 1.4%

bisexual.

Entry survey results	%	Exit survey results (intentions)	%
Ever had sexual intercourse (past year was 7.4%)	9.5	Less likely to have sex intercourse in next 6 months	77.1
-Had sex in past 3 months w/ 1 partner	46.9	Prefer to abstain	60.8
-Had sex w/ 2 or more partners	18.7		
-Used condom	69.6	Will use condom	48.4
-Used oral contraceptive	42.9	Will use oral contraceptive	35.0
-Secondary abstinence	34.4		

PR PREP conducted ¡Cuídalos!, a parent intervention to 69 parents/caregivers with a mean age of 45 y/o, and 87.0% females which completed with a retention rate of 97.1%. In post intervention survey more than 90% indicated they were more interested in knowing their child friends, will support him/her in their decision making process and goals, will keep healthy communication to manage conflicts and will approach him or her to speak about important issues

AEGP worked with 1,510 adolescents (10-12 years) in its 6th year implementation of EBP Adult Identity Mentoring (AIM). Ninety eight percent of participants (98%) completed ≥75% of AIM. Fifty three percent (53%) were males. In pre-post/tests, participants showed positive changes in their perception of how their current actions, plans and behaviors affect their future.

Statements:	Pre	Post
"When I look into the future, I have a clear picture of the type of work I want to do"	92	94
"I am confident that things will work for me in the future",	93	93
"I should wait to be married in order to have sex".	63	63
"Having sex while I am a teen reduces my possibilities to be a successful adult"	60	67
Reasons for not having sex:		
- too young	68	72
- could get infected with STI	24	25
- was against their beliefs and values	83	89
- did not answer any reason	-	36

AEGP also worked with parents/caretakers implementing Parenting Fundamentals Program (PFP) during the past 7 years. In 2017-18 768 parents/ tutors of 10-12 y/o participated and 90% completed ≥75% of the program. Most participants were females 92%, with mean age 40 y/o, 66% married or living with a partner and 50% homemakers.

A total of 747 pre/posttests (parents' evaluations) collected showed parents' significant improvement in survey scales:

Survey Scales:	Pre	Post
Positive parenting knowledge	8.2	9.6
Non-violent discipline	2.4	3.5
Child development knowledge	1.58	1.80

Parents also improved their scores in family functioning, parent-child involvement, social support, and nurturing. This program also included: art lessons to 592 kids while their parents attended PFP, 1,101 individualized home visits (2 hrs.) to PFP families, 183 comprehensive referrals, and follow up support group sessions to 307 parents or tutors.

MCAH Secondary TPP efforts include ***MCHIEV*** with EBP Healthy Families America and Growing Great Kids curriculums. This program offers services to high risk pregnant adolescents and until the child is 36 months old using a strength-based, family centered partnership and relationship based interactions. Participants receive prenatal and post-partum care orientations, breastfeeding and immunization support as well as baby's development and milestones, brain development and activities according to baby's age, family planning, how to set goals, and be more autonomous among others. They receive referrals based on needs. During 2017-18, 130 families received a total amount of 2,408 home visits in four (4) municipalities that also were affected by the hurricanes.

MCAH Home Visiting Program (HVP) uses a coordinated management care model to serve pregnant women and their families with the following criteria: prim gravid adolescents until 21 years of age, prim gravid with chronic health condition (diabetes, hypertension, lupus, epilepsy, or other), morbid obesity or ZikaV positive, prim gravid >35 years old, pregnant woman with a previous adverse pregnancy result (abortion, intrauterine death, infant or pediatric death) with no living child. HVP visit each participant using a specific schedule until the baby is born and afterwards offer inter-conceptional visits until the baby is 24 months of age to space future births.

During 2017-18, 81 HVP offered services in 70 PR municipalities. A total of 3,633 women participated in HVP of which 1,578 (43.4%) were 19 years or less and two thirds (63.7%) or 2,316 were < 23 y/o. HVP visits provide support and empowerment to pregnant and parenting teens and young adults. HVP registered a total of 26,083 visits to pregnant and post-partum women of which 16,619 were to teens and young adults:

HVP	Age Groups						
	<15	15-17	18-19	20-22	Sub-total (≤ 22)	>22	Total
Participants	63 (1.7%)	741 (20.4%)	774 (21.3%)	738 (20.3%)	2,316 (63.7%)	1,317 (36.3%)	**3,633**
Visits	453	5,526	5,536	5,304	16,819 (64.5%)	9,466 (36.3%)	**26,083**

MCAH perinatal nurses visit hospitals to reach pregnant and post-partum women and their families. They offer information and support for post-partum care, breastfeeding, child care, illnesses, losses and other. Service received by 10-19 y/o included: Seventy five (75) pregnant, 488 post-partum women, 26 accompanying males, 2 accompanying pregnant women and 47 non pregnant companions.

Child-rearing in adolescents and young adults:

Breastfeeding (BF) is a big challenge for adolescents and young adult as many attend school, college and work after giving birth requiring additional support especially beyond the first month. HVN provide BF support by scheduling a visit in the first week post-partum and subsequent visits in which they evaluate latching and BF positioning and refer mothers for professional help and support in community if needed. During 2017-18 HVP's 6 months post-partum visit 23.8% <20 y/o were BF, a 24% increase from 19.2% during 2016-17. The 2017-18 report

of BF at birth as reported in first postpartum HVP to teens and young adults is depicted in the following table:

Percent Breastfeeding in 1st PP HVP visit					
	<15	15-17 y/o	18-19 y/o	15-19 y/o	20-24 y/o
Exclusive BF	5.9	28.8	31.9	29.3	41.9
Partial BF	35.3	43.5	41.1	41.9	37.2
Never BF	58.8	27.6	27.0	28.8	20.9

MCAH Prenatal Curriculum for pregnant women and their families, not HVP participants promotes the importance of prenatal, natal and post natal health care while emphasizing healthy life styles, changes during pregnancy, alert signs, delivery plan, breastfeeding, baby care and family planning. It is offered in small groups by CHWs and HE in four (4) sessions. In 2017-18 358 females and 112 males <22 y/o received it as an important tool to empower pregnant teens, their partners and families. .

R*esponsible Parenting Curriculum* promotes parental bonding and healthy baby/child care from 0 to 5 years of age and 6 to 11. CHWs provide it in small groups to parents and caregivers of children less than 11 y/o. It includes growth and development characteristics for children stages, how to provide early stimulation, importance of child health and dental care visits, nutrition, activity, security, loving experience. The 0-5 course was taken by 140 10-21 y/o females and 35 10-21 y/o males. The 6-11 course had 102 10-21 y/o females and 21 10-21 y/o males' attendees.

Mental health is very important and the annual health visit is an excellent opportunity for health providers to do early screening, diagnosis, treatment and referrals regarding teen mental health to prevent suicide deaths and promote wellness especially after natural disasters or other stressful events. YAC identified stress and anxiety as the main mental health issues they face, especially LGBTQ youths and they promoted the use of CARLOS tool (HPQ9) to screen youth mental health.

SISA addresses teen healthy life skills through YHPP's three year Curriculum. Life skills tools serve as protective barriers to help teens face difficult and stressful life situations that may lead to depression and suicidal behavior. YHPP emphasizes several important areas: interpersonal relationships, effective communication and non-discrimination, self-esteem, handling emotions and changes in adolescence. In addition, teen brain development was added in Year 3. Besides understanding the development of the brain during adolescence it includes how it is affected by substances and emotions. The YHPs offer peer to peer information and develop peer activities to celebrate life and promote healthy lifestyles including balancing mental, physical and emotional health and managing stressful events such as bullying, violence and depression. The HAH Guide was developed and offered to YHPs at schools to work with their emotions after the experiences they lived during and after the hurricanes as depicted previously.

To increase SISA team capabilities related to youth mental health after the hurricanes, Caribbean Central University's National Hispanic and Latino Addiction Technology Center Network (ATTC) offered a 4 hour Psychological First Aid (PFA) after Disaster training on November 2017. This training included SISA RCs that were first responders and were going to offer HAH to YHPs, SISA Central and MCAH Staff. PFA objectives were: 1. Define PFA; 2. Describe PFA's 6 strategies or Basic Actions; 3. Identify general PFA guidelines; 4. Identify self-care strategies to use before, during and after offering PFA. Discussion contained examples and strategies used by participants during their work in shelters after the hurricane.

To better serve youths and communities after the disaster, SISA RCs also offered educational brochures of ¡Anímate! Crisis Counseling Intervention Project developed by ASSMCA after the events and promoted ASSMCA's Psychological Help Life (Línea PAS, Primera Ayuda Social) toll free numbers (1-800-981-0023 or 1-888-672-7622

TDD) that provides emergency mental health support and guidance. In 2017-18 ASSMCA's Linea PAS Report from a total amount of 136,492 calls, 6,948 were from <21 y/o.

Linea PAS	10-14	15-17	18-20	Sub-total <21 y/o	≥21 y/o	Total Calls
Feminine	296	1,516	2,215	4,027	79,723	83,750
Masculine	117	1,383	1,412	2,912	49,821	52,733
Total	413	2,899	3,636	**6,948**	129,544	**136,492**

Source: ASSMCA Statistics and evaluation Section of ASSMCA Federal Funds Office Jan 15, 2019

From the total amount of 29,293 Linea PAS calls of persons with suicidal ideas or asking for help after a suicide attempt, 1,914 were < 21 y/o:

Linea PAS calls for suicide ideas or intent					
Age	Ideas fem.	Ideas masc.	Intent fem.	Intent masc.	Calls/ age
0-17	556	275	253	123	1,207
18-20	303	177	158	69	707
Sub-total	859	452	411	192	**1,914**
≥21 y/o	12,123	7,736	4,395	3,125	24,381
Total	12,982	8,188	4,806	3,317	**29,293**

Source: ASSMCA Statistics and evaluation Section of ASSMCA Federal Funds Office Jan 15, 2019

NVSS data for PR 15-19 y/o suicide death rate (NOM 16.3) in 2017 was 3.1/100,000, a slight increase from 2016's 3.0/100,000 and 2015's 2.5/100,000. The suicide rate for 10-14 was 0.5/100,000 and for 20-24 was 6.9/100,000. One girl 10-14 y/o, 7 (6 boys, 1 girl) 15-19 y/o and 16 (12 males, 4 females) 20-24 y/o died by suicide.

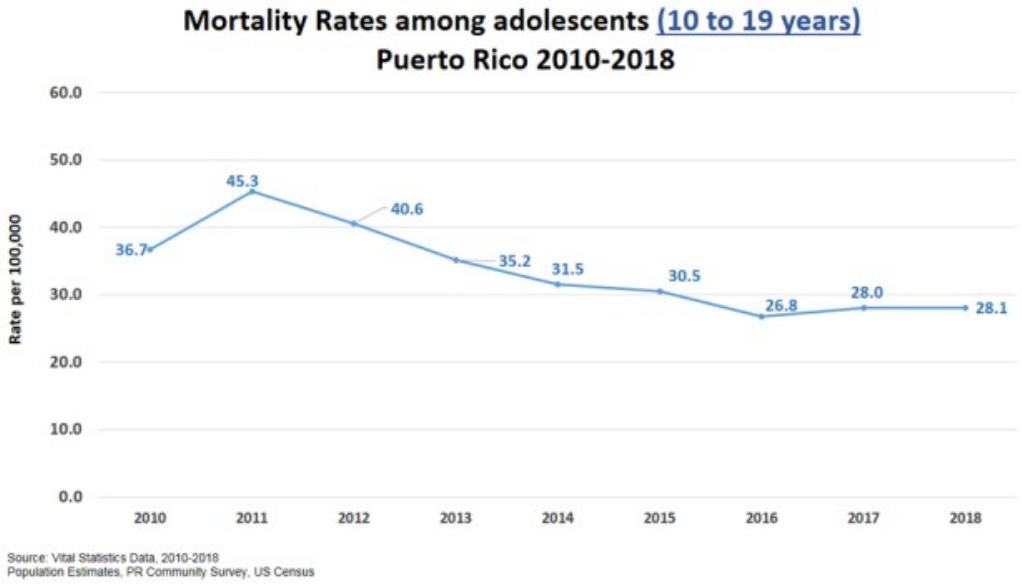
The 2017-18 PR Health Insurance Administration (PRHIA) report indicated 21,451 (unduplicated) 12-21 y/o received mental health services for ADD, ADHD, disorders related to behavior, social and emotional, major depressive, PTSD, anxiety among other. Also, 874 unduplicated 12-21 y/o had at least one condition related to natural disaster during 2017-18. In regards to treatment once a mental health illness is diagnosed, BRFSS 2017 parents reported 92.1 % of their 10-14 and 81.1% of their 15-17 y/o with behavioral health conditions received treatment or counseling.

On April 2018 SISA's Associate Director was invited to be part of ASSMCA's Prevention Advisory Council (PAC) of the *Strategic Prevention Framework Project: Partnership for Success.* PAC goals are to: 1. Strengthen prevention capacity and infrastructure; 2. Reduce alcohol use in 12-20 youths; 3. Reduce consequences associated with alcohol use in 12-20 y/o; and 4. Potentiate and align prevention resources. These goals are in accordance with MCAH adolescent priority. In May 2018 PAC's meeting, SISA Associate Director and Bayamón's SISA RC offered a presentation about SISA, PYD, YHPP, YAC and UA to foster collaboration between both agencies. This participation opened a new communication effort to update MCAH and ASSMCA's MOU. Both entities personnel met in 2018-19 to discuss new MOU statements of collaboration in regards to data sharing and communication of initiatives and referrals.

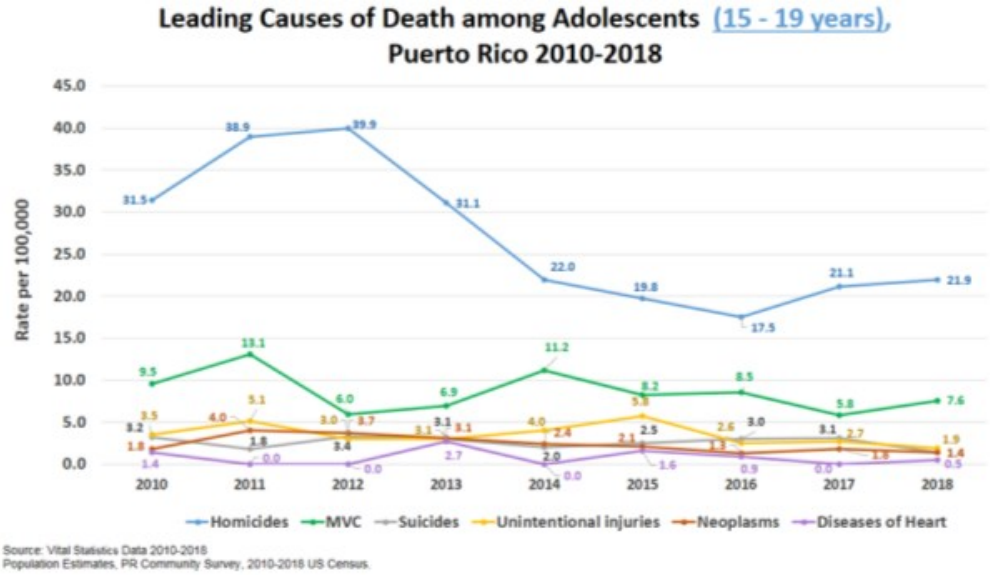
Mortality rates and morbidity in adolescents and young adults: a comprehensive adolescent health system approach is needed

Although 10-19 y/o mortality rates (NOM 16.1) had been declining since 2011, 2018 data of 28.1/10,000 indicates a

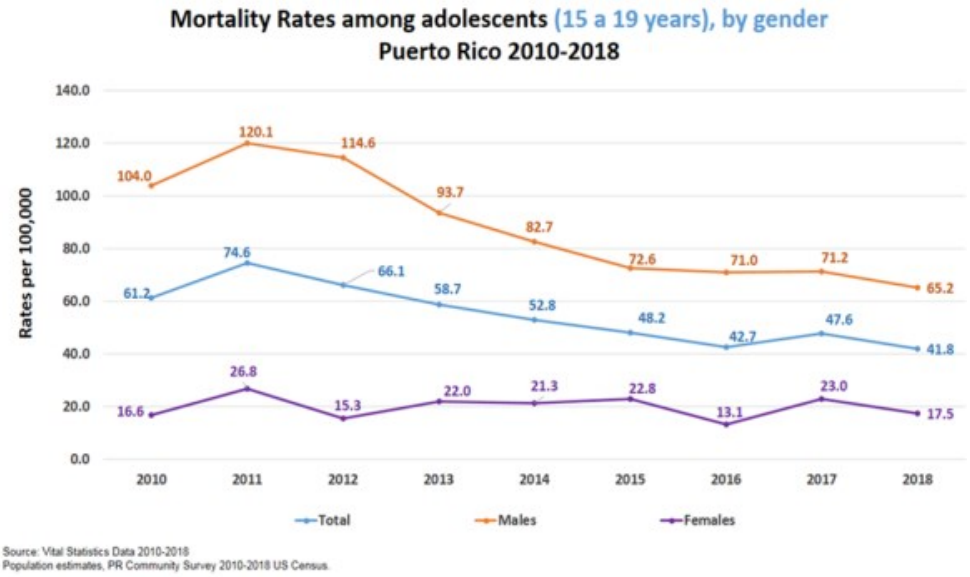
4.9% increase from 2016's 26.8/100,000.



The NVSS 2010-2018 Mortality rate graph for 15-19 y/o provides an understanding of the most common causes of death in the past eight years. Four of the first six 1st causes of death are external causes or violence related. The highest rate is for homicides, followed by motor vehicle crashes with suicides and unintentional injuries fluctuating in the next two. Neoplasm, heart disease and other internal causes also occur. The graph shows 15-19 y/o leading causes of death rates since 2010.



In 2018, males ages 15 to 19 were more than twice as likely as females to die (65.2 versus 17.5 deaths per 100,000) in PR.



To better understand PR youth mortality, MEU compiled data by common causes of death within age groups (10-14, 15-17, 18-19 and 20-24). Mortality rates for each age group per year have different causes associated to them.

During 2017, the first cause of death for 15-17 y/o, 18-19 y/o, and 20-24 y/o in 2017 was homicides. Motor vehicle crashes (MVC) was the 2nd cause for all 10 to 24 y/o. The first cause of death in 10-14 y/o was unintentional injuries. Unintentional injuries include deaths by: drowning, burns and suffocation, among others. MVC data was separated from unintended injuries to get a better picture that could help us delineate strategies for prevention in each age group. Suicides was the third cause for 10-14 and 18 to 24 y/o. The top 5 leading causes of death by adolescents and young adult groups in 2017 were:

Top 5 leading causes of death among adolescentes and young adults by age group

Rates by 100,000, Puerto Rico 2017

Rank	10-14 years	15-17 years	18-19 years	20-24 years
1	Unintentional injuries 1.5	Homicides 10.5	Homicides 36.7	Homicides 68.9
2	Motor Vehicle-Crashes 0.5	Motor Vehicle-Crashes 2.3	Motor Vehicle-Crashes 11.1	Motor Vehicle-Crashes 17.2
3	Suicides 0.5	Neoplasms 2.3	Suicides 6.7	Suicides 6.9
4	Neoplasms 0.5	Unintentional injuries 1.5	Unintentional injuries 4.5	Neoplasms 3.9
5	Upper Respiratory Tract Infections 0.5	Diabetes mellitus 0.8	Neoplasms 1.1	Unintentional injuries 2.6

Source: Vital Statisctiscs Data 2017
Population Estimates, PR Community Survey, US Census.

During 2018, motor vehicle crashes (MVC) was the 1st cause for 10 to 14 year olds instead of unintentional injuries (2017) and the 2nd cause for 15 to 24 y/o. The 1st cause of death for 15-17 y/o, 18-19 y/o, and 20-24 y/o in 2018 continued to be homicides. Suicides continued to be the 3rd cause for 10-14 but also for 15-17 y/o and the 4th and 5th to 20-24 and 18-19 respectively. Unintended injuries caused deaths in all age ranges. All these death can be prevented. It must be remembered that September 2017 hurricane María's path through the island affected youth as all population by the devastation effects that continue to be present today. Anxiety, stress and depression has been mentioned by youth as their concerns of health and although initiatives to address those issues had been implemented, challenges to identify, treat and refer are present today. These four leading mortality causes need to be

addressed throughout a comprehensive, collective and interdisciplinary health system approach that include youth, families, community, entities and government to develop culturally effective initiatives to decrease youth deaths and promote health and wellness in all youth.

The top 5 leading causes of death by adolescents and young adult groups in 2018 were:

Top 5 leading causes of death among adolescentes and young adults by age group				
Rates by 100,000, Puerto Rico 2018				
Rank	10-14 years	15-17 years	18-19 years	20-24 years
1	Motor Vehicle-Crashes 2.7	Homicides 10.3	Homicides 38.9	Homicides 60.2
2	Unintentional injuries 2.1	Motor Vehicle-Crashes 4.8	Motor Vehicle-Crashes 11.8	Motor Vehicle-Crashes 14.1
3	Suicides 1.1	Suicides 1.6	Unintentional injuries 3.5	Unintentional injuries 6.4
4	Diabetes Mellitus 1.1	Unintentional injuries 0.8	Neoplasms 3.5	Suicides 3.7
5	Homicides 0.5	Diseases of heart 0.8	Suicides 1.2	Neoplasms 3.7

Source: Vital Statisctiscs Data 2018

Population Estimates, PR Community Survey, US Census.

4. Develop PR Youth Friendly Healthcare Services Guidelines PR-YFHCSG

Youth friendly health care services are needed to effectively attract young people, meet their needs comfortably and responsively, and succeed in retaining them for continuing care especially the youth annual health visit. The development of PR-YFHCSG continued. It is directed to promote friendly and respectful health services to all youth, including LGBTTQ youth and YSHCN.

During 2017-2018 SISA RCs continued offering 2nd year YHPP Meetings with activities in which youths: 1. Identify reasons why youth go and do not go to the health care provider; 2. Learn what to do before, during and after a healthcare visit; 3. Work with their parents at home to learn what type of insurance plan they have and how to use the card; 4. Design a youth friendly health care office and identify ideal personnel characteristics; 5.Talk about a campaign to promote annual healthcare visit. Youth's ideas and opinions about the health care locality and its personnel to better serve their needs were collected in June 2018 and will be added to those in 2017 "Recompilation of YHP opinion about the preventive health visit " to incorporate them in PR-YFHCSG.

YAC members received health literacy activities that included the design of a youth friendly healthcare service clinic. Comments from YAC participation will be taken into consideration as they will continue to be engaged in the development of the Guideline. YAC members developed an interest to identify youth friendly healthcare services to include in a Directory to be shared with youth through social media. This interest led 3 advisors to schedule a visit to Ararat Center's HOPE Clinic in San Juan on June 2017. They met the Center's Directors, asked them about the services they provide specially to trans youth and developed collaboration. During May and June 2018 YAC received a summary presentation about friendly health services to use in evaluating two Guidelines, from WHO and Healthy Teen Network to assess youth friendly health services. Their work will be continued by next YAC 2018-20.

Adolescent health/wellbeing rights and services: Due to the hurricane events, efforts to compile PR laws about adolescent health-wellbeing rights/ services and design an adequate document to use them paused during 2017-18. This document and the process to produce it, is intended to promote a dialogue between lawyers, health care providers and youth to identify gaps in present laws and identify ways to guarantee health rights for all youth including

LGBTTQ and YSHCN in: consent laws, privacy and confidentiality, mental health, sexual and reproductive health care, among others.

5. Create the PR Youth Guide for transitioning to adult health care services

Adolescents and young adults' annual preventive health care visit can be maximized if all youths are empowered with skills and information to advocate for quality health care services as they move towards adulthood. MCAH Is addressing annual health visit and youth friendly healthcare services before developing the Transitioning Guide for All Youth since the first two will be intertwined in the Guide. Meanwhile, communications with CSHCN personnel continue as they work their pilot to Guide YSHCN in their journey towards adult health care. Youth with special health care needs face the same kind of challenges as all youth, but they are more intense and therefore unique and targeted supports and services must be in place to help them successfully transition into adulthood. During 2017-18 SISA Associate Director collaborated in the revision of a questionnaire developed by CYSHCN that was offered to Pediatric Clinics' personnel to assess the friendliness of services they provide in the CSHCN Pediatric Centers.

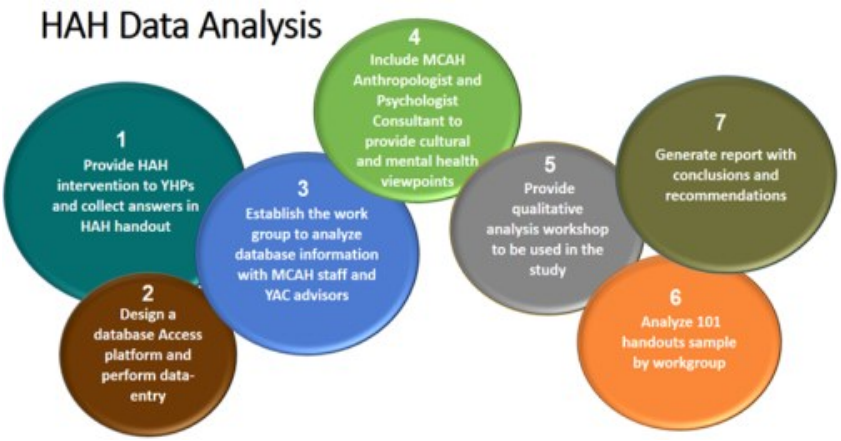
Adolescent Health - Application Year

MCAH will continue using the Socio Ecological Model (SEM) in program planning, partnerships and capacity strengthening to work towards adolescents and young adult's health and wellbeing. Youth opinion was collected through YAC public input to the adolescent domain. Their comments and suggestions will be used while working with each strategy of the 2019-2020 Plan.

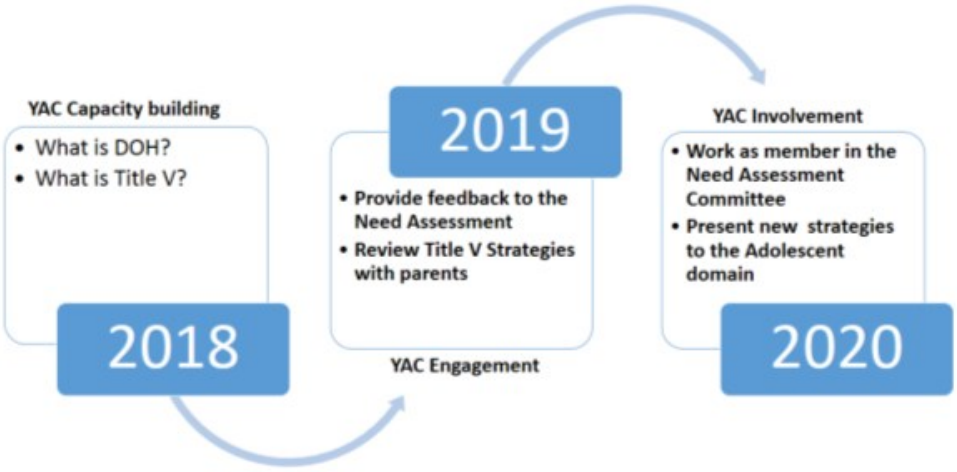
1. Empower youth through Positive Youth Development (PYD)

Youth Health Promoters Project (YHPP): On August 2018, YHPP continued in a total amount of 49 schools in 5 regions around the island. Each SISA RC implements YHPP in 10 schools in his or her DOH region. The reduced amount of YHPP groups is due to the fact that two SISA RCs ended their work in DOH, one to retirement and the other to pursue doctoral studies. A decrease in 2018's YHPs in some already established groups occurred due to a variety of reasons: some youth moved with their families out of PR after the hurricanes, others moved to different towns within PR, and students in schools closed by the DOE went to different schools and were not able to meet again in a group. Another issue that affected YHPP implementation happened when some SISA RCs were unable to get extra time or days to update the cycle of meetings for each YHPP group to complete the three years modules due to school's restrictions after the hurricanes.

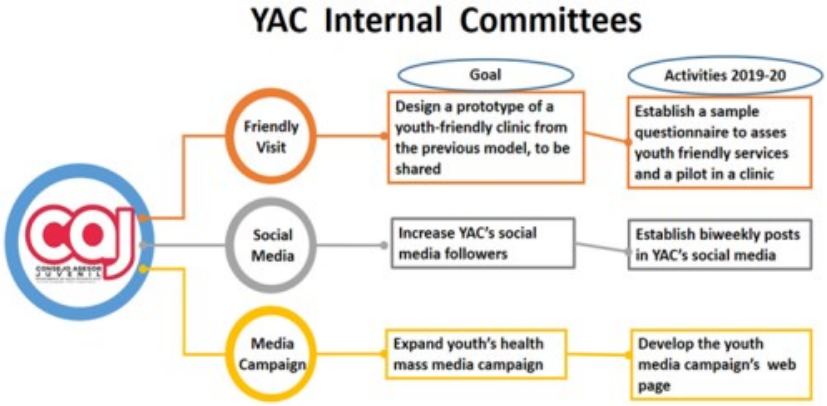
At the present time, PR is slowly recovering from the effects of the hurricanes and more than 30,000 homes still have blue tarps for roofs. During 2018-19 a group of MCAH professionals and YAC advisors have gathered to study *Hope after Hurricane (HAH)* implementation utilizing information collected from YHP's to better understand their experiences and help SISA develop additional strategies to work with youth after any natural disaster. The MCAH Anthropologist was included to provide the cultural and qualitative analysis viewpoint and the Psychologist Consultant to provide the emotional and mental health. Youth insights from more than 600 HAH handouts from different municipalities around the island included experiences, feelings, emotions, positive things and messages of hope, expressed in words or drawings. The following diagram shows 2018-2019 work and 2019-20 proposed process to complete the analysis:



Youth Advisory Council (YAC)*:* One YAC advisor participated as observer in PR 2018-2019 Title V Block Grant Review (BGR) held in NY since she was studying in a nearby college. This is the second occasion youth are present in PR BGR. She answered evaluator's questions about the effects of hurricanes on PR youth and those living abroad. During 2018-19, YAC evaluated MCAH needs assessment questionnaire, participated in Need Assessment Committee, and their public input was considered in 2019-20 Plan. YAC engagement will continue in 2019-20.



YAC 2018-20 started their cycle of monthly meetings after September 2018 YAC's transition meeting to continue providing youth voice and participate on health and wellbeing issues, evaluate initiatives, receive trainings, develop educational projects and represent youth locally and abroad. Nineteen new advisors 14 to 19 y/o and 6 YAC 2016-18 advisors made up the final 2018-2020 YAC which met on October 2018 for the first time. YAC new member's capacity needs were explored, dynamic activities were held to promote integration, and information about previous YAC's work was shared. They decided to continue working with the tasks started by 2016-18 YAC through three Committees:



On November 2018, AMCHP started the abstracts submission process for AMCHP 2019 Conference: "*Investments in MCH: Strengthening Families and the MCH Workforce*". YAC worked with SISA Central Staff to submit two abstracts that were accepted as workshops: *"Youth and Adults Working Together to Create the Youth Advisory Council"* and *"Promoting a Space to Think, Talk and Inspire Others: An Intervention for Youth to Move Forward after a Natural Disaster".* During following meetings they worked developing the ideas for the workshops and five (5) advisors were selected to represent YAC at AMCHP 2019. Advisors participated in the preparation calls previous to the event and they were asked to collaborate and participate in the Youth Track that Texas A&M University held during the Conference.

Some events in which YAC advisors were involved in 2018-19 were:

Youth Advisory Council YAC 2018-19 Summary				
1- Get to know other YAC members and establish a working group relationship	4- Continue to provide the Family Inclusion Workshop	7-Receive HLT and provide feedback	10- Participate in the MCAH Needs Assessment Committee	13- Give feedback to Title V 2018-19 Public Input
2-Understad their responsabilities as YAC members	5-Participate as speakers in 2 workshops AMCHP 2019	8-Provide feedback and strategies to the annual health media campaign	11- Participate in the American Academy of Pediatrics (AAP) Annual Meeting	14-Collaborate in the HIV testing Day
3- Identify personal needs to become a better YAC advisor and MCAH representative	6- Understand the Preventive Health Visit	9- Took workshops on How to Project Themselves as Advisors and How to Manage Social Media	12- Provide sections of the HLT to youth in summer camp	15- Participate in AMCHP's webinar "Youth in MCH Needs Assessment"

During a YAC meeting they evaluated and recommended strategies and activities for 2019-20 adolescent domain's Plan that included: 1. Increase visibility and reach of YHPP, 2. Engage and educate parents to support their youth healthy decisions, 3. Stratify and develop the media messages by youth age groups, 4. Expand the media campaign to reach more youth, 5. Continue promoting healthy lifestyles, the annual healthcare visit and the preventive guidelines through collaboration with other entities working with youth, 6. Better use of internet and social media to promote youth annual preventive healthcare visit guidelines, 7. Educate healthcare providers, including medical residents, about the youth preventive healthcare services guidelines, 8. Include youth friendly heath care services guidelines in CE workshops, 9. Create and put in action the transition to adult healthcare guideline, and 10. Develop attractive and youth friendly brochures.

2. Develop PR Youth Health Literacy Toolkit (HLT) to increase youth capacity to make informed and appropriate decisions relating to health care

In 2018-19 SISA RCs offered Year 2 YHPP Meetings #8 to #12 in schools available to continue the modified schedule programed after the hurricanes. Meetings were offered with the modifications agreed upon in June 2018 SISA Team meeting.

From a total amount of 13 schools that were in 2nd year YHPP, 9 groups were able to complete the meetings and supply the completed forms. A total amount of 85 pre and posttest surveys were collected from the 9 YHPP groups to measure ESM 10.2 *The percent of youths in schools and communities reached with the PR Youth Health Literacy Toolkit that increase their awareness regarding how to use the* healthcare *system (pre and post surveys).* MCAH evaluator used the gathered data to compare with previous 2017-17 and 2017-18 results and analyzed them in the report *"Awareness of Youth Health Promoters with respect to utilization of healthcare services system in 2018-19".* Evaluation results indicated that 84.7% of youth increased their awareness of healthcare utilization, a 42% increase from the increase registered in 2017-18 (59.3%) and a 41% increase from 2016-17 (59.9%). The highest increase was in Question #1 about doing your own health visit appointment from 13% to 80%. (67% increase). He mentioned in the report that it seems the intervention is helping youth to understand how to make their own appointments giving them the tools to increase their self-efficacy and capacity. All post survey results showed an increase in their awareness and five out of the seven questions had a statistically significant increase. More than 90% identified as important to have the annual visit even if they are not sick.

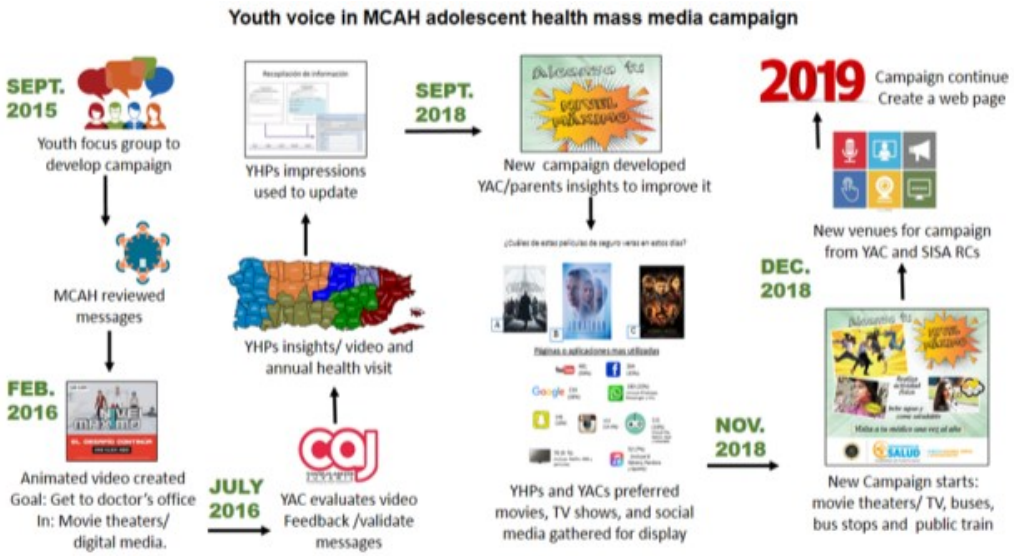
The evaluation report's results and recommendations were discussed with SISA Team on June 2019. The group agreed to continue implementing the past year modifications. The only change agreed to was in the posttest. Many youth expressed they were reluctant to write down so many open ended questions. It was decided to decrease the amount of open ended questions to three instead of five in the posttest survey. The change will not affect the overall evaluation and it is expected more youth will complete them.

During 2018-2019, a compilation of YHPP HLT meetings was done and organized in a workshop to offer to other students not YHPs. Three SISA RCs offered to pilot it with some youth groups in summer camps on June and July 2019. The results will be used to determine its effectiveness and possible modifications.

3. Increase awareness Annual Preventive Health Care Visit importance:

Multimedia campaign: In August 2018 the Advertising Agency (AA) presented MCAH the new format for the adolescent annual health visit and healthy lifestyles promotion campaign. The information gathered in the report "Compilation of YHPs Opinions about Annual Preventive Visit" was used in the meetings with the AA. The draft video they designed was shown to youth and parents during the YAC transition meeting. Their commentaries and suggestions were gathered and shared with the AA to make changes. "Alcanza tu Nivel Máximo" final video, posters and other social media messages associated with it were approved and its airing and display began on November 2018. Information from YHPs and YACs about preferred TV shows, cinema and internet /social media was used and shared with AA to determine the places to show the video and posters. During 2019-20 the AA will continue to work with MCAH Education Advisor and YAC representatives and SISA staff to develop the web page companion to the video and posters campaign. The Webpage Plan includes to utilize social media starting with an Instagram page and monitor their followers as they post health promotion information.

Youth ideas and opinions have been present in the development of the mass media campaign as seen in the following flowchart:



Educational activities directed to youths and adults about adolescent health and wellbeing will continue in schools and communities through SISA RCs, and HE in each DOH Region and YHPs with their peers, school personnel and parents.

Immunizations and adolescent health and wellbeing collaborations with DOH immunization Office and VOICES, a

non for profit organization that promotes child and adolescent immunizations will also continue during 2019-20

Mental health and the annual health visit: MCAH and ASSMCA's personnel met in 2018-19 to update the knowledge of each agency's initiatives in the service to mothers, infants, children, adolescents and their families. Several points of convergence and support were identified. Electronic communication will continue to determine MOU statements of collaboration in regards to data sharing, initiatives and referral and communication of initiatives. Some identified were: ASSMCA's Opioids Assessment and Prevention Grant, home visiting program, youth initiatives, and mental health clinics and services. During 2019-2020 a MOU draft will be discussed and send to legal advisors evaluation before the final one is signed. SISA Associate Director will continue her participation in ASSMCA's Prevention Advisory Council (PAC) of the Strategic Prevention Framework Project: Partnership for Success.

Childbearing and parenting during adolescence: Efforts to educate teens on sexual and reproductive health will continue during 2019-20 through YHPP's, YAC and MCAH Division's Programs and Projects.

During 2018-19, the Personal Responsibility Program (PREP) continued using EBP *¡Cuídate!* to an amplified age range from 12 to 16 y/o, *¡Cuídalos!* to parents/guardians in schools and communities, and also the scope of implementation was increased to 6 municipalities, adding Loíza. *"El Código" (Lifecode*) stage play was recorded with English and Spanish captions to be used to discuss youth sexuality responsible decisions locally and abroad.

AE continued using AIM and Parenting Fundamentals until September 2018 when the AEGP finished and was substituted by Sexual Risk Avoidance Education Program (SRAE) Grant that began in October 2018. EBP *Relationship Smarts Plus 4.0* was selected to be used to help teens make healthy relationships, dating, and sexual decisions for themselves focusing on their future. The age range was increased from 11 to 15 y/o and will be implemented through two CBO's in twelve (12) municipalities.

Secondary TPP MCAH efforts to increase youth information about sexual and reproductive health and responsibilities will continue through HVP and MCHIEV (Familias Saludables de PR) to reduce secondary teen pregnancies and increase health and wellbeing of mothers, babies and families.

During 2018-19 Youth Risk Behavioral Surveillance Survey (YRBSS) data from 2015 and 2017 in Puerto Rico was analyzed. 2015 PR YRSS was the first year to include a question about sexual identity that allows to recognize LGBTTQ opinions in regards to all questions of the survey. The 2017 PR YRBSS was done in the months of February and March 2017, before the hurricanes. The 2019 PR YRBSS was performed in February to March 2019. Both surveys will provide important information in regards to youth before and after the hurricane's events including LGBTTQ youth.

4. Develop PR Youth Friendly Healthcare Services Guidelines

During 2018-19 SISA RCs continued to provide YHPP's Year 2 Meetings #8 to #12 with the activities in which youths: 1. Identify reasons why youth go and do not go to the health care provider; 2. Learn what to do before, during and after a healthcare visit; 3. Work with their parents at home to learn what type of insurance plan they have and how to use the card; 4. Design a youth friendly health care office and identify the ideal characteristics of its personnel; and 5.Talk about the campaign to promote annual healthcare visit and healthy lifestyles. YHP and YAC ideas collected in the process of doing these activities were added to previous ones and considered in the development of the Guide.

YAC 2018-2020 constituted a Committee to continue previous YAC's work towards youth friendly healthcare services. They will be designing a prototype of a youth friendly healthcare clinic and will suggest a sample questionnaire for youth to assess a clinic's friendly service to pilot it in an interested healthcare services clinic. During 2019-20 communications will be reestablished with a FQHC Clinic to assess their interest and availability to collaborate in the development and pilot of the Guide.

5. Create the PR Youth Guide for transitioning to adult health care services

All adolescents need guidance and support in their transition to adult health care services. Youth need to be empowered with the skills and information they need to advocate for quality health care services as they move towards adulthood. MCAH Is addressing annual health visit and youth friendly healthcare services before developing this Transitioning Guide. Meanwhile, communication with YSHCN personnel will continue as they work their Transitioning Guide for YSHCN.

Children with Special Health Care Needs

Linked National Outcome Measures

National Outcome Measures	Data Source	Indicator	Linked NPM
NOM 17.2 - Percent of children with special health care needs (CSHCN), ages 0 through 17, who receive care in a well-functioning system	NSCH	Data Not Available or Not Reportable	NPM 11 NPM 12
NOM 18 - Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling	NSCH	Data Not Available or Not Reportable	NPM 11
NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health	NSCH	Data Not Available or Not Reportable	NPM 11
NOM 25 - Percent of children, ages 0 through 17, who were not able to obtain needed health care in the last year	NSCH	Data Not Available or Not Reportable	NPM 11

National Performance Measures

NPM 11 - Percent of children with and without special health care needs, ages 0 through 17, who have a medical home
Indicators and Annual Objectives

NPM 11 - Children with Special Health Care Needs

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			31.6
Annual Indicator	30.8	30.8	30.8
Numerator	46,505	46,505	46,505
Denominator	150,935	150,935	150,935
Data Source	PR-CSHCN Survey	PR-CSHCN Survey	PR-CSHCN Survey
Data Source Year	2015	2015	2015
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	32.4	33.2	33.9	34.6	35.3	36.0

Evidence-Based or –Informed Strategy Measures

ESM 11.6 - Percent of CSHCNP families that report they receive the information they need.

Measure Status:					Active	
Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	90.0	92.0	93.0	94.0	95.0	95.0

ESM 11.7 - Percent of families that report they feel more confident managing child's condition thanks to the information and support received at the CSHCNP.

Measure Status:					Active	
Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	94.5	95.0	95.5	96.0	96.5	96.5

NPM 12 - Percent of adolescents with and without special health care needs, ages 12 through 17, who received services necessary to make transitions to adult health care
Indicators and Annual Objectives

NPM 12 - Children with Special Health Care Needs

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			25.3
Annual Indicator	24.7	24.7	24.7
Numerator	16,226	16,226	16,226
Denominator	65,560	65,560	65,560
Data Source	PR-CSHCN Survey	PR-CSHCN Survey	PR-CSHCN Survey
Data Source Year	2015	2015	2015
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	26.0	26.6	27.2	27.8	28.4	28.8

Evidence-Based or –Informed Strategy Measures

ESM 12.7 - Percent of CSHCNP families with YSHCN who were successfully contacted to notify them about the importance of transition to an adult health care provider.

Measure Status:					Active	
Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	8.0	10.0	12.0	15.0	20.0	22.0

ESM 12.8 - Percent of YSHCN at the CSHCNP who are given the Transition Readiness Assessment.

Measure Status:					Active	
Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	27.5	27.7	28.0	28.2	28.5	28.7

State Performance Measures

SPM 3 - Percentage of children with ASD that are diagnosed at age 3 years or earlier.

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		0	15.3
Annual Indicator	79.1	15.3	15.3
Numerator	382	3,610	3,610
Denominator	483	23,581	23,581
Data Source	Autism Registry	PRHIA	PRHIA
Data Source Year	2016	2017	2017
Provisional or Final ?	Provisional	Provisional	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	16.0	16.6	17.2	17.8	18.4	19.1

SPM 4 - Prevalence at birth of neural tube defects.

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		9.2	8.4
Annual Indicator	9.2	8.5	5.3
Numerator	26	24	13
Denominator	28,326	28,339	24,310
Data Source	PR- Birth Defects Surveillance System	PR- Birth Defects Surveillance System	PR- Birth Defects Surveillance System
Data Source Year	2016	2016	2017
Provisional or Final ?	Provisional	Provisional	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	6.4	6.3	6.3	6.2	6.2	6.1

SPM 6 - Percent of EHR and tele-health system implementation phases completed.

Measure Status:	Active

State Provided Data		
	2017	2018
Annual Objective	36.2	33.3
Annual Indicator	33.3	46.7
Numerator	5	7
Denominator	15	15
Data Source	CSHCNP data	EHR system implementation work team
Data Source Year	2017	2018
Provisional or Final ?	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	60.0	77.7	90.0	100.0	100.0	100.0

State Action Plan Table

State Action Plan Table (Puerto Rico) - Children with Special Health Care Needs - Entry 1

Priority Need

Increase the number of CSHCN who receive regular ongoing comprehensive health care within a medical home

NPM

NPM 11 - Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Objectives

1. By 2020 increase by 10% CYSHCN ages 0-18 who receives coordinated, ongoing, comprehensive health within a medical home.

Strategies

1. QIC will complete a Medical Home Work Plan focused on improving communication with PCPs, increase quality service coordination at the CSHCNP and improve families' compliance to clinical appointments.

2. Implement activities to enhance family-professional partnerships.

3. Support and train FESAs so they develop their skills and capacities towards leadership and empowerment, impacting families served.

4. Continue outreach to health professionals in the community to increase awareness of the medical home elements.

5. Continue meeting with Medicaid (ASES in PR) to operationalize partnerships.

6. ZAPSS data managers will continue with the weekly queries to identify families that move from PR, as well as families that return to PR, to safeguard the continuum of tracking, monitoring and health care services for families with infants/children born to mothers with laboratory evidence of possible Zika virus infection during pregnancy.

ESMs	Status
ESM 11.1 - Percentage of CSHCN Program staff that attend the medical home meetings to be held.	Inactive
ESM 11.2 - Workshop on medical home components coordination services and family centered care services developed.	Inactive
ESM 11.3 - Percentage of CSHCN Program staff that attend the medical home service coordination and family centered care workshop.	Inactive
ESM 11.4 - Evidence based Services Coordination Protocol Guide created.	Inactive
ESM 11.5 - Services coordination and family centered care indicators developed and implemented at the CSHCN Program to measure progress.	Inactive
ESM 11.6 - Percent of CSHCNP families that report they receive the information they need.	Active
ESM 11.7 - Percent of families that report they feel more confident managing child's condition thanks to the information and support received at the CSHCNP.	Active

NOMs
NOM 17.2 - Percent of children with special health care needs (CSHCN), ages 0 through 17, who receive care in a well-functioning system
NOM 18 - Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling
NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health
NOM 25 - Percent of children, ages 0 through 17, who were not able to obtain needed health care in the last year

State Action Plan Table (Puerto Rico) - Children with Special Health Care Needs - Entry 2

Priority Need

Increase the number of CSHCN aged 12 to 17 years who receive adequate support and services for their transition to adult health care

NPM

NPM 12 - Percent of adolescents with and without special health care needs, ages 12 through 17, who received services necessary to make transitions to adult health care

Objectives

1. By 2020 increase by 10% the number of YSHCN who have a transition readiness assessment and comprehensive plan of care beginning at age 14.

Strategies

1. Create mechanisms within the CSHCNP at the RPCs to better identify and monitor YSHCN 14 years of age or more at the CSHCNP.

2. Improve Got Transition six cores implementation strategies based on the results of the Health Care Transition Process Measurement Tool.

3. The Transition to Adult Health Care Sub-Committee will continue to meet to complete Work Plan to address YSHCN information needs and provide health professionals with tools to support their YSHCN and families that are in the transitioning process.

4. Continue efforts to develop partnerships and collaborations with local organizations and programs on transition to adulthood.

ESMs	Status
ESM 12.1 - Percentage of CSHCN Program staff that participate at transition to adulthood meetings to be held.	Inactive
ESM 12.2 - Workshop on transition to adulthood starting at age 14 developed	Inactive
ESM 12.3 - Percentage of CSHCN Program staff who participate of the transition to adulthood life workshop	Inactive
ESM 12.4 - Evidence based Protocol Guide created for Transition to Adulthood Services starting at age 14.	Inactive
ESM 12.5 - Number of Transition to Adulthood community based organization identified to enhance networking development.	Inactive
ESM 12.6 - Transition to adulthood indicators developed and implemented at the CSHCN Program to measure progress	Inactive
ESM 12.7 - Percent of CSHCNP families with YSHCN who were successfully contacted to notify them about the importance of transition to an adult health care provider.	Active
ESM 12.8 - Percent of YSHCN at the CSHCNP who are given the Transition Readiness Assessment.	Active

NOMs
NOM 17.2 - Percent of children with special health care needs (CSHCN), ages 0 through 17, who receive care in a well-functioning system

State Action Plan Table (Puerto Rico) - Children with Special Health Care Needs - Entry 3

Priority Need

Decrease the age when children at risk for Autism Spectrum Disorders (ASD) receive their first diagnostic evaluation

SPM

SPM 3 - Percentage of children with ASD that are diagnosed at age 3 years or earlier.

Objectives

1. By 2020 increase by 10% the proportion of children with ASD diagnosed at age 3 or earlier.

Strategies

1. Disseminate the “Protocolos Uniformes para el Diagnóstico del Trastorno del Espectro del Autismo” through conferences, electronic messages and press. This is the uniformed protocol for ASD diagnosis.
2. Distribute “Pasaporte a la Salud” at the Demographic Registry to parents of newborns. This is a booklet for parents to document their child’s health information and monitor health services and development.
3. Provide information about early signs of ASD in the DOH’s web page and APNI’s web page.
4. Continue participating in professional activities to orient professionals.
5. Distribute educational materials in centers that serve families with infants and toddlers (pediatricians, PCPs, child care centers, Department of Education).
6. Distribute educational materials among health providers and promote ASD screening at 18 and 24 months of age, as mandated in PR-EDSPT.
7. Promote the use of the ASD Registry among health providers and the importance of registering patients with positive ASD diagnosis.
8. Update ASD Registry database.
9. Promote the use of the “Screening Certification Form” among pediatricians, PCPs and other health care providers.

State Action Plan Table (Puerto Rico) - Children with Special Health Care Needs - Entry 4

Priority Need

Reduce the prevalence at birth of neural tube defects

SPM

SPM 4 - Prevalence at birth of neural tube defects.

Objectives

1. By 2020 reduce prevalence at birth of neural tube defects.

Strategies

1. Partner with HRSA-funded FQHCs to continue education to health professionals about the importance of promoting the folic acid consumption and other birth defects preventive strategies among their patients.

2. Partnerships with schools, colleges and universities will continue for outreach to young population and women in reproductive age to increase awareness about folic acid consumption.

3. Continue community reach-out on folic acid consumption through health fairs, and other educational activity identified.

4. Monitor families affected by neural tube defects births and link families with the services they need.

State Action Plan Table (Puerto Rico) - Children with Special Health Care Needs - Entry 5

Priority Need

Implementation of health information technology (EHR and tele-health) to increase access to necessary health services, ensure consistent tracking and monitoring of CSHCN and improve CSHCN Program data

SPM

SPM 6 - Percent of EHR and tele-health system implementation phases completed.

Objectives

1. By 2020 have achieved at least 77.7% of the implementation phases of the EHR system.

Strategies

1. Prepare measures for the implementation of the EHR system.

1a. Create a platform of control for revisions of patient files.

1b. Create a platform of observations of clinical and medical processes.

2. Pilot the project.

3. Integrate Tele-health.

4. Train staff

5. Assure system interoperability.

Increase the number of CSHCN who receive regular ongoing comprehensive health care within a medical home (NPM 11)

The medical home model is promoted by the AAP as primary care with the goal of addressing and integrating high quality health promotion, and acute care and chronic condition management in a planned, coordinated, and family-centered manner. The CSHCNP contributes to the medical home neighborhood by communicating and connecting with primary health–clinics, identifying CSHCN and family needs, and providing service coordination and support. The CSHCNP continues to implement activities to impact the public health system in areas like access to care, health care services integration, family-centered care, and quality of care. Following is a description of activities and strategies for the medical home priority, based on MCH essential services.

Providing access to care

Navigating the health care system can be difficult, especially for families whose child has recently been diagnosed with a chronic condition. Adequate care coordination can result in enhanced families' interactions with the health care system. Service coordination is a continuous activity at both the central and regional levels of the CSMND and CSHCNP. At the central level, the PR-BDSPS Service Coordinator refers families to the CSHCNP, Part C Early Intervention system, and care providers such as the Spina Bifida and Hydrocephaly Association, the Down Syndrome Association, the Technology Dependent Children Program, and the Jarcho Levin Team. PR-BDSPD nurse abstractors also refer cases as necessary. The PR-HDDDTP Service Coordinator gives support to the PR-Neonatal Screening Program (PR-NSP) coordinating confirmed cases of core RUST. She also refers cases diagnosed with genetic conditions to the Medical Genetic Clinic at the University Pediatric Hospital, Medical Center. At the regional level, Title V Service Coordinators continually offer care coordination services to families with CYSHCN.

A Registry for Technology Dependent Children was created in 2017 as a response to Hurricanes Irma and Maria. At the moment, a total of 170 families have been identified and registered. A Service Coordinator was recruited to give follow-up to this population. He takes care of identifying families' needs, link them to needed services, and has offered support to develop individualized emergency response plan for each family.

In January 2017, the Zika Health Care Services Program (ZHCSP) funds were awarded to the PR Health Department by CMS to support the Department's efforts to provide and expand health care services to all pregnant women and of childbearing age, infants, and men adversely or potentially impacted by the Zika Virus infection. All strategies and outcomes are aligned within four components: 1) increasing access to contraceptive services for women and men, 2) reducing barriers to diagnostic testing, screening and counseling for pregnant women and newborns, 3) increasing access to appropriate specialized healthcare services for pregnant women, children born to mothers with maternal Zika virus infection, and their families, and 4) improving provider capacity and capability. The CMS-ZHCSP was transferred to the CSMND in April 2018, under the leadership of the Title V-CSHCNP. Under this Program, a contract with the UPR Medical Sciences was signed in July 2018 to conduct 4 to 6 monthly clinics at the Metropolitan RPC for each of the following disciplines: general pediatrics, pediatric infectious diseases and pediatric neurology. This contract was recently amended to conduct up to 8 clinics, adding the Ponce and Mayaguez RPC for pediatric neurology and pediatric infectious diseases. The amendment is effective from July 1, 2019. A Service Coordinator was recruited to give follow-up to clinics' appointments.

Since June 2017, ZAPSS Data Managers run weekly queries to identify families that have moved out of PR. When families move to another USA jurisdiction, ZAPSS staff contacts the jurisdiction's epidemiologist to report the case and the woman and infant's laboratory test results. ZAPSS staff also notifies the Zika MCHB Services Program Lead Service Coordinator so that they can tract the family and help them connect with services at their new location. The Lead Service Coordinator also notifies the ZAPSS Coordinator of families that have moved to ensure the ZAPSS database is updated. In the event that a family decides to return to PR, the Lead Service Coordinator and/or the

referring jurisdiction's epidemiologist will notify the ZAPSS Coordinator. As of May 2019, 413 families that moved out of PR, and 84 who returned to PR were identified. As part of the activities of a new project, the ZAPPS' Social Worker is communicating with all families that relocated after Hurricane Maria to corroborate their current residence, if they are still off the island, if they plan to return, and if a pediatrician served the infant while they were in PR. This project began in April 2019.

Quality Improvement

Quality of care is an essential component of the medical home model. Well-planned protocols and processes are necessary to continually enhance quality of care. On June 1, 2018, thirteen (13) CSHCNP pediatricians and State level staff met with the CSMND Director to discuss how to improve protocol processes and forms at the RPCs for CSHCN and for infants/children born to possible Zika positive pregnancies. The ASD protocols were also discussed.

Clinical appointment non-compliance is a common cause of failed medical action. The CSHCNP assessment on family compliance with clinical appointments during July to September of 2016 revealed a range from 27% to 45% of absenteeism and a Program's general rate of 33.25%. Services assessed were pediatrics, nutrition, audiology, psychology, social work, physical therapy, occupational therapy, and speech and language pathology. Visits to the pediatrician resulted in the highest rate of absenteeism (45%) followed by nutrition and physical therapy (37% and 33%, respectively). During 2017, an appointment reminder system was implemented at the RPCs in an effort to reduce family absenteeism rates. Service coordinators and social workers, as well as health professionals (physical and occupational therapists, speech pathologists, psychologists and nutritionists) are revising their family appointment agenda and giving a reminder call 48-72 hours previous to the appointment. Natural year 2017 resulted in a 2% reduction of absenteeism rates (31.15%). Natural year 2018 had an increase of 1% (32.08%). Visits to pediatricians continues to be one of the highest (42.5%). Currently, each RPC is developing a format to collect data on reasons why families may be absent. This is a developing activity to better understand families' barriers to comply with appointments. This activity will continue during the coming year.

One of the accomplishments of the Quality Improvement Committee (QIC) was the creation of RPCs work teams composed of health care providers representing some or all of the RCPs and who have been meeting during the year. These meetings encourage dialogue among health professionals and colleagues, and help increase quality and integration of services within RCPs. Work teams which met during the last fiscal year are composed of physical and occupational therapists, speech pathologists, social workers, psychologists and RPCs administrators. They have developed a Procedures Manual for each of the disciplines that includes pertinent objectives and operational processes, flowcharts and formats. Six meetings were carried out between February 7 and April 6, 2018. The State level is supporting and facilitating these meetings. This activity will be continued during the application year.

The QIC continues to meet at least quarterly to discuss the updates of the QI Work Plan and share experiences within RPCs. Completed QI Work Plan activities are: the development and implementation of Clinical Procedures Manuals per health discipline, a Service Coordination Manual, a Procedures Manual on Information to Families and a Transition to Adult Health Care Manual. Activities that are continuous are: maintain a clinical appointment reminder system, inform and empower families, and give follow-up to the processes to implement the EHR and Tele-Health systems. The QIC also achieved the completion of an Administration Procedures Manual for the CSMND. The Manual includes the Operational Plan for Emergency Management which was developed by the Readiness and Coordination Office for Public Health Response, PR-Department of Health. The QIC is composed of RPCs medical directors and administrators, key service coordinators and social workers, the CSHCNP Family Representative and two families. The QI Work Plan continues its focus on the five State priorities for CSHCN and their families.

Partnerships and collaborations

To enhance the medical home, the National Academy for State Health Policy (NASHP) promotes the collaboration

between key agencies like Medicaid, Title V, Early Intervention and the Department of Education. The CSHCNP understands the importance of developing collaborations with the PR- Health Insurance Administration (PRHIA). The PRHIA was created under Act #72, on September 7, 1993 to negotiate and contract health insurances to serve GHP eligible citizens. It also has the responsibility to monitor and evaluate the services offered by the insurance companies in order to ensure compliance, quality and cost effectiveness. Two meetings have been carried out with the PRHIA's Specialist in Clinical Issues to identify opportunity areas for the enhancement of medical home. As of April 10, 2019, topics discussed are the enhancement of data sharing, and the identification of strategies for a better understanding of care coordination and case management for the CSHCN population. The PRHIA has also expressed interest in incrementing their staff's knowledge on Title V. This is a cutting edge activity and meetings will continue during the application year. Other agreements underway are directed to: include all the participants of the Autism Special Coverage in the PRDOH Autism Registry, include children diagnosed with hearing loss under the GIP special coverage, and add counseling psychology as a discipline qualified to diagnose ASD.

Partnering with other programs and agencies continues as a key activity to strengthen programs' capacity, enhance integration, and support the delivery of comprehensive, coordinated health care for CSHCN and their families. Collaboration with the PR-FQHCs continues for health care coordination for infants born to mothers with laboratory evidence of possible Zika virus infection during pregnancy. This is done through the dissemination of available services, guidance to families, training of professionals and families, and referrals of cases to RPCs. The Division shared a digital version of the Passport to Health with the PR Association of Primary Health to be printed and distributed among their 75 Centers throughout PR. One of the PR-UNHSP's key collaborator is the San Gabriel School for the Deaf, which provides support to families, assuring timely and appropriate early intervention services. The Demographic Registry Office collaborates with the Program by sharing newborns' demographic information that helps reduce the lost to follow-up. Collaboration with the PR Academy of Audiology helps promote the PR-UNHSP among audiologists and increase awareness about the importance of documenting and communicating the diagnostic evaluation results to assure the appropriate early detection and intervention. Another collaborative agreement was developed between the CSHCNP and APNI. Through this agreement, APNI collaborates with the developmental monitoring and health services promotion to families of infants and children born to mothers with laboratory evidence of possible infection by the Zika virus during pregnancy, by means of the disclosure of available services, orientation to families, training of professionals and families, and referrals of cases to the RPCs.

Family Participation

Thirteen (13) Family Engagement and Support Advocates (FESAs) were contracted thanks to the MCH Zika Services Program funds with the main purpose of enhancing family engagement, informing families, supporting parents navigating the health system, and participating in the CSHCN Program quality improvement activities. All FESAs are either a mother of a CSHCN or had a lab result of possible Zika infection during pregnancy. This is the first experience in the CSHCNP at the RPCs to work with families as part of their staff. Most FESAs started working in September, 2017. In addition to their roles, they have integrated other activities such as coordinating educational and social activities for families, and helping with siblings while families talk to health professionals. During last fiscal year, they developed or supported a total of 13 activities with topics as bullying prevention, suicide prevention, family empowerment, respite and friendship. Currently, the CSMND Specialist in Health Education is training them to improve their logistics when developing these kind of activities. FESAs have resulted to be a great support to CSHCNP staff, and health care providers are referring to them the families identified in need of support. On June 23, 2018, the FESAs participated as presenters in the conference, "Arboviral Diseases Diagnosis and Clinical Management, after the 2016 Zika Epidemic, 2018 Update" to share their knowledge and experiences. The scientific component of the activity was organized by the CSMND. The plan for the application year is to continue including this staff as subject experts in the CSMND sponsored educational activities.

Workforce capacity development

Professional, qualified and multidisciplinary workforce is vital for an effective public health system. Ensuring such a

workforce requires constant training and education. The CSMND's goal is to maintain a well-trained and prepared staff, but also, to reach out to health professionals outside the Division. This has been done participating in external activities such as symposiums and professional annual conferences.

A workshop about medical home was held on April 26, 2018 for all CSMND service coordinators and FESAs at the American University in Bayamón. Main purpose was to increase their awareness about the medical home model. Service Coordinators and FESAs meet monthly to discuss protocol processes, receive trainings, share family support activities and discuss cases. Workshops on medical home elements will continue to be carried out as necessary.

Family-professional partnerships are a key element in promoting the health and well-being of children. These partnerships enhance communication between professionals and the family, improve information sharing and increase the effectiveness of shared decision-making. However, many health professionals still work under an outdated paradigm. To address this, a Family Inclusion Committee was created with the purpose of increasing family participation and family-professional partnerships within the Title V staff throughout the Island. The main strategy was to educate Title V regional staff on the importance of family participation, because this staff works directly with families. The Committee was composed of two MCHD Social Workers, the MCHD Cultural Anthropologist, the CSHCNP Evaluation Specialist, the CSHCNP Family Representative, and two community family representatives. The team agreed on a Family Inclusion Work Plan that included a workshop about family-professional partnership developed by the MCHD Cultural Anthropologist. The workshop promotes the perspective of families as allies, not simply as beneficiaries. Family inclusion workshops were carried out at each health region, for a total of seven workshops. With the title, "Inclusion of Families in Title V", the workshop consisted of four (4) sections: 1- workshop's objectives and Title V refresher, 2- families as valuable resources of the public health system, 3- understanding the different approaches of health care providers towards families, and 4- a think tank on family participation opportunities at each professional's work environment. A team composed of the Family Inclusion Committee members, MCH Youth Advisory Council members, and four CSHCNP FESAs carried out the presentations. During 2018, the workshops were provided on: February 21 and 28; March 7, 14, 21, and 28; and April 11. Two hundred seventy six (276) staff attended the workshop.

A workshop on best approaches to CSHCN families was carried out on February 16, 2018 to CSHCNP health professional staff. FESAs participated by sharing their experiences as CSHCN mothers and by performing a role-play. Forty three (43) health professionals and service coordinators attended this workshop.

The ZAPSS Pediatric Consultant and the CSMND Health Educator carried out a third round of educational visits to birthing hospitals. Information shared was related to the Zika administrative order (#388), birth defects possibly associated with Congenital Zika Infection in infants born to a mother with possible Zika virus infection during pregnancy, correct measurement of head circumference, pulse oximetry, and the distribution of the Intergrowth-21st Guide. From August through September 2018, fourteen (14) birthing hospitals and two RPCs were visited, reaching one hundred thirteen (113) health care professionals, primarily nurses. This activity continues during the present year.

Other educational activities are summarized in the table below. These activities were carried out by Title V Central Level staff. Educational activities carried out by Title V CSHCNP regional staff are not included in the table.

Educational activities by CSMND Central Staff for the Annual Report Period

Type of activity	Purpose	Time period	Site	Participants
Orientation and printed educational material	Inform about Title V, CSMND programs and	Jan. 10 – Feb. 21, 2018	34 hospitals	224
Presentations	Service coordinators and FESAs capacity development	Jan. 25 to Feb. 8, 2018	Bayamon PC Metro PC Ponce PC	33 service coordinators and FESAs
	Inform about UNHSP and PCANU	Jan. 25, Feb. 8 April 23, May 16, May 29, 2018	2 FQHC, WIC conference room in Minilla, one pediatrician's practice, one CDT	36 health professionals (16 pediatricians)
Symposiums	Table at the 66th Annual Congress Excellence Pediatrics	Feb. 16-18, 2018	Convention Center, Miramar Intercontinental Hotel	226
	Table at the 3rd Neonatal Hearing Screening Symposium	March 3, 2018	Complejo Ferial de Puerto Rico, Ponce	27
	Table at the 30th Annual Conference of Department of Education	March 14, 2018	Convention Center Verdanza Hotel	70
	Table at the 2018 ZIKA UPDATE	June 23 and 24, 2018		110
	Table at the 2018 PR NBS Timeliness Symposium	June 29, 2018		51
Conferences	Present the "*Pasaporte a la Salud*" for families with children.	May 11 to June 15, 2018	6 WIC region sites visited; one for Arboviral Program staff	253
	Present the PR-BDSPS	June 19 to August 15, 2018	4 CPs (Arecibo, Caguas, Mayagüez, Fajardo) and Metropolitan University	75 health professionals 32 students
Trainings	Present proper measurement of newborn length and head circumference	August 16 to September 17, 2018	13 birthing hospitals and 2 RPCs	113
				Total: 1,250

Strengthening access to care: educating and informing families

The CSHCNP has a history of collaborative agreements with the PR-Parent Information and Training Center (APNI). APNI is a non-profit organization that has served families for over 30 years. Its staff is comprised of families with CSHCN. At the moment, APNI is working in collaboration with the CSHCNP under the HRSA project: "Optimizing family support to families of children with or at-risk of congenital Zika Virus infection". The main purpose is to reach-out to families and educate them on prevention and protocols for the health follow-up of this population. On September 27, 2018, a workshop on the medical home model and on how to navigate the health care system was provided for families. The workshop included information on how to develop a collaborative relationship with their

child's primary care provider, how to participate in decision making related to their child's health, and how to navigate the health care system to obtain the services their child needs. This activity was carried out in the PR Autism Center for six families. Currently, this activity is being carried out for other sites on the Island. Workshops about other topics are also being offered to families through this collaborative agreement.

There is evidence about the need of CYSHCN families to access information on a variety of topics such as how children grow and develop, child's condition, supporting child's learning and development, managing child's behavior, services available for the child in the present and in the future, and transition to adult life. To address this need, QIC members created a Procedures Manual to Inform Families. From February 26 to May 1, 2018, a total of eight meetings were held with staff at the seven RPCs and the two Autism Centers to discuss the Manual. In addition to informing families, the protocol address the promotion of services that are available at the seven RPCs and the two Autism Centers. Currently, a needs assessment is being carried out among CSHCNP families to identify specific information needs with the purpose of coordinating educational activities and discussions with families. The list of possible topics includes matters of interest for youth with special health care needs and their families.

The CSMND has developed multiple written material for families to be distributed at health fairs and other community activities. This is a strategy of health promotion and education to the general public that can result in the improvement of the health status of families and communities, including families with CSHCN. Families' knowledge about existing services and supports at the community level also leads to an increase in access to care. The CSMND Health Educator is a key collaborator in the coordination of educational activities and in identifying community activities and fairs where Title V staff may have the opportunity to participate.

Last year, the Division participated in eight community health fairs and two workshops for the general public where at least 650 people participated. The workshop "*La importancia de los beneficios de la vitamina ácido fólico*" (The Importance of the Benefits of the Folic Acid Vitamin), was given on July 10 and 11, 2018 at Plaza Las Americas, the largest shopping center in the Caribbean. Seven (7) health fairs where Title V central staff shared a table with written material were in Fajardo, Adjuntas, Hato Rey, Santurce and Isla Verde from April to September, 2018. The CSHCNP at Fajardo led the community health fair, "Feria de Salud y Divulgación de Servicios: Autismo", on April 20, 2018 with the collaboration of the Fajardo Municipality. This activity was carried out at the Plaza in the Center of the town. Fifteen (15) public and community entities and programs participated, some of which were: Fajardo WIC Program, Fajardo Launch Project, Puerto Rican Epilepsy Association, Department of Health Community Reach Out, and the Department of the Family.

Below is a table of some of the educational material distributed at community activities during last fiscal year. It is estimated that more than 40,000 brochures and written material have been distributed to CSHCN families and the general public during the last fiscal year.

Written educational material

Document Title	Description
FASES - Facilitando Acceso a Servicios Especializados de Salud	Brochure describing the CSHCN Program.
Transición a la vida adulta en el cuidado médico de jóvenes con necesidades médicas especiales	Brochure with information on the transition process to adult health care.
Como prevenir los defectos de nacimientos	Brochure with information on the prevention of birth defects.
Beneficios Potenciales de la Vitamina Ácido Fólico	Brochure with information on the benefits of folic acid consumption.
Oximetría de pulso	Brochure for families on neonatal pulse oximetry
Diez cosas que necesitas saber acerca de los defectos de nacimiento	Brochure that presents 10 facts about birth defects and their prevention.
La audición de mi bebé	Brochure with information for families whose baby had a positive neonatal hearing screening.
Mamá y papa	Brochure for parents with information about the importance of hearing screening and evaluation.
Pasaporte a la Salud	Booklet for parents to document their child's health information and monitor health services and development.
Centro de Autismo de PR	Brochure describing the Puerto Rico Autism Center.
Vigilancia del Desarrollo y Coordinación de Servicios.	Brochure describing the developmental surveillance system for infants and children born to mothers with possible Zika infection during pregnancy.

Evaluation

Family-centered care and continuous quality improvement is also about listening to family voices. Families have always participated in the CSHCNP needs assessments and surveys. However, strategies are being developed so that families may have continuous access to express their satisfaction, and provide inputs, concerns and recommendations about the Program. A Family Survey was implemented at the CSHCNP to collect information on: 1) CSHCNP family centered care, 2) access to CSHCNP services and 3) family satisfaction. The survey was distributed at the RCPs from February to August 2018. As of August 23, 2018, a total of 489 families had participated in the CSHCNP Family Survey, of which 255 were families with CSHCN. Of the 255 families, more than

90% of families reported they are receiving information regarding health services for their child, and how to access services, including pediatric specialists at the CSHCNP RPCs. Regarding community support, and health insurance or other financial support, a smaller percent of families, 76.5% and 78.4% respectively, reported they are provided the needed information. Close to eighty percent of families (87.6%) reported easily or very easily obtaining information and support from CSHCNP staff, 88.1% reported being satisfied or very satisfied with the support received, and 94% agreed that they feel more skilled and confident to manage their child's condition after the CSHCNP intervention. Ninety six percent (96%) agreed that Program staff make them feel as part of the team and decision making, 96.1% reported they are carefully heard by staff, and 92.1% agree that Program staff consider their difficulties and try to facilitate access to services. Most frequently reported barriers were: parking fees and food costs (24% and 22%), having to miss work (20.4%) and time in the waiting room (16.2%). Barriers differ within RPCs.

An open question for recommendations was answered by 111 families. Most frequent recommendations were: 1- to shorten waiting time to be attended by the pediatric specialists, 2- provide toys, music or other entertainments for children while they wait, 3- improve infrastructure and appearance of some of the CPs, 4- lower parking costs (especially when the family spends hours in the CP).

Family Survey results were reported to the QIC on September 21, 2018. Next, the Evaluation Specialist and the Auxiliary Director visited the seven CPs from November 9 to December 4, 2018 to present the results to all CSHCNP staff who work directly with families. A total of 161 health and social providers went to the presentations.

Increase the number of CSHCN aged 12 to 18 years who receive adequate support and services for their transition to adult health care (NPM 12)

Health care transition is the process of changing from a pediatric to an adult model of health care, and the medical home model is the ideal platform to support this process. Changing doctors is never easy, much less for a teenager with a chronic condition and new to advocating for his/her own health care. YSHCN and families need support and guidance during this process. The Got Transition model is a best-practice model that aims to improve transition from pediatric to adult health care. The implementation of this model at the CSHCNP started on March 2018.

The Transition to Adult Health Care Sub-Committee is part of the QIC. It was created to identify strategies to improve the transition process at the CSHCNP. It is comprised of CSHCNP social workers, service coordinators and two family representatives; a total of 13 members. In August 2017, this group completed a Transition to Adult Health Care Procedures Manual based on the Got Transition six core elements. The Manual also contains a transition plan of care for families of YSHCNs who lack potential for independent adult life.

Between September 14 and December 13, 2017, five meetings were carried out with RPC staff to present and discuss the Manual, educate about the six core elements, and inform about the roles of youth, parents, pediatricians, other health care providers and the adult health care provider during the transition process. A total of 116 health providers, social workers and service coordinators attended these meetings.

The implementation of the six core transition elements began with special focus on the first two core elements: 1- transition policy and 2- tracking and monitoring. An electronic copy of the transition policy was sent to all RPCs directors. Each RPC has posted the policy in visible places for families to see, and are sharing it with families who have CSHCN 14 years of age or older. Tracking has been a challenge for all of the RPCs because of the hundreds or thousands of hard copy health records of children with the possibility of being within the target ages. Implementation of an EHR system is still in process, so each RPC is creating its own strategies to track cases, and all RPCs are capturing YSHCN that visit the Center. From March 1 to September 30, 2018, RPCs received a total of 441 YSHCN visits, and have conducted 121 transition readiness assessments (27.4%). Of the 121 cases, 38 are between the ages of 19 and 21, 58 are between 16 to 18 years old, and 25 are 14 or 15 years of age. Some RPCs are not yet collecting information on the number of cases unable to contact. This implementation process will

continue during application year.

In order to monitor progress of the six-core transition element implementation, a survey was carried out among CSHCNP providers for a baseline measure. The Health Care Transition Process Measurement Tool for Transitioning Youth to Adult Health Care Providers was adapted and administered at the seven RPCs between February and March 2018. A total of 80 CSHCNP providers participated. The measurement tool has indicators with assigned weights for each core element, and collects the participants' perceptions about the indicator at their work-place. Each core elements is scored depending on the participants' answers for each indicator (yes or no),. The first core element, "Transition policy", resulted with a score of 9.4 out of 16 (59%). The second core element, "Tracking and monitoring", resulted in a score of 3.72 out of 7 (53%). The third core element, "Transition readiness assessment", resulted in 46% ; "Development and implementation of transition plan" resulted in 40.4%, "Transfer to adult health care" resulted in 46.3% and "Finalizing the transfer" resulted in 32.9%. Health providers' perceptions varied greatly depending on their duties. Social workers and service coordinators tend to perceive a higher degree of core transition elements' compliance in comparison to other health care providers.

Results of the Health Care Transition Process Measurement Tool for Transitioning Youth to Adult Health Care Providers (at the early phase implementation of the model)

Core element	Score
Transition Policy	59%
Tracking and Monitoring	53%
Transition Readiness Assessment	46%
Development and Implementation of Transition Plan	40.4%
Transfer to adult health care	46.3%
Finalizing transfer	32.9%

The Transition to Adult Health Care Sub-Committee continues its efforts to enhance transition processes. Three months after Hurricane Maria, the Sub-Committee returned to its regular meetings, and now are working on strategies to address the following identified issues: 1- lack of YSHCN knowledge in topics like sexuality, health habits, decision making, and budget management of YSHCN and their families; 2- barriers to transition to an adult health care provider of YSHCN who live out of the metropolitan area; and 3- health care providers better understanding about matters pertaining to YSHCN. The Sub-committee invited the CSMND Health Educator to help them in the development of strategies to address these issues. This activity will continue during application year.

The Sub-Committee developed two brochures on transition to adult health care. One is addressed to pediatricians and the other is addressed to families. Its purpose is to increase awareness on the processes of a successful transition and the services and supports offered at the RCPs on transitioning. The brochures are being distributed to families at the RPCs and in educational activities where the CSMND participates.

Combined Internal Medicine & Pediatrics (Med-Peds) is a residency leading to Board Certification both in Internal Medicine and Pediatrics. A physician trained in Med-Peds can care for the newborn to the geriatric patient, which makes them ideal health providers for the YSHCN health care transition process. In July 2014, a Med-Peds Program was inaugurated at the School of Medicine, Medical Science Campus, University of PR. CSHCNP Auxiliary Director and Evaluation Specialist coordinated a meeting with the Director of the Medical Science Campus Med-Peds Residency, Dr. Arelis Febles, and her assistant Dr. Lisette Lugo. The meeting was held on June 20, 2018 with the

purpose of discussing possible agreements in the area of transition to adult health care providers. Formal agreements were unable to take place because the program had only two students who have just graduated and are planning to pursue other subspecialties out of PR. However, both physicians offered the following: 1- transition should be a curriculum requirement for medicine students, 2- pediatricians should provide support to the adult health care provider who will follow-up their patient, 3- families and YSHCN should be educated on the difference between the pediatric and the adult health care settings.

The Inborn Errors of Metabolism (IEM) Clinic for the adult population was created under State Law #139, August 8, 2016, beginning operations in August 2017. It is located at PR Medical Center and provides bi-monthly health care, prevention and treatment to the PKU population. When newborns are confirmed with an IEM in PR, they are usually referred to the CSHCNP where they can be monitored until 21 years of age. With this new clinic the CSHCNP, as well as the PKU Patient Society, have the opportunity to refer PKU youth for follow-up after their 21st birthday. From August 2017 to May 2018 the Clinic has served 36 PKU patients. The IEM Clinic is composed of a team that includes a Geneticist, a Family Physician, a Clinical Psychologist, a Social Worker, two nurses, a team of nutritionists, and a staff of three for administrative and organizational purposes. Puerto Rico has nearly 60 cases of PKU.

The Metro RCP Social Worker coordinated three educational activities on April 4, May 11 and June 26, 2018 to educate families on diverse topics including the health care transition process. Dr. Mitchlery Cardona, Clinical Psychologist, the Vocational Rehabilitation Program, APNI, Hogar Ruth for Domestic Violence Prevention and Special Education Program collaborated in providing orientation. Information on sexuality and transition to adulthood was also provided. A total of 54 families participated in these activities.

Decrease the age when children at risk for Autism Spectrum Disorders receive their first diagnostic evaluation

CSMN Division staff integrated the priorities of the Autism Spectrum Disorders Steering Committee (ASD Steering Committee) with the strategies presented in the State Action Plan for October 2017 to September 2018: 1- Continue the distribution of educational material to health professionals to increase awareness of early signs of ASD and promote the use of ASD screening tools, 2- Continue the distribution of educational materials about developmental milestones and early signs of ASD to families in general, 3- Continue the promotion of ASD screening at 18 and 24 months of age among health providers, as mandated in PR-EPSDT, 4- Continue the promotion of the ASD Registry among health providers and the importance of registering patients with positive ASD diagnosis, and promote the use of the “Screening Certification Form” among pediatricians, PCPs and other health care providers.

The ASD Steering Committee, created by Law #220 of 2012, Law for the Well-being, Integration and Development for People with Autism (Ley BIDA, Spanish Acronym), under the leadership of the Title V CSHCNP, developed an Action Plan for the Act’s implementation based on the following processes: development of alliances, analysis and planning, evidence-based paths designs, clarification and procurement, and quality services provision. The ASD Steering Committee’s 2017-2018 work was focused on the following priorities strengthening early identification and diagnosis of children with Autism Spectrum Disorders (ASD), strengthening the ASD Registry, identifying evidenced based practices for planning for interventions, competencies for first responders and establishing mechanisms so that professionals who work with children with ASD and their families comply with their discipline’s competencies. At the same time the CSMN Division continued working toward lowering the age at which children with ASD are diagnosed.

The efforts and activities directed toward these priorities are presented below.

Early Identification and Diagnosis of ASD

This ASD Steering Committee’s priority corresponds to the following State Action Plan strategies: Continue the distribution of educational material to health professionals to increase awareness of early signs of ASD and promote the use of ASD screening tools; Continue the distribution of educational materials about developmental milestones

and early signs of ASD to families in general; Continue the promotion of ASD screening at 18 and 24 months of age among health providers, as mandated in PR-EPSDT; and promote the use of the “Screening Certification Form” among pediatricians, primary care providers and other health providers.

To promote the early identification of developmental delays and ASD, the booklet called “Passport to Health” (*Pasaporte a la Salud*), that was developed by the PRDOH with the purpose of informing families about children’s growth and development and of warning signs for developmental delay and ASD from birth to five years of age, continues to be distributed to families when they register their newborn at their local Demographic Registry Office. This booklet was revised to include information of the Procedures for the developmental surveillance of infants and toddlers born to mothers with laboratory evidence of possible ZIKA virus during pregnancy during their first three years of life. The booklet also includes the “Screening Certification Form” and provides contact information if families have concerns concerning developmental delay or risk for ASD.

In February 2018, the CSMN Division applied for and was awarded the Puerto Rico Act Early Ambassador Liaison to the CDC’s Learn the Signs: Act Early Initiative. This Initiative aims to improve early identification of developmental delays and autism by promoting parent engaged monitoring so children and their families can receive the services and supports they need as early as possible. The PR Ambassador established the following goals: 1-Support developmental surveillance and screening services for infants and toddlers born to mothers with laboratory evidence of possible Zika infection during pregnancy at the CSHCN Program Regional Pediatric Centers, and 2-Systematically integrate LTSAE materials in other programs that provide services to young children and their families, such as: Community Health Centers, WIC, EHS/HS, Child care centers and MCH Home visiting programs. To meet these goals CSMN Division staff distributed materials and provided workshops on early identification and the use of the Passport to Health, CDC Learn the Signs. Act Early materials including the Milestone Tracker at the PR Medical Association’ Annual Conference Pediatricians and Psychologists professional conferences, the PR Private Child Care and Development Centers’ Annual Conference; to EHS/HS Grantee Health and Nutrition Managers, the staff at the 11 Regional Offices, Family Participation and Support Advocates, and to the Service Coordinators at the 7 CSHCN Pediatric Centers.

The protocols to guide the early identification and diagnosis of children with ASD based on recommended practices and following the AAP algorithm were revised to include counseling psychology as a discipline qualified to diagnose ASD. Meetings were held with PRHIA to discuss and agree on the provisions of said protocol. The protocols were approved and signed by the Secretary of Health on April 2, 2018. The early identification guide was revised to include these protocols.

On April 26, 2018 all Service Coordinators from the 7 CSHCN Regional Pediatric Centers were trained on the administration of the M-CHAT-R/F screening tool.

To support awareness of ASD early signs and the use of the early identification and diagnostic protocols, the ASD early identification guide (*Guía para la Identificación Temprana del Trastorno del Espectro del Autismo: Vigilancia, Cernimiento y Diagnóstico*) which includes the protocols for early identification (*Protocolos Uniformes para la Identificación Temprana del TEA: Vigilancia y Cernimiento del Desarrollo 0-66 meses) and diagnosis of ASD (Protocolos Uniformes para el Diagnóstico del Trastorno del Espectro del Autismo)* were published in the Parent Information Center’s (APNI) web page, www.apnipr.org .

Since May 2018, the CSHCN Division has 27 Arbovirus Health Educators assigned to 60 WIC clinics throughout PR. They provide follow-up and support to families of infants and toddlers born to mothers with laboratory evidence of possible Zika infection during pregnancy and encourage families to participate in the CSHCN Program Regional Pediatric Centers Surveillance and Service Coordination Protocol. These educators provide support to families on the use of the Passport to Health, the “Screening Certification Form” and the implementation of the developmental and ASD monitoring with the Act Early Materials and the Milestone Tracker.

Staff from the CSMND continues to participate in the Central Council of Project LAUNCH (Linking Actions for Unmet

Needs in Children's Health) activities. Project LAUNCH serves the municipalities of Fajardo, Vieques and Culebra. One of Project LAUNCH's initiatives is the early identification of developmental delays and that children receive developmental and ASD screening as established by PR-EDSPT and the ASD (Surveillance and Screening) Protocol.

The CSHCN Division has established a collaborative relationship with the PR Community Health Centers (Section 330). The Division shared a digital version of the Passport to Health for the PR Association of Primary Health to print and distribute among their 62 Centers throughout PR. Additionally, Division staff initiated training on the importance of providing information on developmental milestones and early identification of developmental delays to families in order to strengthen their participation in the surveillance of their children's development. Centers' nursing, pediatric, social work, psychology, community liaisons, service coordination, and health education staff participated. Participants received CDC's materials in Spanish and explored how to use them and the Passport to Health to support early identification. The training also oriented on the services provided by the Division and the referral process for ASD diagnostic evaluations through the Divisions' 7 Regional Pediatric Centers and 2 Autism Centers. The first training was held on September 11, 2018 for staff from centers of the Metro Region. Trainings for the remaining Regions were programmed for: October 23, 2018 (North Region), November 15, 2018 (West Region), and December 11, 2018 (South Region).

Autism Registry

CSHCN staff continues promoting the Autism Registry among health providers, and of the importance of registering their patients diagnosed with ASD.

The Autism Registry was implemented in April, 2016. The Registry collects the following information: demographics, age when ASD signals were observed for the first time, ASD diagnosis, date of diagnosis and severity, diagnostic tools used, and health professional that made the diagnosis, and comorbid conditions, among other information. It is continuously improved based on feedback from users.

A brochure, directed to parents, informing on the Registry has been distributed to all the Regional CSHCN Centers, the Special Education Services Centers, Early Intervention Programs, Early Head Start and Child Care Centers and the Parent Training and Information Center. The brochure is on line and can be downloaded. The Autism Registry is continuously improved based on feedback from users.

In order to increase the number of providers who diagnose ASD, staff from the CSHCN Division participated of the *Asociación de Psicológos de Puerto Rico* Annual Convention on January 26 and 27, 2018. A summary of the ASD Diagnostic Procedures was distributed to all participants. During the Convention Psychologists who carry out ASD diagnostic evaluations were able to open their account in the Autism Registry.

On July 7, 2018 staff from the CSHCN Division met with the Special Education Associate Secretary of the PR Department of Education (DOE) to present the ASD Diagnostic Procedures and the Autism Registry. The Associate Secretary agreed to amend the contracts of the corporations that provide ASD diagnostic services to the DOE so as to include compliance with the DH's Diagnostic Procedures and Autism Registry. As a result of this meeting, on August 8, 2018, an orientation on the ASD Diagnostic Procedures and the Autism Registry was given to the psychologists that carry out diagnosis of ASD of the DOE's largest corporation. The psychologists were also able to open their account in the Autism Registry.

The CSHCN staff submits a monthly report of the number of children diagnosed and on the number of diagnosis registered.

The PR Parent Information Center continues to distribute the Autism Registry brochure at the education and health community based activities in which they participate.

A collaborative agreement is underway with PRHIA to include all the participants of the Autism Special Coverage in the PRDOH Autism Registry. Additionally, ongoing orientations to parents of children diagnosed with ASD and

professionals that carry out diagnostic evaluations continue to be offered during the application year at health fairs, professional conferences and DOE and PRDOH activities.

The following ASD Steering Committee priorities do not directly correspond to the State Action Plan's October 2017 to September 2018. However they support the development of systems of services for the population with ASD.

Assessment for Planning Interventions

A Sub-Committee of the ASD Steering Committee developed a Procedures for assessment for planning interventions (*Protocolo del Avalúo Interdisciplinario Dirigido a la Planificación de Intervenciones*). The Procedures was approved by the ASD Steering Committee and signed by the Secretary of Health on April 2, 2018. On March 2018 the Sub-Committee also completed a guide for assessment for planning interventions for children and youth with ASD (*Guía para el Avalúo Dirigido a la Planificación de Intervenciones para Niños y Adolescentes con el Trastorno del Espectro del Autismo)*. The Guide was distributed to 1,900 and can be downloaded from the Parent Information Center's web site.

Professional Competencies

Trans-disciplinary and specific competencies were developed and approved by the ASD Steering Committee for the following disciplines: special education, speech and language pathology, speech and language therapy, occupational therapy, physical therapy, social work, medicine, odontology, nursing, psychology, rehabilitation counseling, nutrition/dietician and audiology. In order to establish a mechanism that assures that professionals continued education meets the established competencies for professionals and paraprofessionals who work with individuals with autism across the lifespan a request was made to the Secretary of Health to emit an Administrative Order for the following disciplines: audiology, odontology, nutrition, nursing, speech and language pathology and therapy, occupational therapy, physical therapy, medicine, and psychology. This Administrative Order should state that the examining boards for the aforementioned disciplines must require that the professionals that they certify and license meet the established professional competencies.

Competencies for first responders were developed and approved by the ASD Steering Committee. With the purpose of disseminating the competencies, meetings were held with the 911 Office and the Fire Fighters Academy.

Decrease Prevalence of Neural Tube Defects at Birth

The AAP, as well as many other health societies and associations, endorsed the recommendation that women at reproductive age consume 400 mg of folic acid daily to prevent neural tube defects (NTDs). There is scientific evidence that folic acid supplementation before conception can prevent 50% or more of NTDs such as spina bifida and anencephaly. For women who have previously had an NTD pregnancy, CDC recommends increasing the intake of folic acid to 4000 mg per day, beginning at least 1 month before conception and continuing through the first trimester. Implementation of these recommendations is essential for the primary prevention of these birth defects. The consumption of folic acid is an evidence-based practice, and the PR-BDSPS continues its promotion for the use of folic acid in women of reproductive age. The surveillance system also uses the data collected to identify populations at risk of congenital defects.

The PR-BDSPS continued its neural tube defects (NTD) prevention activities through diverse educational and promotional strategies. Materials on folic acid were disseminated at community based health fairs and educational activities. From October 2017 to September 2018, the BDSPS participated in fifteen (15) community based health fairs reaching over 1,900 individuals where 5,000 copies of educational materials were distributed. These health fairs were held all over the island: Intercontinental Hotel, Residencial Monte Hatillo, Plaza Kids and Food Festival at Plaza Las Americas, Community Health Fair at Cataño and Juan Pachin Vicens Auditorium in the Ponce Region. The remaining ten community health fairs were held in the municipalities of Adjuntas, Cataño, Caguas, Ceiba, Fajardo, Juncos, Juana Diaz, Rio Grande, and Toa Alta.

The CSMND Health Educator offered presentations and lectures regarding birth defect prevention and the

recommended folic acid consumption to over 240 students of 6 university and colleges, and 13 elementary and high schools in different municipalities, reaching over 600 students. The Health Educator worked closely with three FQHCs community primary health care centers: COSSMA, Salud Integral de la Montaña and Health Pro Med. As of February 2018, the Health Educator had offered three (3) educational lectures to 33 patients waiting for their appointment.

Continued activities included the distribution of the brochures “How to Prevent Birth Defects” and “Congratulations, Mom”. The first one is continuously distributed to couples seeking a marriage license, and the second is distributed during infants’ registration at the Demographic Registry Office.

The PR-BDSPS Social Worker continued contacting families with NTD affected pregnancies to provide orientation, recurrence prevention counseling, and to offer coordination services and referral to community and parents supports groups such as: My Down Syndrome Friends (MASD), Spina Bifida Association, Association of Parents of Children with Disabilities (APNI), and Jarcho-Levin and Trisomy 18 family support group. During last fiscal year 94% (143/152) of mothers interested in receiving services relevant to their child's needs were served. Surplus funds were used to purchase educational material, such as information sheets, system forms and office materials for the BDSPS nurses. During this reporting period, 100% of the interested families were successfully referred.

The BDSPS continued working closely with PR Maternal and Fetal Medicine (MFM) specialists. A dedicated medical records abstractor actively obtained the ultrasounds and amniocentesis results where birth defects are identified. This active case-finding strategy allows for the rapid identification of any potential case of birth defects, as well as, fetal deaths and terminations.

The PR-BDSPS 2017 Annual Report was released on January 2018. Since it has relevant data, such as demographic information and prevalence maps, the report is being distributed to health professionals at all 37 birthing hospitals and other sites. During year 2018, approximately 635 Annual Reports have been distributed.

Increase data capacity and improve services through the implementation of health information technology (EHR and tele-health) at the RPCs.

In December 2017, the Government General Budget Office (OGP) rejected the request to contract the selected healthcare technology company SabiaMed to implement the EHR system. In order to complete the project, it was integrated with a similar project in the Medical Services Administration (ASEM), which is part of the Department of Health. The new company is called Meditech. A Memorandum of Understanding was agreed upon until the Meditech services contract was completed by the end of 2018. A re-assessment for needed hardware at the RPCs was carried out and the following equipment was acquired: 18 printers, 7 receipt printers, 117 UPS Battery Backup, 117 CISCO Units, 117 Computers, 4 Laptops, and 117 Smart Net Cisco. The CSMND contracted a Specialized Programmer and two Information System Technicians who are currently working with the Meditech staff. Equipment installations and technological configurations were carried out in each Pediatric Center; a total of seven configurations were completed last year. Currently, the installation and configuration of desktop computers was completed for all nine centers, including an additional 44 portable computers for the MCBH-Zika administrative staff and clinical Tele-medicine staff. This process is also authenticated by staff from the Office of Computing and Technological Advances (OIAT, Spanish acronym), of the DOH.

An equipment needs assessment was carried out for the Tele-health system. Comparisons of software, hardware, prices and demonstration of the best available equipment and services in the market, as identified at the American Tele-Medicine Association (ATA) 2017 Annual Conference, was performed. A Standard Operating Procedures (SOP) Manual was developed based on the recommendations at the ATA Annual Conference, including the processes to evaluate the Telemedicine Project, and the development of documents such as the Informed Consent, family satisfaction surveys, data quality and connectivity assessment. A job description for a Tele-Presenter was developed, interviews with potential tele-presenter candidates were carried out and a candidate was selected and recently contracted. Currently, the process of office and technological equipment acquisition to prepare the

Telemedicine rooms is taking place.

Children with Special Health Care Needs - Application Year

Increase the number of CSHCN who receive regular ongoing comprehensive health care within a medical home (NPM 11)

CSHCNP efforts to enhance medical home in PR have been, and will continue focusing on educating staff on family-centered care, family-professional partnerships, and quality service coordination; educating families on medical home, family engagement; enhancing collaborations and facilitating networking; strengthening access to care and quality improvement.

The NCQA guiding principles for a Patient-Centered Connected Care (PCCC) Provider include: coordinating with and connecting patients to primary care, providing timely access to appropriate care within the scope of practice, supporting family decision making, systematically tracking tests and referrals, and engaging in activities to improve quality and patient safety and experience. Literature on NCQA-PCCC guiding principles has been shared with RPCs medical directors and a presentation will be provided to the QIC to increase their awareness and knowledge on these principles, as to influence the Medical Home work plan. The QIC will continue its regular meetings focused on CSHCN state priorities.

Workforce capacity development is a constant activity at the CSMND, both at the central and regional level staff. Monthly meetings with service coordinators will continue, as well as lectures and workshops to CSHCNP's health care providers. The topics planned for the application year are: how to increase and enhance communication with PCPs, developing and enhancing family-professional partnerships, the importance of follow-up in service coordination processes, and increasing and improving community networks. Meetings within RPCs health care providers will continue as well as meetings within programs and projects.

FESAs have been an asset to the RPCs, especially relating to family support. Step by step, they have become empowered family leaders and they have strengthened their support role at the Program. After 18 months of FESAs working in a completely new role at the Program, additional competency needs will be evaluated based on the MCH leadership competencies. Strategies to support their competencies will be implemented.

Activities at the community level will continue to be carried out by the CSMND Health Educator, Lead Service Coordinator, regional service coordinators and social worker leaders, Family Representative, FESAs and other specialized staff, depending on the activity to be carried out. Some of these activities and workshops are planned with the collaboration of APNI, the PR Parent Information Center, especially when families are addressed. When addressing families, education will focus on empowerment such as how to develop a collaborative relationship with the primary care provider, how to participate in the child's health decision making, and how to navigate the health care system. FESAs are developing and coordinating social and/or educational activities addressed to CSHCNP families; these activities will continue. CSHCNP will participate in activities at the community level to influence the population. A data base was created to register all educational activities performed by the CSHCNP and addressed to the health/social professional community and to communities in general.

The CSHCNP will continue efforts to make sure families have access to care. Public transportation is unavailable in many municipalities, especially those that are localized at the *Cordillera Central*, the mountain chain located at the center of the Island. There are families with few resources who live in these rural areas and may not own a car. These families frequently rely on families or friends to be transported to clinical appointments. Those that own a private car may have to drive long distances through curved and sloped roads to reach the Metro area, where most of the clinics are located. The CMS Zika Health Care Services Program provides funds to increase access to specialized health care services for pregnant women, infants and children adversely or potentially affected by the Zika Virus. Funds are being used to provide coordination for transportation or reimbursement to families through a collaboration agreement with APNI. APNI is following-up families identified as needing transportation, and is providing coordination to facilitate their clinical appointment compliance. This activity will be established during the

application year and will include the development of geographical logistics and contracting of private transportation companies. In the meantime, vouchers are being provided to families depending on their housing location.

CSHCN require health care services beyond those required by children in general. This includes oral and dental health care. A project reviewing progress in children's oral health since the Surgeon General's Report of Oral Health of the year 2000, found that dental care remains the most frequently cited unmet health need for CSHCN. The study found that children with Down syndrome and other forms of intellectual disability, cerebral palsy and autism faced greater difficulty obtaining dental care. Children with significant health care needs require accommodations and specialized care that are not usually available in regular dental clinics.

The Ponce RPC opened its dental clinic in 1985. One (1) pediatric dentist and one (1) dental assistant provide the Center's direct dental services. Presently, the Clinic needs crucial renovation. It has two dental operatories that were acquired in the 1990's and have not been updated since. The compressor and vacuum system for both chairs are currently inoperative. For the last 6 years, the dentist has only been able to provide oral evaluations and manual preventive care services. Due to the lack of necessary equipment and materials, restorative services such as amalgam, stainless steel crowns and resin restorations; endodontics, or oral surgery have not been provided. Emergency palliative services are limited.

State funding is being requested for the renovation and reconfiguration of the Clinic to not only improve and expand the current dental services it provides beyond diagnostic and preventive services to include restorative, endodontics, oral surgery and palliative emergency services, but also to increase the number of children who receive dental care. The Project will renovate and reconfigure 430 square feet of space previously used for dental services to enhance integrated oral health services at the RPC. Renovation will include the removal of two (2) dental operatories that were acquired in the 1990's to be replaced by one dental operatory with its equipment and treatment console; the relocation and expansion of the sterilization area with appropriate equipment; the installation of a regular X ray machine and one panoramic X Ray system; the replacement of three windows; the sealing of one (1) window; the replacement and relocation of a sink; the relocation of the laboratory; removal and replacement of vinyl flooring; and plumbing and electrical work to accommodate the renovations and reconfiguration of the clinic. Two wheelchair accessible doors will be installed. Furniture for the dentist's administrative work will be installed. In addition, furniture (side consoles, cabinets and equipment will be acquired to prepare the laboratory in the space previously occupied by the operatory that will be eliminated; and for the space for the new operatory. The reception area to the dental clinic will be redesigned. A Speech and Language Pathologist, Occupational Therapist and Nutritionist provide a clinic for children with dysphagia. This team works closely with the Center's Dentist. Training and technical assistance directed to establishing an interdisciplinary team based approach to providing preventive and primary dental health care services will enable an integrated oral health services delivery model.

Linking families to needed services will continue. The PR-BDSDS Social Worker and the HDDDTP Coordinator will continue to assure every infant or child confirmed positive of a RUST Core Condition or with a birth defect, as well as their families, are referred to treatment or needed services. PR-BDSPS nurse abstractors also link infants identified as not referred, especially to the Part C Early Intervention Program. The 170 families identified as having a technological dependent child at home, will continue to receive follow-up services by the Care Coordinator. These families are being empowered to have their own emergency plan, especially during the hurricane season.

The QIC will provide follow-up to the implementation of CSHCNP's Procedures Manuals completed during 2018, and will also provide follow-up to strategies for families' clinical appointments' compliance. The CSHCNP staff collecting families' reported reasons for appointment non-compliance will continue during the application year. Its purpose is to better understand families' difficulties and improve support. The QIC is currently developing its QI Work Plan for the application year focusing on medical home, transition to adult health care, early detection of autism, promotion of the benefits of folic acid consumption and RPCs sustainability.

Meetings with PRHIA and with the PR-Primary Health Association have taken place and will continue during the

application year aimed at strengthening collaborations. Both entities are facilitating access to personnel who can contribute information for the Title V five-year needs assessment.

Increase the number of CSHCN aged 12 to 18 years who receive adequate support and services for their transition to adult health care (NPM 12)

The Transition to Adult Health care Sub-committee finalized the Transition to Adult Health Care Procedures Manual that includes the transition readiness evaluation form and other forms. Orientation to CSHCNP staff regarding the Procedures Manual was provided. The Sub-Committee is now focusing on other strategies while providing follow-up to the implementation of the Got Transition six core elements. Each RPC has created its own strategies to track cases, which has been a challenge. The mechanisms of tracking and monitoring are being discussed among RPCs Medical Directors in order to identify a common protocol for all the seven RPCs.

The Transition to Adult Health Care Sub-Committee will continue meeting quarterly or as necessary. The team is currently coordinating focal groups with YSHCN to identify topics of interest and develop activities accordingly. The first focal group is being coordinated for next August with the collaboration of the Independent Life Achievement Movement (*Movimiento para el Alcance de Vida Independiente* (MAVI, Spanish Acronym)), and the Educational and Rehabilitation Society (*Sociedad de Educación y Rehabilitación (SER de Puerto Rico)).* MAVI is a nonprofit organization that promotes the philosophy of independent living among people with disabilities and supports the development of skills for decision-making and independent living. It promotes independence, equality, productivity, empowerment, integration and inclusion of human beings in all aspects of society. SER de Puerto Rico was founded in 1950 and provides medical, therapeutic and educational services, including the Montessori teaching method, to children and youth with disabilities, including autism.

The Sub-Committee is also developing an Educational Guide to Transition to Adulthood addressed at YSHCN with the guidance of the CSMND Health Educator. The purpose of the Guide is to provide a tool for health providers to educate YSHCN and their families on fundamental issues in the process of transitioning to adulthood. Some of the topics in the Guide are sexuality, health habits, budget management and decision making. These topics provide essential information for two types of participants at the RPCs: YSHCN with the cognitive capacity to understand the medical transition to adult life, and the YSHCN who needs support from his/her family. To maximize the quality process of transition, the Sub-Committee recommends using both guides together: the Transition to Adult Health Care Procedures and the Educational Guide for the Transition to Adult Life Guide.

One of the recommendations provided by the Medical Science Campus Med-Peds Program directors during a meeting held on June 2018, was the need of adult health care providers to receive the support of pediatricians while transferring YSHCNs to adult services. One of the barriers for a successful transition is the lack of adult health care providers that are skilled to treat adults who have chronic conditions since their childhood. This issue has been discussed in the Transition to Adult Health Care Sub-committee. A pediatrician has been enrolled as part of the Sub-committee. This addition has supported the team's capacity to identify strategies in relation to this issue. Key service coordinators at the RPCs have been updating a directory of adult physicians for the YSHCN population. This activity will continue during the application year.

Decrease the age when children at risk for Autism Spectrum Disorders receive their first diagnostic evaluation

The ASD Steering Committee's 2019-2020 work plan priorities focus on: Early identification, diagnosis and intervention, evidence based interventions, intra and inter agency collaboration, and competencies for first responders.

During 2019-2020 the CSMND will continue working toward decreasing the age when children at risk for ASD receive their first diagnostic evaluation.

Decrease Prevalence of Neural Tube Defects at Birth

The PR-BDSPS will continue the promotion for the use of folic acid during the application year. Folic acid written educational material will be disseminated at identified community based health fairs and other activities like symposiums, conferences, workshops, and trainings. The brochures "How to Prevent Birth Defects" and "Congratulations, Mom" will be distributed, the first one to couples seeking a marriage certificate, and the second one during infants' registration at the Demographic Registry Office. The CSHCNP Health Educator will continue offering presentations and lectures regarding birth defect prevention and the recommended folic acid consumption at universities and colleges, where hundreds of women in reproductive age can be reached. Elementary and high schools students will also be reached, as well as communities with the collaboration of FQHCs and other community entities.

Monitoring and follow-up of families with NTD affected pregnancies will continue. Orientation and recurrence prevention counseling is provided to these families by the BDSDP Social Worker, who also offers service coordination and community referral. For the application year, it is expected that services be provided to at least 80% of mothers interested in receiving services relevant to the needs of their child. The surveillance system uses data collected to identify populations at risk of having a congenital defect birth.

The PR-BDSPS is an active surveillance system with 6 abstractor nurses who visit all birthing hospitals and pediatric centers to collect all cases with any of the congenital defects monitored in the system. Since October 2018, these nurses have access to the EHR system of 87% of hospitals. During the application year it is expected they will have EHR access to 100% of hospitals. This will enhance the identification of cases.

In addition to folic acid promotion, the PR-BDSPD invests efforts in the prevention of births defects. The surveillance system participated in a public hearing for Senate Bill No. 1127 to establish the Public Policy of the Government of Puerto Rico on Albinism and Hermansky-Pudlak Syndrome, providing direct access to physicians and specialists, and to medications and treatments without the need for referral, authorization or pre-authorization of the insurance plan. Also, the CSMND Health Educator and PR-BDSPS Coordinator created an informational capsule in order to educate the general population. This was done with the collaboration of APNI for the National Month of Congenital Cardiac Defects, February 2019. The BDSPS will continue developing these activities during the application year.

Increase data capacity and improve services through the implementation of health information technology (EHR and tele-health) at the RPCs.

Currently, the CSHCNP has a specialized work team for the EHR system implementation that consists of a Project Manager, an Information System Coordinator and two Information System Technicians. Another two Information System Technicians are in the process of being contracted. This team is working in collaboration with the healthcare technology company Meditech, the Office of Computing and Technological Advances (OIAT, Spanish acronym), the seven RPCs and the two Autism Centers.

The past year's RPCs technological needs assessment showed that most of the equipment previously bought was not connected or configured with the Government Health Network of PR. Most of the communication racks did not have spaces available for additional drops, and temporary switch requests were required from the OIAT and ASEM teams. Some of these tasks require authentication by the technical staff of the OIAT team. A corrective project took place during this year. Currently, the installation and configuration of desktop computers was completed for all nine centers, including an additional 44 portable computers for the MCBH-Zika administrative staff and clinical Tele-medicine staff.

For the application year, efforts are focused on the preparatory measures for the implementation of the EHR system. This includes the confirmation of resources for services provided in each facility, the creation of a Platform of Control for the revisions of patient file forms, and the creation of a Platform of Observations for clinical and medical processes. The later consists of a detailed log of observations of each center and specialty.

By the year 2020, it is expected to have all the clinical and financial modules running 'live', integrating a fully functional electronic medical record in each Pediatric and Autism Centers: patient index, statistical database,

reporting system, ' e-prescribing ', and possibly the patient's portal which would allow our population to see their own records from home.

Health and office supplies have been purchased for the Tele-medicine project, as well as 11 licenses of AGNES Interactive Complete Software and 11 licenses of AGNES Exam Flow Modules. Also, the license for AGNES HL7 Module and EHR Integration was purchased. During the application year, Telemedicine equipment tests will be carried out as well as a pilot conference between Metro and Caguas RPCs. Test cases performed on all 7 RPCs and Autism Centers will verify the following: videoconference stability, data transfer, bandwidth performance (speed tests), frame rate and audio-video capability.

Cross-Cutting/Systems Building

Cross-Cutting/Systems Builiding - Annual Report

No content was entered for the Cross-Cutting/Systems Building - Annual Report in the State Action Plan Narrative by Domain section.

Cross-Cutting/Systems Building - Application Year

No content was entered for the Cross-Cutting/Systems Building - Application in the State Action Plan Narrative by Domain section.

III.F. Public Input

The Title V Maternal and Child Services Block Grant is located within the Puerto Rico Department of Health. Component A & B are under the Maternal, Child and Adolescent Health Division (MCAHD) and Component C under the Children with Special Medical Needs Division (CSMND). Both Divisions are under the Auxiliary Secretariat of Family Health, Integrated Services and Health Promotion.

To ensure input from stakeholders (e.g. families, youth, consumers, public and private organizations staff and interested individuals) into the priorities, strategies and activities related to MCH and CSHCN, the Title V Block Grant Program State Snapshot for Puerto Rico was translated into Spanish with the addition of the Action Plan Table for FY 2017-18. The snapshot along with an evaluation form (Google Form link) was distributed among stakeholders. The evaluation form allowed stakeholders make recommendations for each of the strategies in the current Action Plan as well as giving suggestions for new strategies that should be considered in the next Action Plan.

Key PRMCAH personnel discussed the strategies recommended for the Action Plan accounting for resource and staff availability to develop and implement said strategy. In order to include strategies that MCAHD and CSMND cannot directly carry out, other agencies - that also serve the MCA population – joined us in our efforts.

Inputs were provided by 45.5% government agencies, 36.4% nonprofit organizations and 18.2% from the community (parents and youth representation). In general, all of the agencies, individuals and families that provided input for the MCAH State Action Plan agrees that most of the strategies aimed at improving the health and wellbeing of each population contribute to reach said priorities “a lot” or “quite a lot”. Most of the recommendations focus on considering to include nutrition, physical activity, and mental health in almost all domains as part of the State Action Plan.

Example of the State Snapshot in Spanish used for Public Input of Stakeholders

HRSA
Health Resources & Services Administration

Título V Bloque de Servicios de Salud Materno Infantil

PUERTO RICO

Resumen del Estado

Solicitud de Fondos Año Fiscal 2019/ Informe Anual Año Fiscal 2017

Diciembre 2018

Insumo:

La División de Madres, Niños y Adolescentes interesa conocer su opinión con relación a las estrategias del Plan de Acción de este año fiscal. Su insumo será de beneficio para el desarrollo del nuevo Plan de Acción para el próximo año. Favor de visitar la siguiente página web para compartir su insumo:

Alianza Federal-Estatal de Título V - Puerto Rico

El Programa de Subvenciones del Bloque de Salud Materna e Infantil de Título V es una alianza federal-estatal con 59 estados y jurisdicciones cuyo propósito es mejorar la salud materna e infantil en todo el país. Este resumen de Título V presenta datos de alto nivel y el resumen ejecutivo contenido en el Plan de Acción del año fiscal 2019 y el Informe Anual del año fiscal 2017. Para obtener mayor información sobre los datos de la División de Madres, Niños y Adolescentes (DMNA), visite la página web de la Alianza Federal-Estatal de Título V (https://mchb.hrsadata.hrsa.gov)

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Fondos según la Fuente

Fuente	Gastos Años Fiscal 2017
Asignación Federal	$15,638,032
Fondos Estatales MNA	$11,732,573
Fondos Locales MNA	$0
Otros Fondos	$0
Ingresos del Programa	$134,322

Gastos Años Fiscal 2017

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Resumen Ejecutivo

Reseña del Programa

El Departamento de Salud de Puerto Rico administra el Bloque de Título V a través de la División de Madres, Niños y Adolescentes (DMNA) y la División de Niños con Necesidades Médicas Especiales (NNME), las cuales forman parte de la Secretaría Auxiliar de Salud Familiar, Servicios Integrados y Promoción de Salud. La DMNA y NNME lideran los programas y políticas de salud materno infantil (MNA), incluyendo la supervisión de los programas de salud materno infantil a nivel estatal de asociaciones y colaboraciones que proveen apoyo compresivo, coordinación y cuidados enfocados en la familia.

El mayor reto que enfrenta el Programa de Título V en Puerto Rico (PR) es la crisis socioeconómica caracterizada por una enorme deuda pública, bancarrota del gobierno, disminución de oportunidades de empleo y un aumento en la pobreza. Esta situación empeoró dado a los efectos devastadores causados por los huracanes Irma y María que azotaron la Isla durante septiembre de 2017. Los huracanes causaron daños profundos y duraderos a la infraestructura, limitando a la población el acceso a los servicios de salud y apoyo, refugios, alimentos, agua potable y otras necesidades básicas. Como resultado de las tormentas, miles de personas dejaron la Isla, incluyendo un número significativo de profesionales de la salud, lo que causó una mayor limitación al acceso de los servicios necesarios.

Dada a la crisis general, el Programa de Título V de PR se enfocó en maximizar los factores protectivos, educar a la población y en mejorar los accesos a los servicios de cuidado de salud tal y como se muestra en el siguiente resumen.

El Programa de Título V de PR se basa en el insumo de una gran variedad de colaboradores, incluyendo a las familias y jóvenes, para evaluar las necesidades de la población, sus fortalezas y recursos disponibles. Esto es esencial para identificar las prioridades y desarrollar estrategias para un plan de acción que responda adecuadamente a las necesidades de la población.

Como resultado del Estudio de Necesidades (EN) del 2016 al 2020 los programas DMNA y NNME identificaron 10 prioridades. Durante el EN interino del 2017 al 2018 se identificó el abordar las implicaciones sociales y de salud de los niños dependientes de la tecnología y que se encuentran en sus hogares, como una necesidad emergente. Las prioridades se mantuvieron de la siguiente forma:

1. Mejorar la salud y el bienestar de la mujer en edad reproductiva incluyendo condiciones emergentes
2. Mejorar los resultados del embarazo
3. Reducir la mortalidad infantil
4. Mejorar la salud y el bienestar de los niños

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Estrategias por Áreas de Dominio Año Fiscal 2018-2019

Dominio/Medidas	Prioridades y Estrategias
Salud de la Mujer y la Madre	**Mejorar la salud y el bienestar de la mujer en edad reproductiva incluyendo condiciones emergentes** 1. Diseminar y promover la Guía de Servicios Preventivos de la mujer en edad reproductiva en diversos medios y foros de publicidad. 2. Identificar mujeres sin seguro de salud y referirlas para evaluacion al seguro de salud del gobierno. 3. Proveer informacion a las mujeres de edad reproductiva con respecto a signos, síntomas, transmisión y prevención del ZIKA. 4. Continuar las actividades del Sistema de Vigilancia de Mortalidad Materna en PR.
NPM 1: Visitas Preventivas en Mujeres *SPM1: Cesáreas en Mujeres de Bajo Riesgo*	**Mejorar los resultados del embarazo** 1. Proveer actividades educativas sobre el cuidado prenatal mediante el curso prenatal: "Un bebé en camino". 2. Distribuir información sobre señales y síntomas de parto prematuros a todas las mujeres en gestacion a través de las oficinas de obstetras y ginecólogos. 3. Identificar y referir mujeres embarazadas para iniciar el cuidado prenatal. 4. Continuar con la campaña de medios para promover las 40 semanas de gestación y los estilos de vida saludable durante el embarazo. 5. Diseminar y promover las Guías de Servicios Preventivos Cuidado de Salud Prenatal.
Salud Perinatal e Infantil	**Reducir la mortalidad infantil** 1. Realizar una evaluación continua de los niveles de clasificación de los hospitales utilizando el instrumento CDC/LOCATa, basado en las capacidades de cuidado materno y neonatal establecido por ACOG y AAP. 2. Diseminar los hallazgos relacionados a la evaluación por niveles de cuidado neonatal y materno de los hospitales para apoyar en la toma de decisiones de los sistemas de salud público y privado. 3. Continuar con el Comité de Revisión de muertes infantiles de PR con el propósito de identificar las brechas y mejorar el cuidado de salud materno infantil. 4. Continuar con la campaña de medios para promover las 40 semanas de gestación y estilos de vida saludables durante el embarazo. 5. Adiestrar a las participantes del PVH y la comunidad sobre el CPR en cualquier momento para infantes. 6. Promover la creación de una red entre hospitales para transferir mujeres gestantes de alto riesgo. 7. Adiestrar al personal del PVH con el conocimiento y las técnicas para promover y apoyar el inicio de la lactancia exitosa en el periodo prenatal y pos parto. 8. Promover y apoyar la iniciación de la lactancia exitosa en las participantes del PVH durante el periodo prenatal y pos parto. 9. Promover y apoyar a las participantes del PVH en la lactancia exclusiva hasta los seis meses.
NPM 3: Riesgo Apropiado de Cuidado Perinatal *NPM 4: Lactancia*	

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Following is the breakdown of the input received from all stakeholders.

STAKEHOLDERS

Regional Boards

The State Snapshot was presented to 59 regional board members. The members provided recommendations for other initiatives that could be incorporated as part of the Action Plan for FY 2019-20, such as the promotion of immunization and the inclusion of mental health and nutrition as part of the strategies in woman/maternal health domain; physical activity, nutrition and immunization for the strategies in the perinatal/infant health; and the inclusion of the community in all the activities performed by the Youth Advisory Council.

Pediatric (RPCs) and Autism Centers

The strategies recommended by the RPCs and Autism Centers (3 and 2, respectively) to be considered as part of the Action Plan for FY 2019-20 are: to provide training to primary physicians on surveillance and early screening of children with ASD, keep well trained the insurance personnel that serve the public in relation to the process of obtaining temporary special coverage, diagnostic processes and obtaining special coverage of ASD. They also recommended to reinforce the use of preventive guidelines in pediatricians, the promotion of folic acid in schools and to create a group of young people who can help other young people for transition to adult life.

PR March of Dimes (PR MOD)

Twelve members of PR MOD Mission Program Committee However, certain recommendations were shared in order to be considered as part of the following Action Plan. The events that came along with Hurricane Maria are to be taken under consideration to develop guidelines and strategies that are tailored to the needs that may emerge for the MCH population during and after a disaster. The committee recommended to promote the use of low-dose aspirin, birth-spacing and group prenatal care as part of the strategies aimed at improving birth outcomes. In terms of perinatal/infant health, the committee also recommended the inclusion of abuse during pregnancy by means of orientation and education to the community and the publication of a report with the most relevant findings and recommendations of FIMR for professionals, institutions, and the community at large. They also suggested to consider nutrition, physical activity and tackle ACEs as part of the strategies used to achieve child's health and wellbeing. For adolescent's health, PR MOD Mission Program Committee members mentioned the need to include a strategy for sex education or to be more specific in the strategy that includes this topic, as well as to include it as part of the healthcare guidelines for adolescents. Lastly, for CHSCN, although neural tube defects is a prevalent anomaly in the Island, the committee feels the need to take under considerations other anomalies.

Food and Nutrition Commission (FaND)

In general, they recommended to continue providing educational activities across the Island for the MCH population, particularly those related to WRA and prenatal care. They also recommended the creation of videos with prenatal care information that could be shown at the OB/Gyns waiting rooms. The FaND also recognized the need of a support group for parents that experience fetal or infant loss and recommend the development of a referral system for this population. Due to technological advancements and the use of electronic devices, they also recommended the creation of an application that adolescents could use to have information about nutrition (creation of a healthy plate and healthy choices) and monitoring of physical activity.

WIC Program

Strategies recommended to address the needs for the MCA population were: Nutrition and physical activity for WRA, community activities with a direct impact on pregnant women, nutrition and physical activity for children, family planning education for adolescents, more access of subspecialists for CSHCN and education in school about the importance of folic acid for the reduction of neural tube defects.

PROGyn

Strategies recommended by PROGyn is to provide formal, concrete and effective education about the Reproductive Life Plan (RLP). Discussing RLP is crucial to promote women's health in general and increase birth rates in a healthy

and responsible manner. They offered to collaborate with our efforts through the MATTERR project of PROGyn. MATERR is aimed at reducing maternal morbidity and mortality by empowering pregnant women in their obstetric care and actively supporting the efforts of their clinical team. PROGyn also recommended to promote vaccination according to the Advisory Committee on Immunization Practices (ACIP).

Administration of Mental Health and Anti-Addiction Services (ASSMCA)

Among the strategies recommended to be included is to provide orientation in schools and universities on reproductive health, increase the availability of health and nutrition education services, include education on the effects of the use of prescribed drugs, illicit drugs and alcohol, ensure that health insurance plan allows mothers/infants at risk to stay in hospital an additional day for education about the care of vulnerable infants, include early detection of mental health conditions in children 1-9 years old, increase universal screening of physical, oral and mental health in schools to identify adolescents and youth with needs and refer them for treatment, identify sources of federal funds to increase transition programs, and integrate mental health in Telehealth.

United Way

Strategies recommended to address the needs for the MCA population were: to include education about folic acid intake and other preventive care for WRA, promote web applications about pregnancy care for pregnant women, develop and include initiatives for the prevention of obesity such as healthy eating (my plate) and physical activity for the reduction of sedentary lifestyle for children, and, develop a campaign for the dissemination of statistics in PR of birth defects and how we can prevent neural tube defects.

Emergency Medical Services for Children (EMSC)

Among the strategies to be considered as part of the next Action Plan is the promotion of preventive measures against abuse for WRA and pregnant women, the continuation of the campaign for the prevention of non-intentional injuries and the use of the protective seat for infant and children. EMSC also recommended to continue with the campaign for the prevention of non-intentional injuries in adolescents as well as the use of all-terrain vehicles and safety on roads and also to include campaigns or educational activities related to drug and alcohol abuse prevention. Finally, EMSC recommends to also include CSHCN in the education and prevention of non-intentional injuries as well as preparation and management of emergencies in disasters.

Association of Primary Health of Puerto Rico (ASPPR)

Among the strategies recommended by ASPPR is to ensure that the PHSGWRA is completed and disseminated to professionals and the community, dissemination on how to prevent C/S and premature births, the continuation of the Hard Stop Policy ensuring quality services and to ensure that the findings of the Maternal Mortality Surveillance Systems are accompanied by strategies for prevention. Other recommendations are to develop a campaign in the HRSAFHC to promote our educational activities, courses and programs. In terms of breastfeeding, ASPPR recommended to continue emphasizing the benefits of exclusive breastfeeding, the importance of breastfeeding in the first hour postpartum and skin-skin contact. In terms of children's health, it was suggested to include some strategy to work with the social and health repercussions of the excessive use of technology and include some support strategy to reduce childhood obesity. ASPPR also recommended to consider that Puerto Rico Youth Friendly Health Services Guide contains topics of attention to social determinants of health, violence, family planning, among others. For CSHCN, ASPPR recommended to guide families on how to navigate PR health systems and services, and to provide directory of allied organizations to support and meet needs for CSHCN.

SER of Puerto Rico

Some strategies recommended by SER are: the creation of a media campaign for WRA (including young women with special health care needs) educating about the importance of preventive visits and what should be included in them, to promote healthy eating during pregnancy, promotion of the pediatric preventive care guidelines in the community to empower them and the promotion of medical homes to families with CSHCN to ensure the effective use of this service.

COMMUNITY

Head Start and Early (HS) Heads Start Families (EHS)

A group of 9 mothers representing 7 HS and EHS agencies in 7 municipalities in PR, gave input on the strategies, programs and priorities relevant to infant and child domain of the PR Title V for 2017-2018. All approved of the programs and educational initiatives delivered such as: Parenting (0 to 5 y/o, 6 to 11y/o) and Prenatal Courses, Crying Management, and the campaign "Encuentro de mi Vida" (Encounter of my Life). They also approved the FIMR, the HVP, and Feeding Guidelines from 0 to 24 months. Relating to participation in collaborative efforts such as in the HS and EHS Normative Policies Committee, Children Justice Act Committee, Children Task Force, and the BFPCG the mothers also agreed. A 100% agreed on the priority to continue to promote breastfeeding, to continue to promote preventive health and oral care visits, to continue to promote parenting, development stimulation and resiliency skills, promoting healthy lifestyles (nutrition and physical activity), and educating on preventing unintentional injuries. They added commentaries on how they recommend Title V to continue its initiatives and use of the resources to reinforce health promotion and information in communities.

Youth Advisory Council (YAC)

The advisors (n=16), together with their families (n=6), reviewed the strategies that the PR MCAH Program presented in the Action Plan for FY 2017-18. In summary the strategies recommended by YAC and their families are geared to continue and increase educational activities for pregnancy care, importance of preventive visits and widen the visibility of the media campaigns in order to reach more people. Also it is recommended to include other areas for children's health such as mental health, nutrition and physical activity, school violence and other chronic conditions prevalent in this population.

Families with CSHCN

Three families with CSHCN provided their recommendations to be considered for the next Action Plan. Most of their recommendations emphasize the need to continue educating families and community on all topics (like for example transition to adult life) through activities and/or media campaigns. They also stressed the need of concrete training for young adults with disabilities that are considering to be incorporated on the workforce. In addition, in their input this families expressed that the implementation of the Tele Health System would be of great aid to all these families with CSHCN.

PUBLIC

Newspaper ad/Public Notices

An ad was published during May 30 and May 31, 2019, on 2 newspapers of wide circulation in the island, “El Vocero”, and, “Primera Hora”, requesting input from the general public. A copy of Puerto Rico Snapshot was available in the seven MCAH regional offices locates at Aguadilla-Mayaguez, Arecibo, Bayamón, Caguas, Fajardo, Ponce, and, San Juan along with past Title V Block Grant Proposal. People interested in reviewing and submitting recommendations had the opportunity to do so during June 6 and 7, 2019. Written recommendations were due June 14, 2019.

The snapshot was also posted in the Department of Health web page and provided a Google Form link for input:

http://www.salud.gov.pr/Pages/Home.aspx

Three people from the DOH and other government agencies requested to review the Title V Block Grant Proposal. As of June 14, 2019 no written recommendations have been received in the PRMCAH Central Office.

III.G. Technical Assistance

The Title V MCAH/CSHCN programs did not identified a specific area for TA at this moment. In the event of an emergent need, the proper request will be submitted.

IV. Title V-Medicaid IAA/MOU

The Title V-Medicaid IAA/MOU is uploaded as a PDF file to this section - MOU PRDOH AND ASES.pdf

V. Supporting Documents

The following supporting documents have been provided to supplement the narrative discussion.

Supporting Document #01 - ABBREVIATIONS MCAH 2019.pdf

Supporting Document #02 - Conditions under the Special Coverage of Heatlh (by ICD-10 Codes).pdf

Supporting Document #03 - Integrated Index of Maternal and Infant Health Status_PR 2017.pdf

Supporting Document #05 - CSHCN Success Story.pdf

VI. Organizational Chart

The Organizational Chart is uploaded as a PDF file to this section - Organizational Chart PR Department fo Health 2015 and MCAH_CSHCN 2019.pdf

VII. Appendix

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Form 2
MCH Budget/Expenditure Details

State: Puerto Rico

	FY 20 Application Budgeted	
1. FEDERAL ALLOCATION (Referenced items on the Application Face Sheet [SF-424] apply only to the Application Year)	$ 15,800,897	
A. Preventive and Primary Care for Children	$ 4,740,270	(30%)
B. Children with Special Health Care Needs	$ 5,530,314	(35%)
C. Title V Administrative Costs	$ 1,580,089	(10%)
2. Subtotal of Lines 1A-C (This subtotal does not include Pregnant Women and All Others)	$ 11,850,673	
3. STATE MCH FUNDS (Item 18c of SF-424)	$ 11,850,673	
4. LOCAL MCH FUNDS (Item 18d of SF-424)	$ 0	
5. OTHER FUNDS (Item 18e of SF-424)	$ 0	
6. PROGRAM INCOME (Item 18f of SF-424)	$ 228,880	
7. TOTAL STATE MATCH (Lines 3 through 6)	$ 12,079,553	
A. Your State's FY 1989 Maintenance of Effort Amount $ 10,226,318		
8. FEDERAL-STATE TITLE V BLOCK GRANT PARTNERSHIP SUBTOTAL (Total lines 1 and 7)	$ 27,880,450	
9. OTHER FEDERAL FUNDS Please refer to the next page to view the list of Other Federal Programs provided by the State on Form 2.		
10. OTHER FEDERAL FUNDS(Subtotal of all funds under item 9)	$ 17,325,276	
11. STATE MCH BUDGET/EXPENDITURE GRAND TOTAL (Partnership Subtotal + Other Federal MCH Funds Subtotal)	$ 45,205,726	

OTHER FEDERAL FUNDS	FY 20 Application Budgeted
Department of Health and Human Services (DHHS) > Administration for Children & Families (ACF) > State Personal Responsibility Education Program (PREP)	$ 518,999
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Birth Defects Tracking Systems	$ 170,000
Department of Health and Human Services (DHHS) > Centers for Medicare & Medicaid Services (CMS) > Pregnancy Risk Assessment Monitoring System (PRAMS)	$ 179,299
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Early Hearing Detection and Intervention (EHDI) State Programs	$ 250,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Zika Surveillance Systems Grant Program	$ 127,032
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > State Systems Development Initiative (SSDI)	$ 50,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Zika Maternal and Child Health Services Program	$ 2,279,380
Department of Health and Human Services (DHHS) > Centers for Medicare & Medicaid Services (CMS) > Zika Surveillance, Intervention and Referral to Services Program	$ 7,000,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Early Hearing Detection and Intervention (EHDI) State Programs	$ 147,373
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) Formula Grants	$ 1,266,400
US Department of Education > Office of Special Education Programs > Early Identification and Intervention for Infants and Toddlers with Disabilities (Part C of IDEA)	$ 3,464,595
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Puerto Rico partnership to support families affected by Zika	$ 150,000
Department of Health and Human Services (DHHS) > Administration for Children & Families (ACF) > Puerto Rico Sexual Risk Avoidance Education Program (PRSRAE)	$ 1,722,198

	FY 18 Annual Report Budgeted		FY 18 Annual Report Expended	
1. FEDERAL ALLOCATION (Referenced items on the Application Face Sheet [SF-424] apply only to the Application Year)	$ 15,636,032		$ 15,613,262	
A. Preventive and Primary Care for Children	$ 4,690,810	(30%)	$ 4,886,872	(31.2%)
B. Children with Special Health Care Needs	$ 5,472,611	(35%)	$ 6,302,365	(40.3%)
C. Title V Administrative Costs	$ 1,563,603	(10%)	$ 620,774	(4%)
2. Subtotal of Lines 1A-C (This subtotal does not include Pregnant Women and All Others)	$ 11,727,024		$ 11,810,011	
3. STATE MCH FUNDS (Item 18c of SF-424)	$ 11,727,024		$ 11,709,947	
4. LOCAL MCH FUNDS (Item 18d of SF-424)	$ 0		$ 0	
5. OTHER FUNDS (Item 18e of SF-424)	$ 0		$ 0	
6. PROGRAM INCOME (Item 18f of SF-424)	$ 300,713		$ 332,632	
7. TOTAL STATE MATCH (Lines 3 through 6)	$ 12,027,737		$ 12,042,579	
A. Your State's FY 1989 Maintenance of Effort Amount $ 10,226,318				
8. FEDERAL-STATE TITLE V BLOCK GRANT PARTNERSHIP SUBTOTAL (Total lines 1 and 7)	$ 27,663,769		$ 27,655,841	
9. OTHER FEDERAL FUNDS Please refer to the next page to view the list of Other Federal Programs provided by the State on Form 2.				
10. OTHER FEDERAL FUNDS (Subtotal of all funds under item 9)	$ 21,418,204		$ 16,020,171	
11. STATE MCH BUDGET/EXPENDITURE GRAND TOTAL (Partnership Subtotal + Other Federal MCH Funds Subtotal)	$ 49,081,973		$ 43,676,012	

OTHER FEDERAL FUNDS	FY 18 Annual Report Budgeted	FY 18 Annual Report Expended
Department of Health and Human Services (DHHS) > Administration for Children & Families (ACF) > State Abstinence Education Grant Program	$ 1,933,868	$ 1,909,439
Department of Health and Human Services (DHHS) > Administration for Children & Families (ACF) > State Personal Responsibility Education Program (PREP)	$ 526,622	$ 438,089
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Pregnancy Risk Assessment Monitoring System (PRAMS)	$ 815,000	$ 606,056
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > ACA Maternal, Infant and Early Childhood Home Visiting Program	$ 992,000	$ 976,409
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > State Systems Development Initiative (SSDI)	$ 100,000	$ 50,000
US Department of Education > Office of Special Education Programs > Early Identification and Intervention for Infants and Toddlers with Disabilities (Part C of IDEA)	$ 3,707,580	$ 4,001,609
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Universal Newborn Hearing Screening and Intervention	$ 250,000	$ 175,125
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Zika Maternal and Child Health Services Program	$ 5,775,761	$ 5,071,920
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Early Hearing Detection and Intervention (EHDI) State Programs	$ 147,373	$ 35,171
Department of Health and Human Services (DHHS) > Centers for Medicare & Medicaid Services (CMS) > Zika Surveillance, Intervention and Referral to Services Program	$ 7,000,000	$ 2,610,456
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Birth Defects and Developmental Disabilities	$ 170,000	$ 145,897

Form Notes for Form 2:

None

Field Level Notes for Form 2:

1.	**Field Name:**	**Federal Allocation, A. Preventive and Primary Care for Children:**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Reflects real expenditures. Working plans were implemented to enhance services for the preventive and primary care for children.	
2.	**Field Name:**	**Federal Allocation, B. Children with Special Health Care Needs:**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Reflects real expenditures. Working plans were implemented to enhance services for the Children with Special Health Care Needs.	
3.	**Field Name:**	**Federal Allocation, C. Title V Administrative Costs:**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Difference from Components A&B. Reflects real expenditures. Budgeted funds for administration were reassigned and invested in services provision for preventive and primary care for children.	
4.	**Field Name:**	**6. PROGRAM INCOME**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Reflects real program income. Working plans were implemented to enhance services.	

Data Alerts: None

Form 3a
Budget and Expenditure Details by Types of Individuals Served

State: Puerto Rico

I. TYPES OF INDIVIDUALS SERVED

IA. Federal MCH Block Grant	FY 20 Application Budgeted	FY 18 Annual Report Expended
1. Pregnant Women	$ 1,975,112	$ 1,901,625
2. Infants < 1 year	$ 1,975,112	$ 1,901,626
3. Children 1 through 21 Years	$ 4,740,270	$ 4,886,872
4. CSHCN	$ 5,530,314	$ 6,302,365
5. All Others	$ 0	$ 0
Federal Total of Individuals Served	$ 14,220,808	$ 14,992,488

IB. Non-Federal MCH Block Grant	FY 20 Application Budgeted	FY 18 Annual Report Expended
1. Pregnant Women	$ 2,580,322	$ 2,554,607
2. Infants < 1 year	$ 2,580,322	$ 2,554,607
3. Children 1 through 21 Years	$ 6,654,765	$ 6,588,446
4. CSHCN	$ 264,144	$ 367,544
5. All Others	$ 0	$ 0
Non-Federal Total of Individuals Served	$ 12,079,553	$ 12,065,204
Federal State MCH Block Grant Partnership Total	$ 26,300,361	$ 27,057,692

Form Notes for Form 3a:

None

Field Level Notes for Form 3a:

1.	**Field Name:**	**IA. Federal MCH Block Grant, 1. Pregnant Women**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: Lines IA.1 and IA. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the budget for this domain is divided in two as a proxy for each group.	
2.	**Field Name:**	**IA. Federal MCH Block Grant, 2. Infant < 1 Year**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: Lines IA.1 and IA. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the budget for this domain is divided in two as a proxy for each group.	
3.	**Field Name:**	**IB. Non-Federal MCH Block Grant, 1. Pregnant Women**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: Lines IB.1 and IB. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the budget for this domain is divided in two as a proxy for each group.	
4.	**Field Name:**	**IB. Non-Federal MCH Block Grant, 2. Infant < 1 Year**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: Lines IB.1 and IB. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the budget for this domain is divided in two as a proxy for each group.	
5.	**Field Name:**	**IB. Non-Federal MCH Block Grant, 5. All Others**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**

	Field Note: All other funds are included in the $12,079,553 reported at Non-Federal Total of Individuals Serve, since PRHIA is not able to provide the detail of the population served.	
6.	**Field Name:**	**IA. Federal MCH Block Grant, 1. Pregnant Women**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Lines IA.1 and IA. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the expenditures for this domain is divided in two as a proxy for each group.	
7.	**Field Name:**	**IA. Federal MCH Block Grant, 2. Infant < 1 Year**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Lines IA.1 and IA. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the expenditures for this domain is divided in two as a proxy for each group.	
8.	**Field Name:**	**IB. Non-Federal MCH Block Grant, 1. Pregnant Women**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Lines IB.1 and IB. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the expenditures for this domain is divided in two as a proxy for each group.	
9.	**Field Name:**	**IB. Non-Federal MCH Block Grant, 2. Infant < 1 Year**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: Lines IB.1 and IB. 2 belongs to one domain. It is difficult to determine specific allocation for each group because services are provided by the same staff. Therefore, the expenditures for this domain is divided in two as a proxy for each group.	

Data Alerts: None

Form 3b
Budget and Expenditure Details by Types of Services

State: Puerto Rico

II. TYPES OF SERVICES

IIA. Federal MCH Block Grant	FY 20 Application Budgeted	FY 18 Annual Report Expended
1. Direct Services	$ 557,876	$ 585,705
A. Preventive and Primary Care Services for all Pregnant Women, Mothers, and Infants up to Age One	$ 0	$ 0
B. Preventive and Primary Care Services for Children	$ 0	$ 0
C. Services for CSHCN	$ 557,876	$ 585,705
2. Enabling Services	$ 9,585,619	$ 9,597,903
3. Public Health Services and Systems	$ 5,657,402	$ 5,429,654
4. Select the types of Federally-supported "Direct Services", as reported in II.A.1. Provide the total amount of Federal MCH Block Grant funds expended for each type of reported service		
Pharmacy		$ 114,020
Physician/Office Services		$ 451,751
Hospital Charges (Includes Inpatient and Outpatient Services)		$ 0
Dental Care (Does Not Include Orthodontic Services)		$ 0
Durable Medical Equipment and Supplies		$ 19,934
Laboratory Services		$ 0
Direct Services Line 4 Expended Total		$ 585,705
Federal Total	$ 15,800,897	$ 15,613,262

IIB. Non-Federal MCH Block Grant	FY 20 Application Budgeted	FY 18 Annual Report Expended
1. Direct Services	$ 11,850,673	$ 11,709,947
A. Preventive and Primary Care Services for all Pregnant Women, Mothers, and Infants up to Age One	$ 5,160,644	$ 5,099,362
B. Preventive and Primary Care Services for Children	$ 6,655,117	$ 6,575,740
C. Services for CSHCN	$ 34,912	$ 34,845
2. Enabling Services	$ 228,880	$ 332,632
3. Public Health Services and Systems	$ 0	$ 0
4. Select the types of Non-Federally-supported "Direct Services", as reported in II.B.1. Provide the total amount of Non-Federal MCH Block Grant funds expended for each type of reported service		
Pharmacy		$ 32,828
Physician/Office Services		$ 1,322,228
Hospital Charges (Includes Inpatient and Outpatient Services)		$ 436,965
Dental Care (Does Not Include Orthodontic Services)		$ 8,573,184
Durable Medical Equipment and Supplies		$ 0
Laboratory Services		$ 1,344,742
Direct Services Line 4 Expended Total		$ 11,709,947
Non-Federal Total	$ 12,079,553	$ 12,042,579

Form Notes for Form 3b:

None

Field Level Notes for Form 3b:

1.	**Field Name:**	**IIA. Federal MCH Block Grant, 1. A. Preventive and Primary Care Services for all Pregnant Women,Mothers, and Infants up to Age One**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: MCAH FUNDS COMPONENTS A&B DO NOT PROVIDE DIRECT SERVICES WITH FEDERAL FUNDS. DIRECT SERVICES FOR THIS POPULATION ARE PROVIDED BY PRHIA.	
2.	**Field Name:**	**IIA. Federal MCH Block Grant, 1. B. Preventive and Primary Services for Children**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: MCAH FUNDS COMPONENTS A&B DO NOT PROVIDE DIRECT SERVICES WITH FEDERAL FUNDS. DIRECT SERVICES FOR THIS POPULATION ARE PROVIDED BY PRHIA.	
3.	**Field Name:**	**IIB. Non-Federal MCH Block Grant, 1. A. Preventive and Primary Care Services for all Pregnant Women,Mothers, and Infants up to Age One**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: MCAH COMPONENTS A&B- DIRECT SERVICES PROVIDED BY PRHIA. BUDGETED WITH FY15 FINAL DATA REPORTED BY PRHIA FOR THIS POPULATION.	
4.	**Field Name:**	**IIB. Non-Federal MCH Block Grant, 1. B. Preventive and Primary Services for Children**
	Fiscal Year:	**2020**
	Column Name:	**Application Budgeted**
	Field Note: MCAH COMPONENTS A&B- DIRECT SERVICES PROVIDED BY PRHIA. BUDGETED WITH FY17 FINAL DATA REPORTED BY PRHIA FOR THIS POPULATION.	
5.	**Field Name:**	**IIA. Federal MCH Block Grant, 1. A. Preventive and Primary Care Services for all Pregnant Women,Mothers, and Infants up to Age One**
	Fiscal Year:	**2018**

	Column Name:	**Annual Report Expended**
	Field Note: MCAH FUNDS COMPONENTS A&B DO NOT PROVIDE DIRECT SERVICES WITH FEDERAL FUNDS. DIRECT SERVICES FOR THIS POPULATION ARE PROVIDED BY PRHIA.	
6.	**Field Name:**	**IIA. Federal MCH Block Grant, 1. B. Preventive and Primary Services for Children**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: MCAH FUNDS COMPONENTS A&B DO NOT PROVIDE DIRECT SERVICES WITH FEDERAL FUNDS. DIRECT SERVICES FOR THIS POPULATION ARE PROVIDED BY PRHIA.	
7.	**Field Name:**	**IIB. Non-Federal MCH Block Grant, 1. A. Preventive and Primary Care Services for all Pregnant Women,Mothers, and Infants up to Age One**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: MCAH COMPONENTS A&B- DIRECT SERVICES PROVIDED BY PRHIA. EXPENDITURES COMPUTED WITH FY17 FINAL DATA REPORTED BY PRHIA FOR THIS POPULATION.	
8.	**Field Name:**	**IIB. Non-Federal MCH Block Grant, 1. B. Preventive and Primary Services for Children**
	Fiscal Year:	**2018**
	Column Name:	**Annual Report Expended**
	Field Note: MCAH COMPONENTS A&B- DIRECT SERVICES PROVIDED BY PRHIA. EXPENDITURES COMPUTED WITH FY17 FINAL DATA REPORTED BY PRHIA FOR THIS POPULATION.	

Form 4
Number and Percentage of Newborns and Others Screened Cases Confirmed and Treated

State: Puerto Rico

Total Births by Occurrence: 21,418 **Data Source Year: 2018**

1. Core RUSP Conditions

Program Name	(A) Aggregate Total Number Receiving at Least One Screen	(B) Aggregate Total Number Presumptive Positive Screens	(C) Aggregate Total Number Confirmed Cases	(D) Aggregate Total Number Referred for Treatment
Core RUSP Conditions	21,411 (100.0%)	239	41	41 (100.0%)

Program Name(s)				
Biotinidase Deficiency	Classic Galactosemia	Congenital Adrenal Hyperplasia	Cystic Fibrosis	Primary Congenital Hypothyroidism
S,S Disease (Sickle Cell Anemia)	Severe Combined Immunodeficiences			

2. Other Newborn Screening Tests

Program Name	(A) Number Receiving at Least One Screen	(B) Number Presumptive Positive Screens	(C) Number Confirmed Cases	(D) Number Referred for Treatment
Universal Hearing Screening Program	20,444 (95.5%)	685	49	49 (100.0%)

3. Screening Programs for Older Children & Women

None

4. Long-Term Follow-Up

The CSHCNP-HDDDTP Coordinator, in collaboration with the PR-Newborn Screening Program Genetic Counselor, monitors and follows-up families with positive confirmed newborns after they are referred for treatments. The purpose is to ensure newborns are receiving the health care they need and to support families.

Form Notes for Form 4:

None

Field Level Notes for Form 4:

1.	**Field Name:**	**Total Births by Occurrence**
	Fiscal Year:	**2018**
	Column Name:	**Total Births by Occurrence Notes**
	Field Note: 2018 Preliminary Data	
2.	**Field Name:**	**Data Source Year**
	Fiscal Year:	**2018**
	Column Name:	**Data Source Year Notes**
	Field Note: Preliminary Data	

Data Alerts: None

Form 5
Count of Individuals Served by Title V & Total Percentage of Populations Served by Title V

State: Puerto Rico

Annual Report Year 2018

Form 5a – Count of Individuals Served by Title V
(Direct & Enabling Services Only)

		Primary Source of Coverage				
Types Of Individuals Served	(A) Title V Total Served	(B) Title XIX %	(C) Title XXI %	(D) Private / Other %	(E) None %	(F) Unknown %
1. Pregnant Women	14,517	67.1	0.0	32.7	0.0	0.2
2. Infants < 1 Year of Age	7,526	70.0	0.0	29.0	1.0	0.0
3. Children 1 through 21 Years of Age	46,416	57.0	0.0	38.0	5.0	0.0
3a. Children with Special Health Care Needs	6,204	63.6	0.0	33.7	2.7	0.0
4. Others	7,744	43.0	0.0	49.0	8.0	0.0
Total	76,203					

Form 5b – Total Percentage of Populations Served by Title V
(Direct, Enabling, and Public Health Services and Systems)

Populations Served by Title V	Reference Data	Used Reference Data?	Denominator	Total % Served	Form 5b Count (Calculated)	Form 5a Count
1. Pregnant Women	27,250	No	21,482	100	21,482	14,517
2. Infants < 1 Year of Age	27,358	No	26,299	81	21,302	7,526
3. Children 1 through 21 Years of Age	819,208	No	779,916	52	405,556	46,416
3a. Children with Special Health Care Needs	Not Available	No	161,765	43	69,559	6,204
4. Others	2,505,261	No	2,488,411	36	895,828	7,744

Form Notes for Form 5:

Hurricane Maria, struck PR on September 20, 2017, inflicting catastrophic damage. Damage to the energy grid left 100% of the island without electricity. Almost 90% of the electric power was reestablished by February 2018. This means that for about five months the MCAH Program could not operate to all its capacity. Added to this, the loss of workforce due to migration to mainland in order to have better opportunities, has not allowed services for the FY 2017-18 to be provided as expected.

Field Level Notes for Form 5a:

1.	**Field Name:**	**Pregnant Women Total Served**
	Fiscal Year:	**2018**
	Field Note: Data Source: 1. Residents Live Births 2018 with GHP 2. Payment for postpartum visits 3. Pregnant participants of HVP with private health insurance or pay cash	
2.	**Field Name:**	**Infants Less Than One YearTotal Served**
	Fiscal Year:	**2018**
	Field Note: Data Source: 1. Well-visit Check-ups in children <1 year old of age covered with GHP as reported by ICO. 2. CSHCN (Infants) served in PR Pediatric and Autism Centers 3. Infants served by HVP. Note: 1. 5.8% of GHP for infants and children 1 to 21 years old are covered by SCHIP.	
3.	**Field Name:**	**Children 1 through 21 Years of Age**
	Fiscal Year:	**2018**
	Field Note: Data Source: 1. Well-visit Check-ups in children 1 to 21 years old of age covered with GHP as reported by ICO. 2. Adolescent served by CAHP. 3. CSHCN served in PR Pediatric and Autism Centers 4. Children served at the specialized pediatric clinics. 5. CSHCN who received coordination services by Title V State Level Coordinators. 6. Children who received services of the Catastrophic Disease Program. Note: 1. 5.8% of GHP for infants and children 1 to 21 years old are covered by SCHIP. 2. There may be children < 1 years of age among CSHCN served at the specialized pediatric clinics.	
4.	**Field Name:**	**Children with Special Health Care Needs**
	Fiscal Year:	**2018**

	Field Note: Data Source: 1. CSHCN served in PR Pediatric and Autism Centers 2. Children served at the specialized pediatric clinics. 3. CSHCN who received coordination services by Title V State Level Coordinators. 4. Children who received services of the Catastrophic Disease Program. Note: 1. 5.8% of GHP for infants and children 1 to 21 years old are covered by SCHIP. 2. There may be children < 1 years of age among CSHCN served at the specialized pediatric clinics.	
5.	**Field Name:**	**Others**
	Fiscal Year:	**2018**
	Field Note: Data Source: 1. Contraceptives distributed to unique partiicpants of GHP 2. Female sterilizations 3. Male sterilizations 4. Prenatal Course 5. Parenting Courses	

Field Level Notes for Form 5b:

1.	**Field Name:**	**Pregnant Women**
	Fiscal Year:	**2018**
	Field Note: Actual Percentage: 99.7% Data Source: 1. Campaign "El Encuentro de Mi Vida". Count all Residents Live Births 2018. Reference Data: 1. Demographic Registry Vital Statistics 2018.	
2.	**Field Name:**	**InfantsLess Than One Year**
	Fiscal Year:	**2018**
	Field Note: Actual Percentage: 81.4% Data Source: 1. Neonatal Screening Program 2017-2018. Reference data: 1. IDB, Census 2018	
3.	**Field Name:**	**Children 1 Through 21 Years of Age**

	Fiscal Year:	**2018**

Field Note:
Actual Percentage: 52.3%

Data Source:
1. Well-visit Check-ups in children 1 trhough 21 years of age as reported by ICO.
2. Children served by HVP
3. Children served by PR-PREP
4. Children served by the Abstinence Program
5. Children served by ACA
6. Children served by CAHP
7. Children served by CHW's
8. Children served by Health Educators
9. Children 1 to 3 years old served by PR Early Intervention (Part C of IDEA)
10. Media Campaign "Alcanza tu Nivel Máximo" including television, newspapers, radio, digital media (Facebook, Google, among others), cinemas and websites adds. This number represents children 14 to 21 years reached by these medias.

Reference data:
1. IDB, Census 2018

4.	**Field Name:**	**Children With Special Health Care Needs**
	Fiscal Year:	**2018**

Field Note:
Actual Percentage: 43.1%

Data Source:
1. CSHCN served in PR Pediatric (including Zika) and Autism Centers
2. Children who received services of the Catastrophic Disease Program
3. CSHCN insured by special and autism coverage of GHP (refer to Supporting Document for list of Conditions under the Special Health Care Coverage).
4. Apni’s family information web page.
5. Evidence of participants in educational activities carried out by: CSMND Health Specialist, PR-BDSPS, PR-HDDDTP and Act 220, 2012 (Law for the Welfare, Integration and Development of People with Autism) Educators.
6. Health activities carried out by the Fajardo and Metro PCs.

Note:
1. This number denotes a minimum of population served. There is still unavailable data from other sources like APNI’s collaborative reach-out activities, FESAs reach-out activities, and other collaborative reach-out activities which will be available to report in the future.

Reference Data:
1. PR-CSHCN Survey, 2015

5.	**Field Name:**	**Others**
	Fiscal Year:	**2018**

Field Note:
Actual Percentage: 36.1%

Data Source:
1. Contraceptives distributed to unique partiicpants of GHP
2. Female sterilizations
3. Male sterilizations
4. Prenatal and Parenting Courses.
5. Media Campaign "El Encuentro de mi Vida" including television, newspapers, radio, digital media (Facebook, Google, among others), cinemas and websites to men and women 22 to 49 years old.

Reference data:
1. IDB, Census 2018

Data Alerts: None

Form 6
Deliveries and Infants Served by Title V and Entitled to Benefits Under Title XIX

State: Puerto Rico

Annual Report Year 2018

I. Unduplicated Count by Race/Ethnicity

	(A) Total	(B) Non-Hispanic White	(C) Non-Hispanic Black or African American	(D) Hispanic	(E) Non-Hispanic American Indian or Native Alaskan	(F) Non-Hispanic Asian	(G) Non-Hispanic Native Hawaiian or Other Pacific Islander	(H) Non-Hispanic Multiple Race	(I) Other & Unknown
1. Total Deliveries in State	21,478	467	72	20,850	2	30	0	6	51
Title V Served	21,091	456	72	20,475	2	29	0	6	51
Eligible for Title XIX	14,171	306	48	13,759	1	19	0	4	34
2. Total Infants in State	26,299	572	88	25,530	2	37	0	7	63
Title V Served	21,091	456	72	20,475	2	29	0	6	51
Eligible for Title XIX	17,672	384	59	17,156	1	25	0	5	42

Form Notes for Form 6:

Race taxonomies in PR are constructed on the basis of phenotype traits such as texture of hair, skin tone, and lip and mouth shape. There is also a generalized denial of racial prejudice and discrimination in the island. Although Vital Statistics data reports race and ethnicity, it is not a reliable data because it depends on how the mother visualizes the color of her skin. People in PR may also opt to report their race as white (despite skin tone) due to an unstated contempt for everything associated with being dark or black skinned.

Field Level Notes for Form 6:

1.	**Field Name:**	**2. Total Infants in State**
	Fiscal Year:	**2018**
	Column Name:	**Total**

Field Note:
Preliminary birth data reports 21,418 births for 2018. However, 2018 International Database (Census) reports an estimate of 26,299 infants by 2018. The difference is more than the 10% of the births. For the last years, births in PR decreased significantly. We assume that one of the main reasons for this decrease is the Zika Virus and the exodus of puertorricans to the mainland due to the effects of Hurricane María during September 2017. Many pregnant women gave birth in the mainland and came back to the island once the situation stabilized.

This could explain why the difference between births and the infant population for 2017 is more than the expected 10%.

Form 7
State MCH Toll-Free Telephone Line and Other Appropriate Methods Data

State: Puerto Rico

A. State MCH Toll-Free Telephone Lines	2020 Application Year	2018 Annual Report Year
1. State MCH Toll-Free "Hotline" Telephone Number	(787) 765-2929 x4550	(787) 765-2929 x4550
2. State MCH Toll-Free "Hotline" Name	Línea Informativa Madres, Niños y Adolescentes	Línea Informativa Madres, Niños y Adolescentes
3. Name of Contact Person for State MCH "Hotline"	Dr. Manuel I. Vargas Bernal	Dr. Manuel I. Vargas Bernal
4. Contact Person's Telephone Number	(787) 765-2929 x4583	(787) 765-2929 x4583
5. Number of Calls Received on the State MCH "Hotline"		11,276

B. Other Appropriate Methods	2020 Application Year	2018 Annual Report Year
1. Other Toll-Free "Hotline" Names	Línea PAS	Línea PAS
2. Number of Calls on Other Toll-Free "Hotlines"		136,492
3. State Title V Program Website Address	www.salud.gov.pr	www.salud.gov.pr
4. Number of Hits to the State Title V Program Website		18,267
5. State Title V Social Media Websites	PR Department of Health Facebook, YAC on Facebook, Twitter and Instagram	Encuentro de mi Vida Campaign on Facebook (PR Department of Health Facebook), YAC on Facebook and Twitter
6. Number of Hits to the State Title V Program Social Media Websites		44,437

Form Notes for Form 7:

Youth Advisory Council Social Medias:
1. Facebook: Consejo Asesor Juvenil@CAJPR
2. Twitter@CAJSalud
3. Instagram/ Consejo Asesor Juvenil

Form 8
State MCH and CSHCN Directors Contact Information

State: Puerto Rico

1. Title V Maternal and Child Health (MCH) Director	
Name	Manuel I. Vargas Bernal
Title	MD, MPH
Address 1	PO BOX 70184
Address 2	
City/State/Zip	San Juan / PR / 00936
Telephone	(787) 765-2929
Extension	4550
Email	mivargas@salud.pr.gov

2. Title V Children with Special Health Care Needs (CSHCN) Director	
Name	Miguel Valencia Prado
Title	MD
Address 1	PO BOX 70184
Address 2	
City/State/Zip	San Juan / PR / 00936
Telephone	(787) 765-2929
Extension	4572
Email	mvalencia@salud.pr.gov

3. State Family or Youth Leader (Optional)	
Name	Coralaidee Jimenez Burgos
Title	Family Representative
Address 1	PO BOX 70184
Address 2	
City/State/Zip	San Juan / PR / 00936
Telephone	(787) 765-2929
Extension	4575
Email	coralaidee@salud.pr.gov

Form Notes for Form 8:

None

Form 9
List of MCH Priority Needs

State: Puerto Rico

Application Year 2020

No.	Priority Need
1.	Improve Women in Reproductive Age Health and Wellbeing including emergent conditions
2.	Improve birth outcomes
3.	Decrease Infant Mortality
4.	Improve Children Health and Wellbeing
5.	Improve adolescent health and wellbeing
6.	Increase the number of CSHCN who receive regular ongoing comprehensive health care within a medical home
7.	Increase the number of CSHCN aged 12 to 17 years who receive adequate support and services for their transition to adult health care
8.	Decrease the age when children at risk for Autism Spectrum Disorders (ASD) receive their first diagnostic evaluation
9.	Reduce the prevalence at birth of neural tube defects
10.	Implementation of health information technology (EHR and tele-health) to increase access to necessary health services, ensure consistent tracking and monitoring of CSHCN and improve CSHCN Program data

Form 9 State Priorities-Needs Assessment Year - Application Year 2016

No.	Priority Need	Priority Need Type (New, Replaced or Continued Priority Need for this five-year reporting period)	Rationale if priority need does not have a corresponding State or National Performance/Outcome Measure
1.	Improve WRA health and wellbeing	Continued	
2.	Improve birth outcomes	Replaced	
3.	Decrease Infant Mortality	New	
4.	Improve Children Health and Wellbeing	Replaced	
5.	Improve adolescent health and wellbeing	Replaced	
6.	Increase the number of CSHCN who receive regular ongoing comprehensive health care within a medical home	New	
7.	Increase the number of CSHCN aged 12 to 17 years who receive adequate support and services for their transition to adult health care	Continued	
8.	Decrease the age when children at risk for Autism Spectrum Disorders (ASD) receive their first diagnostic evaluation	New	
9.	Reduce the prevalence at birth of neural tube defects	Continued	Since 2004, the NTD birth prevalence in PR has remained relatively stable, 9.8 per 10,000 live births. This is higher than in the US, where the prevalence is 7 per 10,000 live births. Hispanics consistently had a higher prevalence of NTDs compared to other racial/ethnic groups. There remain opportunities for prevention among women with lower folic acid intakes to further reduce the prevalence of NTDs in Puerto Rico, as well as the infant mortality related to this birth defect.

No.	Priority Need	Priority Need Type (New, Replaced or Continued Priority Need for this five-year reporting period)	Rationale if priority need does not have a corresponding State or National Performance/Outcome Measure
10.	Improve CSHCN Program data capacity	New	This priority was chosen as the result of the needs assessment process itself. Data for Puerto Rico is not available from the National Survey of Children with Special Health Care Needs (NS-CSHCN) or the National Survey of Children's Health (NSCH). Data systems support service delivery, facilitates performance and outcome monitoring, fosters quality improvement, and helps cultivate political support for services. Gaining an in-depth understanding of CSHCN through exploring existing data sources, identifying missing data, and developing new data sources will allow the DOH to identify gaps in services and to better assist the CSHCN community throughout the island.

Form Notes for Form 9:

None

Field Level Notes for Form 9:

None

Form 10
National Outcome Measures (NOMs)

State: Puerto Rico

Form Notes for Form 10 NPMs, NOMs, SPMs, SOMs, and ESMs.

None

NOM 1 - Percent of pregnant women who receive prenatal care beginning in the first trimester

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	81.5 %	0.3 %	19,792	24,280
2016	81.3 %	0.2 %	22,950	28,245
2015	81.9 %	0.2 %	25,415	31,050
2014	81.0 %	0.2 %	27,723	34,227
2013	77.2 %	0.2 %	27,969	36,243
2012	74.8 %	0.2 %	28,947	38,696
2011	76.2 %	0.2 %	31,073	40,800
2010	76.4 %	0.2 %	31,923	41,805
2009	74.4 %	0.2 %	33,098	44,501

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

State Provided Data	
	2018
Annual Indicator	83.3
Numerator	17,499
Denominator	21,005
Data Source	Vital Statistics
Data Source Year	2018

NOM 1 - Notes:

Numerator and Denominator: 2018 Vital Statistics.
2018 Vital Statistics data is preliminary.
Missing data excluded from denominator.

Data Alerts: None

NOM 2 - Rate of severe maternal morbidity per 10,000 delivery hospitalizations

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	325.1
Numerator	691
Denominator	21,252
Data Source	ICO, PRHIA and Vital Statistics
Data Source Year	2017-18

NOM 2 - Notes:

Numerator: Insurance Commissioner Office (ICO) and the Puerto Rico Health Insurance Administration (PRHIA), 2017-2018.
Denominator: 2018 Vital Statistics.
2018 Vital Statistics data is preliminary.

Data Alerts: None

NOM 3 - Maternal mortality rate per 100,000 live births

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	46.7
Numerator	10
Denominator	21,422
Data Source	Vital Statistics
Data Source Year	2018

NOM 3 - Notes:

Numerator and Denominator: 2018 Vital Statistics.

Data Alerts: None

NOM 4 - Percent of low birth weight deliveries (<2,500 grams)

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	10.5 %	0.2 %	2,556	24,307
2016	10.2 %	0.2 %	2,885	28,243
2015	10.5 %	0.2 %	3,282	31,142
2014	10.8 %	0.2 %	3,713	34,405
2013	10.5 %	0.2 %	3,846	36,473
2012	11.6 %	0.2 %	4,501	38,888
2011	12.5 %	0.2 %	5,119	40,909
2010	12.6 %	0.2 %	5,304	42,064
2009	12.4 %	0.2 %	5,525	44,709

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	10.3
Numerator	2,211
Denominator	21,418
Data Source	Vital Statistics
Data Source Year	2018

NOM 4 - Notes:

Numerator and Denominator: 2018 Vital Statistics.
2018 Vital Statistics data is preliminary.
Missing data excluded form denominator.

Data Alerts: None

NOM 5 - Percent of preterm births (<37 weeks)

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	11.4 %	0.2 %	2,783	24,308
2016	11.5 %	0.2 %	3,248	28,254
2015	11.4 %	0.2 %	3,547	31,145
2014	11.8 %	0.2 %	4,066	34,397
2013	11.2 %	0.2 %	4,069	36,354
2012	13.2 %	0.2 %	5,101	38,781
2011	17.4 %	0.2 %	7,127	40,937
2010	16.7 %	0.2 %	6,998	41,940
2009	17.6 %	0.2 %	7,871	44,664

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

State Provided Data	
	2018
Annual Indicator	11.9
Numerator	2,549
Denominator	21,414
Data Source	Vital Statistics
Data Source Year	2018

NOM 5 - Notes:

Numerator and Denominator: 2018 Vital Statistics.
2018 Vital Statistics data in preliminary.
Missing data excluded from denominator.

Data Alerts: None

NOM 6 - Percent of early term births (37, 38 weeks)

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	34.7 %	0.3 %	8,445	24,308
2016	35.6 %	0.3 %	10,060	28,254
2015	37.1 %	0.3 %	11,545	31,145
2014	38.7 %	0.3 %	13,313	34,397
2013	40.9 %	0.3 %	14,861	36,354
2012	44.8 %	0.3 %	17,390	38,781
2011	43.3 %	0.2 %	17,719	40,937
2010	45.6 %	0.2 %	19,108	41,940
2009	45.2 %	0.2 %	20,181	44,664

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	35.1
Numerator	7,524
Denominator	21,414
Data Source	Vital Statistics
Data Source Year	2018

NOM 6 - Notes:

Numerator and Denominator: 2018 Vital Statistics.
2018 Vital Statistics data is preliminary.
Missing data excluded from denominator.

Data Alerts: None

NOM 7 - Percent of non-medically indicated early elective deliveries

Data Source: CMS Hospital Compare

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017/Q2-2018/Q1	9.0 %			
2017/Q1-2017/Q4	8.0 %			
2016/Q4-2017/Q3	6.0 %			
2016/Q3-2017/Q2	5.0 %			
2016/Q2-2017/Q1	5.0 %			
2016/Q1-2016/Q4	5.0 %			
2015/Q4-2016/Q3	6.0 %			
2015/Q3-2016/Q2	8.0 %			
2015/Q2-2016/Q1	11.0 %			
2015/Q1-2015/Q4	13.0 %			
2014/Q4-2015/Q3	16.0 %			
2014/Q3-2015/Q2	18.0 %			
2014/Q2-2015/Q1	20.0 %			
2014/Q1-2014/Q4	30.0 %			
2013/Q4-2014/Q3	31.0 %			
2013/Q3-2014/Q2	32.0 %			
2013/Q2-2014/Q1	44.0 %			

Legends:

Indicator results were based on a shorter time period than required for reporting

NOM 7 - Notes:

None

Data Alerts: None

NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	8.0	0.5	226	28,382
2015	6.5	0.5	204	31,269
2014	7.9	0.5	272	34,580
2013	7.5	0.5	275	36,641
2012	8.3	0.5	326	39,054
2011	8.6	0.5	355	41,262
2010	7.5	0.4	317	42,313
2009	8.0	0.4	359	44,944

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	6.8
Numerator	147
Denominator	21,503
Data Source	Vital Statistics
Data Source Year	2018

NOM 8 - Notes:

Numerator and Denominator: 2018 Vital Statistics.

Data Alerts: None

NOM 9.1 - Infant mortality rate per 1,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	7.6	0.5	215	28,257
2015	7.0	0.5	217	31,157
2014	7.0	0.5	240	34,434
2013	7.1	0.4	259	36,486
2012	9.2	0.5	358	38,900
2011	8.4	0.5	344	41,080
2010	7.4	0.4	314	42,153
2009	7.7	0.4	346	44,773

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	6.6
Numerator	141
Denominator	21,422
Data Source	Vital Statistics
Data Source Year	2018

NOM 9.1 - Notes:

Numerator and Denominator: 2018 Vital Statistics.

Data Alerts: None

NOM 9.2 - Neonatal mortality rate per 1,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	5.1	0.4	145	28,257
2015	4.6	0.4	142	31,157
2014	4.9	0.4	168	34,434
2013	4.8	0.4	175	36,486
2012	6.5	0.4	251	38,900
2011	6.0	0.4	246	41,080
2010	5.3	0.4	223	42,153
2009	5.9	0.4	263	44,773

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	4.2
Numerator	90
Denominator	21,422
Data Source	Vital Statistics
Data Source Year	2018

NOM 9.2 - Notes:

Numerator and Denominator: 2018 Vital Statistics.

Data Alerts: None

NOM 9.3 - Post neonatal mortality rate per 1,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	2.5	0.3	70	28,257
2015	2.4	0.3	75	31,157
2014	2.1	0.3	72	34,434
2013	2.3	0.3	84	36,486
2012	2.8	0.3	107	38,900
2011	2.4	0.2	98	41,080
2010	2.2	0.2	91	42,153
2009	1.9	0.2	83	44,773

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	2.4
Numerator	52
Denominator	21,422
Data Source	Vital Statistics
Data Source Year	2018

NOM 9.3 - Notes:

Numerator and Denominator: 2018 Vital Statistics.

Data Alerts: None

NOM 9.4 - Preterm-related mortality rate per 100,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	244.2	29.4	69	28,257
2015	224.7	26.9	70	31,157
2014	232.3	26.0	80	34,434
2013	227.5	25.0	83	36,486
2012	352.2	30.1	137	38,900
2011	287.2	26.5	118	41,080
2010	237.2	23.8	100	42,153
2009	281.4	25.1	126	44,773

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	270.6
Numerator	66
Denominator	24,390
Data Source	Vital Statistics
Data Source Year	2017

NOM 9.4 - Notes:

Numerator and denominator: 2017 Vital Statistics
2018 data is not available for this indicator.

Data Alerts: None

NOM 9.5 - Sleep-related Sudden Unexpected Infant Death (SUID) rate per 100,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	63.7	15.0	18	28,257
2015	51.4	12.8	16	31,157
2014	58.1	13.0	20	34,434
2013	NR	NR	NR	NR
2012	NR	NR	NR	NR
2011	NR	NR	NR	NR
2010	NR	NR	NR	NR
2009	NR	NR	NR	NR

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 9.5 - Notes:

None

Data Alerts: None

NOM 10 - The percent of infants born with fetal alcohol exposure in the last 3 months of pregnancy

Federally available Data (FAD) for this measure is not available/reportable.

NOM 10 - Notes:

PR PRAMS does not include fetal alcohol exposure in the last 3 months of pregnancy and is not included as part of the Jurisdictional Survey. Paid bills for ICD-10 Code "Q 86.0" will be requested to PRHIA and HICO as a proxy for next year.

Data Alerts:

1.	Data has not been entered for NOM 10. This outcome measure is linked to the selected NPM 1,. Please add a field level note to explain when and how data will be available for tracking this outcome measure.

NOM 11 - The rate of infants born with neonatal abstinence syndrome per 1,000 hospital births

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	1.3
Numerator	27
Denominator	21,302
Data Source	ICO, PRHIA and Vital Statistics
Data Source Year	2017-2018

NOM 11 - Notes:

Numerator: Insurance Commissioner Office (ICO) and the Puerto Rico Health Insurance Administration (PRHIA), 2017-2018.
Denominator: 2018 Vital Statistics.
2018 Vital Statistics data is preliminary.

Data Alerts: None

NOM 12 - Percent of eligible newborns screened for heritable disorders with on time physician notification for out of range screens who are followed up in a timely manner. (DEVELOPMENTAL)

Federally available Data (FAD) for this measure is not available/reportable.

NOM 12 - Notes:

None

Data Alerts: None

NOM 13 - Percent of children meeting the criteria developed for school readiness (DEVELOPMENTAL)

Federally available Data (FAD) for this measure is not available/reportable.

NOM 13 - Notes:

None

Data Alerts: None

NOM 14 - Percent of children, ages 1 through 17, who have decayed teeth or cavities in the past year

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	17.8
Numerator	106,955
Denominator	600,429
Data Source	PRHIA, ICO and US Census
Data Source Year	2017-18

NOM 14 - Notes:

PR does not participate in the National Survey of Children's Health. Data is requested to the PR Health Insurance Administration (PRHIA) and the Insurance Commissioner Office (ICO) according to the HCPCS- codes codes for decayed teeth.

Denominator: 2018 International Database (IDB), US Census.

Data Alerts: None

NOM 15 - Child Mortality rate, ages 1 through 9, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	12.6	2.0	38	302,310
2016	17.1	2.3	55	321,534
2015	11.7	1.9	40	341,739
2014	11.9	1.8	43	360,447
2013	14.3	1.9	54	378,778
2012	11.5	1.7	45	390,179
2011	17.1	2.1	69	402,813
2010	11.0	1.6	46	416,894
2009	16.7	2.0	72	430,868

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	10.7
Numerator	30
Denominator	279,502
Data Source	Vital Statistics, US Census
Data Source Year	2018

NOM 15 - Notes:

Numerator: Vital Statistics 2018
Denominator: PRCS Population Estimates, 2018.US Census

Data Alerts: None

NOM 16.1 - Adolescent mortality rate ages 10 through 19, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	26.7	2.5	113	423,618
2016	26.5	2.5	117	441,778
2015	30.4	2.6	140	460,315
2014	31.1	2.6	149	478,818
2013	33.9	2.6	171	503,974
2012	39.3	2.8	205	521,058
2011	43.6	2.9	234	536,795
2010	36.5	2.6	201	550,303
2009	43.4	2.8	244	562,264

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	28.1
Numerator	112
Denominator	397,997
Data Source	Vital Statistics, US Census
Data Source Year	2018

NOM 16.1 - Notes:

Numerator: Vital Statistics 2018
Denominator: PRCS Population Estimates, 2018.US Census

Data Alerts: None

NOM 16.2 - Adolescent motor vehicle mortality rate, ages 15 through 19, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2015_2017	4.0	0.6	53	1,325,563
2014_2016	9.3	1.1	68	729,318
2013_2015	8.7	1.1	66	755,567
2012_2014	7.8	1.0	61	778,951
2011_2013	8.3	1.0	67	808,534
2010_2012	9.1	1.1	75	828,627
2009_2011	10.6	1.1	90	847,317
2008_2010	10.8	1.1	93	863,092
2007_2009	13.3	1.2	116	874,158

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	7.6
Numerator	16
Denominator	210,483
Data Source	Vital Statistics, US Census
Data Source Year	2018

NOM 16.2 - Notes:

Numerator: Vital Statistics 2018
Denominator: PRCS Population Estimates, 2018.US Census

Data Alerts: None

NOM 16.3 - Adolescent suicide rate, ages 15 through 19, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2015_2017	1.4	0.3	19	1,325,563
2014_2016	2.3	0.6	17	729,318
2013_2015	2.4	0.6	18	755,567
2012_2014	2.8	0.6	22	778,951
2011_2013	2.7	0.6	22	808,534
2010_2012	2.8	0.6	23	828,627
2009_2011	2.8	0.6	24	847,317
2008_2010	3.6	0.7	31	863,092
2007_2009	3.3	0.6	29	874,158

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	1.4
Numerator	3
Denominator	210,483
Data Source	Vital Statistics, US Census
Data Source Year	2018

NOM 16.3 - Notes:

Numerator: Vital Statistics 2018
Denominator: PRCS Population Estimates, 2018.US Census

Data Alerts: None

NOM 17.1 - Percent of children with special health care needs (CSHCN), ages 0 through 17

Federally available Data (FAD) for this measure is not available/reportable.

NOM 17.1 - Notes:

None

Data Alerts: None

NOM 17.2 - Percent of children with special health care needs (CSHCN), ages 0 through 17, who receive care in a well-functioning system

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	17.4
Numerator	22,734
Denominator	130,489
Data Source	PR-CSHCN Survey
Data Source Year	2015

NOM 17.2 - Notes:

This is the percent of CYSHCN ages 0 through 17 that received all components of a well-functioning system: family partnership, medical home, early screening, adequate insurance, easy access to services, and preparation to adult transition.
Final data.

Data Alerts: None

NOM 17.3 - Percent of children, ages 3 through 17, diagnosed with an autism spectrum disorder

Federally available Data (FAD) for this measure is not available/reportable.

NOM 17.3 - Notes:

None

Data Alerts: None

NOM 17.4 - Percent of children, ages 3 through 17, diagnosed with Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD)

Federally available Data (FAD) for this measure is not available/reportable.

NOM 17.4 - Notes:

None

Data Alerts: None

NOM 18 - Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	90.1
Numerator	79,066
Denominator	87,754
Data Source	BRFSS
Data Source Year	2017

NOM 18 - Notes:

PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. This data is provided by parents.

Data reported is from PR BRFSS 2017.

Data Alerts: None

NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	66.5
Numerator	416,745
Denominator	626,728
Data Source	BRFSS
Data Source Year	2017

NOM 19 - Notes:

PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS.

Data reported is from PR BRFSS 2017.

Data Alerts: None

NOM 20 - Percent of children, ages 2 through 4, and adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)

Data Source: WIC

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2014	13.9 %	0.1 %	10,292	74,118
2012	15.7 %	0.1 %	12,826	81,751
2010	20.3 %	0.2 %	14,321	70,699
2008	18.9 %	0.1 %	15,349	81,321

Legends:

Indicator has a denominator <50 or a relative standard error ≥30% and is not reportable

Indicator has a confidence interval width >20% and should be interpreted with caution

Data Source: Youth Risk Behavior Surveillance System (YRBSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	11.2 %	1.0 %	11,072	99,102
2015	10.7 %	0.9 %	12,019	112,095
2013	10.8 %	0.8 %	12,430	114,685
2011	11.7 %	1.0 %	14,108	120,107
2005	11.8 %	0.7 %	19,792	168,168

Legends:

Indicator has an unweighted denominator <100 and is not reportable

Indicator has a confidence interval width >20% points or >1.2 times the estimate and should be interpreted with caution

NOM 20 - Notes:

None

Data Alerts: None

NOM 21 - Percent of children, ages 0 through 17, without health insurance

Data Source: American Community Survey (ACS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	3.3 %	0.5 %	21,486	656,804
2016	3.1 %	0.4 %	21,359	695,772
2015	2.7 %	0.3 %	19,890	737,310
2014	3.2 %	0.3 %	24,416	772,570
2013	3.5 %	0.3 %	28,247	813,865
2012	4.3 %	0.4 %	36,271	849,263
2011	4.0 %	0.4 %	34,677	876,289
2010	4.5 %	0.3 %	39,980	897,649
2009	4.2 %	0.3 %	40,271	963,572

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 21 - Notes:

None

Data Alerts: None

NOM 22.1 - Percent of children, ages 19 through 35 months, who completed the combined 7-vaccine series (4:3:1:3*:3:1:4)

Data Source: National Immunization Survey (NIS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	64.4 %	3.4 %	29,723	46,176
2015	61.0 %	4.1 %	30,576	50,148
2014	60.3 %	4.9 %	32,747	54,350

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval half-width/estimate > 0.6

Estimates with 95% confidence interval half-widths > 10 might not be reliable

NOM 22.1 - Notes:

None

Data Alerts: None

NOM 22.2 - Percent of children, ages 6 months through 17 years, who are vaccinated annually against seasonal influenza

Data Source: National Immunization Survey (NIS) - Flu

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016_2017	40.3 %	1.4 %	270,515	671,752
2015_2016	41.5 %	1.6 %	307,288	739,740
2014_2015	37.2 %	2.1 %	274,859	739,862

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval half-width/estimate > 0.6

Estimates with 95% confidence interval half-widths > 10 might not be reliable

NOM 22.2 - Notes:

None

Data Alerts: None

NOM 22.3 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the HPV vaccine

Data Source: National Immunization Survey (NIS) - Teen

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	75.8 %	2.7 %	170,935	225,560
2015	72.6 %	3.0 %	170,973	235,623

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval half-width/estimate > 0.6

Estimates with 95% confidence interval half-widths > 10 might not be reliable

NOM 22.3 - Notes:

None

Data Alerts: None

NOM 22.4 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the Tdap vaccine

Data Source: National Immunization Survey (NIS) - Teen

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	91.2 %	1.6 %	205,718	225,560
2015	82.5 %	2.6 %	194,328	235,623
2014	81.7 %	3.7 %	202,898	248,374

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval half-width/estimate > 0.6

Estimates with 95% confidence interval half-widths > 10 might not be reliable

NOM 22.4 - Notes:

None

Data Alerts: None

NOM 22.5 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the meningococcal conjugate vaccine

Data Source: National Immunization Survey (NIS) - Teen

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2016	89.2 %	1.9 %	201,246	225,560
2015	87.9 %	2.2 %	207,210	235,623
2014	83.5 %	3.4 %	207,377	248,374

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval half-width/estimate > 0.6

Estimates with 95% confidence interval half-widths > 10 or that are inestimable might not be reliable

NOM 22.5 - Notes:

None

Data Alerts: None

NOM 23 - Teen birth rate, ages 15 through 19, per 1,000 females

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017	24.2	0.5	2,650	109,611
2016	29.6	0.5	3,389	114,472
2015	33.8	0.5	4,013	118,620
2014	40.1	0.6	4,901	122,069
2013	44.9	0.6	5,706	127,075
2012	49.3	0.6	6,456	130,895
2011	52.4	0.6	7,031	134,268
2010	51.7	0.6	7,170	138,682
2009	56.5	0.6	7,992	141,571

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

State Provided Data

	2018
Annual Indicator	18.6
Numerator	1,932
Denominator	104,056
Data Source	Vital Statistics and International Database
Data Source Year	2018

NOM 23 - Notes:

Numerator: 2018 birth certificate data is preliminary.
Denominator: 2018 International Database, US Census.

Data Alerts: None

NOM 24 - Percent of women who experience postpartum depressive symptoms following a recent live birth

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data	
	2018
Annual Indicator	14.0
Numerator	2,214
Denominator	15,806
Data Source	PR PRAMS
Data Source Year	2017

NOM 24 - Notes:

Numerator and denominator: PR PRAMS 2017

Data Alerts: None

NOM 25 - Percent of children, ages 0 through 17, who were not able to obtain needed health care in the last year

Federally available Data (FAD) for this measure is not available/reportable.

NOM 25 - Notes:

PR does not participates in the National Survey of Children's Health (NSCH)

Data Alerts:

1.	Data has not been entered for NOM 25. This outcome measure is linked to the selected NPM 11,. Please add a field level note to explain when and how data will be available for tracking this outcome measure.

Form 10
National Performance Measures (NPMs)

State: Puerto Rico

NPM 1 - Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Federally Available Data			
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)			
	2016	**2017**	**2018**
Annual Objective	71.5	72.4	77.8
Annual Indicator	75.6	77.7	78.9
Numerator	500,771	509,399	487,822
Denominator	662,076	655,595	618,458
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2015	2016	2017

Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	79.7	80.5	81.3	82.1	82.9	83.7

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
Average Annual Percent Change (AAPC) shows an increase of 1.2% for the following years, however there is a possible budget reduction for PR GHP, therefore annual objectives were calculated taking under consideration 0.8% increase for each year until 2024.
Source: BRFSS 2017.

NPM 3 - Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective	70.8	74.8	29.5
Annual Indicator	74.4	57.9	51.5
Numerator	285	205	157
Denominator	383	354	305
Data Source	Vital Statistics	Vital Statistics	Vital Statistics
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	51.6	51.7	51.8	51.9	52.0	52.1

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: Numerator and Denominator: 2016 Vital Statistics. 2016 Vital Statistics data in preliminary. Missing data excluded from denominator.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: Numerator and Denominator: 2017 Vital Statistics. Missing data excluded from denominator. Note: LOCATe assessment tool was used to identify hospitals with a Level III+ NICU.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: Numerator and Denominator: 201 8Vital Statistics. 2018 Vital Statistics data in preliminary. Missing data excluded from denominator. Note: LOCATe assessment tool was used to identify hospitals with a Level III+ NICU for 2017 and 2018. This assessment started in 2017 and finished in 2018. Annual Objective of 2018 was based on the preliminary assessment started in 2017. Once the assessment was completed, the Annual Objectives 2019 to 2024 were calculated .	
4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: LOCATe was implemented in 2017 and only 2 years data is available. Currently in PR there is no regionalization system and after PR MCAH visited the participating institutions they are under transition for better services according to their level of care. Annual objectives were calculated considering a 0.1% increase of VLBW in Level III+ until 2024. Source: Vital Statistics 2018 Vital Statistics data is preliminary.	

NPM 4A - Percent of infants who are ever breastfed

Federally Available Data			
Data Source: National Immunization Survey (NIS)			
	2016	**2017**	**2018**
Annual Objective	88	83	83.5
Annual Indicator	82.7	81.9	85.9
Numerator	25,467	25,075	21,344
Denominator	30,787	30,611	24,861
Data Source	NIS	NIS	NIS
Data Source Year	2013	2014	2015

State Provided Data			
	2016	**2017**	**2018**
Annual Objective	88	83	83.5
Annual Indicator	94.8	96.6	96.3
Numerator	26,807	23,509	20,631
Denominator	28,266	24,328	21,418
Data Source	Vital Statistics	Vital Statistics	Vital Statistics
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	90.0	95.0	95.0	95.0	95.0	95.0

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**

Field Note:
Numerator and Denominator: 2016 Vital Statistics.

2016 Vital Statistics data in preliminary.

Missing data excluded from denominator.

2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**

Field Note:
Numerator and Denominator: 2017 Vital Statistics.
Missing data excluded from denominator.

3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**

Field Note:
Numerator and Denominator: 2018 Vital Statistics.
2018 Vital Statistics data in preliminary.
Missing data excluded from denominator.

Note:
There is a difference in the annual indicator reported for the percent of infants ever breastfed between the federally available data (obtained from the Immunization Survey) and the state provided data (Obtained from Puerto Rico Vital Statistics) because they report different years. The federal data is from 2015 and the state data is for 2016 to 2018.

4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
According to 2018 VS data ever breastfed rate is over 95%. Annual objectives were calculated considering that NIS data will attain what is reported in VS and remain in 95% for the rest of the years.
Source: Vital Statistics
2018 Vital Statistics data is preliminary.

NPM 4B - Percent of infants breastfed exclusively through 6 months

Federally Available Data			
Data Source: National Immunization Survey (NIS)			
	2016	**2017**	**2018**
Annual Objective	19.7	21.2	20.6
Annual Indicator	20.1	20.1	26.5
Numerator	6,133	6,093	6,531
Denominator	30,551	30,260	24,618
Data Source	NIS	NIS	NIS
Data Source Year	2013	2014	2015

Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	27.9	29.4	30.9	32.6	34.3	36.1

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
AAPC from 2013 to 2015 was calculated to estimate Annual Performance objectives 2019 to 2024.
Source: NIS 2015

NPM 10 - Percent of adolescents, ages 12 through 17, with a preventive medical visit in the past year.

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			76.1
Annual Indicator	76	76	72.3
Numerator	179,519	179,519	174,840
Denominator	236,100	236,100	241,976
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2016	2016	2017
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	72.3	72.3	72.4	72.4	72.5	72.5

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. Data reported from PR BRFSS 2016.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. Provisional data reported from PR BRFSS 2016, 2017 final data will be reported by 2019.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. Provisional data reported from PR BRFSS 2017. This will be the last data reported from PR BRFSS since it will be included in the Jurisdictional Survey.	
4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. This is the second and last year of reporting BRFSS data, Average Annual Percent Change cannot be estimated. Annual objectives were calculated considering an increase of 0.1% every two years. This indicator was included in the Jurisdictional Survey that will be performed in PR by 2020. Source: BRFSS 2017	

NPM 11 - Percent of children with and without special health care needs, ages 0 through 17, who have a medical home - Children with Special Health Care Needs

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			31.6
Annual Indicator	30.8	30.8	30.8
Numerator	46,505	46,505	46,505
Denominator	150,935	150,935	150,935
Data Source	PR-CSHCN Survey	PR-CSHCN Survey	PR-CSHCN Survey
Data Source Year	2015	2015	2015
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	32.4	33.2	33.9	34.6	35.3	36.0

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: Data is based on the 2015 PRS-CSHCN Survey data. Survey participants were from the CYSHCN population and there was no representation of children without special health care needs.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: Data is based on the PR-CYSHCN Survey (2015). There is no representation of typical youth in the 2015 NPM indicator.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: Data is based on the PR-CSHCN Survey (2015). There is no representation of typical children in the 2015 NPM indicator.	
4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: Objectives are based om the PR-CYSHCN Survey (2015). There is no representation of typical children in the 2015 NPM 11 indicator. Objectives may change when obtaining results from the Jurisdictional Survey.	

NPM 12 - Percent of adolescents with and without special health care needs, ages 12 through 17, who received services necessary to make transitions to adult health care - Children with Special Health Care Needs

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			25.3
Annual Indicator	24.7	24.7	24.7
Numerator	16,226	16,226	16,226
Denominator	65,560	65,560	65,560
Data Source	PR-CSHCN Survey	PR-CSHCN Survey	PR-CSHCN Survey
Data Source Year	2015	2015	2015
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	26.0	26.6	27.2	27.8	28.4	28.8

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: Data is based on the 2015 PRS-CSHCN Survey data. Survey participants were from the CYSHCN population and there was no representation of adolescents without special health care needs.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: Data is based on the PR-CYSHCN Survey (2015). There is no representation of typical youth in the 2015 NPM indicator.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: Data is based on the PR-CYSHCN Survey (2015). There is no representation of typical youth in the 2015 NPM indicator.	
4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: Objectives are based on the PR-CYSHCN Survey (2015) results. There is no representation of typical youth in the 2015 NPM indicator. Objectives may change when obtaining results from the Jurisdictional Survey.	

NPM 13.2 - Percent of children, ages 1 through 17, who had a preventive dental visit in the past year - Child Health

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data			
	2016	2017	2018
Annual Objective			75.7
Annual Indicator	75.7	75.7	72.3
Numerator	519,746	519,746	433,883
Denominator	686,290	686,290	600,429
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2016	2016	2017
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	72.3	72.3	72.4	72.4	72.5	72.5

Field Level Notes for Form 10 NPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. Data reported from PR BRFSS 2016.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. Provisional data reported from PR BRFSS 2016, 2017 final data will be reported by 2019.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. Provisional data reported from PR BRFSS 2017. This will be the last data reported from PR BRFSS since it will be included in the Jurisdictional Survey.	
4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. This is the second and last year of reporting BRFSS data, Average Annual Percent Change cannot be estimated. Annual objectives were calculated considering an increase of 0.1% every two years. This indicator was included in the Jurisdictional Survey that will be performed in PR by 2020. Source: BRFSS 2017	

Form 10
State Performance Measures (SPMs)

State: Puerto Rico

SPM 1 - Percent of cesarean deliveries among low-risk first births

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		39.7	40.5
Annual Indicator	40.2	40.9	41.5
Numerator	3,865	3,357	3,125
Denominator	9,618	8,209	7,524
Data Source	Vital Statistics	Vital Statistics	Vital Statistics
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	41.1	40.8	40.4	40.1	39.8	39.4

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: Numerator and denominator: 2016 Vital Statistics.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: Numerator and denominator: 2017 Vital Statistics.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: Numerator and denominator: 2018 Vital Statistics. 2018 Vital Statistics data is preliminary. Note: Many hospitals in PR has implemented the Hard Stop Policy (HSP). Recently, a champion of the HSP of the leading birthing hospital in the Island passed away. This resulted in a significant increase of the early elective delivery in this hospital. This may be one one of the reasons for the slight increase of low risk C/S in PR.	
4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: AAPC from 2005 to 2018 was calculated to estimate Annual Performance objectives 2019 to 2024. Source: Vital Statistics 2018 Vital Statistics data is preliminary.	

SPM 2 - Percent of children with a preventive services visit in the last year

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		6.6	79.5
Annual Indicator	79.4	79.4	85.8
Numerator	357,484	357,484	307,621
Denominator	450,190	450,190	358,453
Data Source	BRFSS	BRFSS	BRFSS
Data Source Year	2016	2016	2017
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	85.8	85.8	85.9	85.9	86.0	86.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**

Field Note:
PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS.

Data reported from PR BRFSS 2016.

2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**

Field Note:
PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS.

Provisional data reported from PR BRFSS 2016, 2017 final data will be reported by 2019.

3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**

Field Note:
PR does not participate in the National Survey of Children's Health. PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS.

Provisional data reported from PR BRFSS 2017. This will be the last data reported from PR BRFSS since it will be included in the Jurisdictional Survey.

4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
PR MCAH Program incorporated this indicator as one of the state added questions in the PR BRFSS. This is the second and last year of reporting BRFSS data, Average Annual Percent Change cannot be estimated. Annual objectives were calculated considering an increase of 0.1% every two years. This indicator was included in the Jurisdictional Survey that will be performed in PR by 2020.
Source: BRFSS 2017

SPM 3 - Percentage of children with ASD that are diagnosed at age 3 years or earlier.

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		0	15.3
Annual Indicator	79.1	15.3	15.3
Numerator	382	3,610	3,610
Denominator	483	23,581	23,581
Data Source	Autism Registry	PRHIA	PRHIA
Data Source Year	2016	2017	2017
Provisional or Final ?	Provisional	Provisional	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	16.0	16.6	17.2	17.8	18.4	19.1

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: Source of Data is the Autism Registry. It is not representative of the island as it was mostly entered by health providers of the Autism Centers and RPCs.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: Based in number of ASD diagnostic codes per age in PRHIA database. This result is not based on number of cases. Agreements with PRHIA are in process for single patient data sharing. Annual objectives may vary after the completion of a data sharing agreement with PRHIA.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: Based in the number of claims with ASD diagnostic codes per age in PRHIA database. Clamis outside the GHP are not included. Measure may vary when obtaining data based on unique cases.	
4.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: Objectives are based on the percentage of ASD diagnostic codes per child's age in PRHIA database for year 2017. Children under private health insurances may not be represented. Annual objectives may vary when obtaining PRHIA data on unique cases. This data is still pending.	

SPM 4 - Prevalence at birth of neural tube defects.

Measure Status:	Active

State Provided Data

	2016	2017	2018
Annual Objective		9.2	8.4
Annual Indicator	9.2	8.5	5.3
Numerator	26	24	13
Denominator	28,326	28,339	24,310
Data Source	PR- Birth Defects Surveillance System	PR- Birth Defects Surveillance System	PR- Birth Defects Surveillance System
Data Source Year	2016	2016	2017
Provisional or Final ?	Provisional	Provisional	Provisional

Annual Objectives

	2019	2020	2021	2022	2023	2024
Annual Objective	6.4	6.3	6.3	6.2	6.2	6.1

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
Objectives are based on the preliminary prevalence of neural tube defects births reported by PR-BDSPS for 2017.

SPM 6 - Percent of EHR and tele-health system implementation phases completed.

Measure Status:	Active

State Provided Data		
	2017	2018
Annual Objective	36.2	33.3
Annual Indicator	33.3	46.7
Numerator	5	7
Denominator	15	15
Data Source	CSHCNP data	EHR system implementation work team
Data Source Year	2017	2018
Provisional or Final ?	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	60.0	77.7	90.0	100.0	100.0	100.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: SPM 6 is the measure for priority 5 and substituted SPM 5.	
2.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: SPM 6 is the measure for state priority 5.	
3.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**
	Field Note: SPM 6 is the measure for state priority 5.	

Form 10
Evidence-Based or –Informed Strategy Measures (ESMs)

State: Puerto Rico

ESM 1.4 - Reduce the percent of uninsured women in reproductive age in Puerto Rico, by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		10	7.8
Annual Indicator	10.6	7.9	7.9
Numerator	95,622	68,727	67,041
Denominator	897,899	870,641	848,623
Data Source	PRHIA, ICO and US Census	PRHIA, ICO and US Census	PRHIA, ICO and US Census
Data Source Year	2016	2016-17	2017-18
Provisional or Final ?	Final	Final	Provisional

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	7.8	7.7	7.6	7.5	7.4	7.3

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: Numerator: PR Health Insurance Administration (PRHIA) and Insurance Commissioner Office (ICO) Denominator: 2016 International Database, US Census.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: Numerator: PR Health Insurance Administration (PRHIA) and Insurance Commissioner Office (ICO) Denominator: 2017 International Database, US Census.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: Numerator: PR Health Insurance Administration (PRHIA) and Insurance Commissioner Office (ICO) Denominator: 2018 International Database, US Census.	

ESM 3.2 - Evaluation and classification of the hospitals in Puerto Rico according to the maternal and perinatal care guidelines will be completed by September 2018

Measure Status:	Inactive - Completed		
State Provided Data			
	2016	**2017**	**2018**
Annual Objective		No	0
Annual Indicator	No	No	Yes
Numerator			
Denominator			
Data Source	N/A	N/A	LOCATe Survey
Data Source Year	N/A	N/A	2017-2018
Provisional or Final ?	Final	Final	Final

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: LOCATe translation and staff training is completed. Invitation letters to participate in the survey were sent to birthing hospitals. Interviews will start mid June until September 2017. This ESM is expected to be completed by September 2018.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: After Hurricane María one hospital closed the obstetric and nursery ward due to severe damages and the other one was unable to provide a date for interview due to other pressing issues after the storm. With the restoration of electricity and water services, we are now in process of completing the interviews for this hospital. This ESM is expected to be completed by September 2018.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: Data Source: CDC LOCATe Assessment Tool completed during interviews between FY 2017-2018.	

ESM 3.7 - The use of LOCATe as an instrument to promote quality improvement in Neonatal and Maternal Care services by September 2020.

Measure Status:					Active	
Annual Objectives						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Annual Objective	96.0	96.0	96.0	96.0	96.0	96.0

Field Level Notes for Form 10 ESMs:

None

ESM 4.1 - The percent of Puerto Rico Home Visiting Program (HVP) participants who ever breastfed by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		67	73.1
Annual Indicator	66.6	73.1	75.9
Numerator	341	578	626
Denominator	512	791	825
Data Source	HVP Participants Records	HVP Participants Records	HVP Participants Records
Data Source Year	2015-16	2016-17	2017-18
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	76.0	76.1	76.2	76.3	76.4	76.5

Field Level Notes for Form 10 ESMs:

None

ESM 10.2 - The percent of youths in schools and communities reached with the PR Youth Health Literacy Toolkit that increase their awareness regarding how to use the health care system (pre-post survey) by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		50	60
Annual Indicator	59.9	59.3	84.7
Numerator	85	64	72
Denominator	142	108	85
Data Source	PR Youth Health Literacy Pre-Post Survey	PR Youth Health Literacy Pre-Post Survey	PR Youth Health Literacy Pre-Post Survey
Data Source Year	2016	2017	2018
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	84.8	84.9	85.0	85.1	85.2	85.3

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**

Field Note:
Numerator: The amount of youths reached that increased their awareness regarding how to use the healthcare system.
Denominator: The total amount of youths from YHPP in year two reached with YLT intervention that completed pre and post surveys.
2018 after Hurricane Maria the amount of youth YHP reached by the Project decreased.

ESM 11.6 - Percent of CSHCNP families that report they receive the information they need.

Measure Status:	Active

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	90.0	92.0	93.0	94.0	95.0	95.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
Based on the CSHCNP Family Survey, 2018

ESM 11.7 - Percent of families that report they feel more confident managing child's condition thanks to the information and support received at the CSHCNP.

Measure Status:	Active

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	94.5	95.0	95.5	96.0	96.5	96.5

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
Based on the CSHCNP Family Survey, 2018

ESM 12.7 - Percent of CSHCNP families with YSHCN who were successfully contacted to notify them about the importance of transition to an adult health care provider.

Measure Status:	Active

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	8.0	10.0	12.0	15.0	20.0	22.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
Annual objectives may vary depending 2018-2019 reports.

ESM 12.8 - Percent of YSHCN at the CSHCNP who are given the Transition Readiness Assessment.

Measure Status:	Active

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	27.5	27.7	28.0	28.2	28.5	28.7

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2019**
	Column Name:	**Annual Objective**

Field Note:
Based on RCPs reports from March 2018 to September 2018

ESM 13.2.1 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) screened for high risk for caries and referred for early oral preventive services in Puerto Rico by September 2017-2021 (ongoing)

Measure Status:	Active

State Provided Data			
	2016	2017	2018
Annual Objective		5	85
Annual Indicator	0	0	73.5
Numerator			626
Denominator			852
Data Source	N/A	N/A	HVP Participants Records
Data Source Year	N/A	N/A	2017-18
Provisional or Final ?	Final	Final	Final

Annual Objectives						
	2019	2020	2021	2022	2023	2024
Annual Objective	73.6	73.7	73.8	73.9	74.0	74.1

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2016**
	Column Name:	**State Provided Data**
	Field Note: Data recollection for Early Childhood caries screening in HVP began in November 2016.	
2.	**Field Name:**	**2017**
	Column Name:	**State Provided Data**
	Field Note: Data recollection for Early Childhood caries screening in HVP is in process.	
3.	**Field Name:**	**2018**
	Column Name:	**State Provided Data**
	Field Note: This indicator measures the percent of infants identified at high risk for early childhood caries by screening and referred for an early dental home visit.	

ESM 13.2.2 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) at high risk for caries who received early oral preventive services in Puerto Rico by September 2020-2025 (ongoing)

Measure Status:	Active

Annual Objectives					
	2020	2021	2022	2023	2024
Annual Objective	18.2	18.3	18.4	18.5	18.6

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2020**
	Column Name:	**Annual Objective**

Field Note:
This indicator measures the percent of infants that completed a referral for an early dental home visit due to a high risk identified upon screening.

Form 10
State Performance Measure (SPM) Detail Sheets

State: Puerto Rico

SPM 1 - Percent of cesarean deliveries among low-risk first births
Population Domain(s) – Women/Maternal Health

Measure Status:	Active
Goal:	To reduce the number of cesarean deliveries among low-risk first births.
Definition:	**Numerator:** Cesarean delivery among (37 + weeks), singleton, vertex, births to nulliparous women. **Denominator:** All term (37 + weeks), singleton vertex births to nulliparous women. **Unit Type:** Percentage **Unit Number:** 100
Healthy People 2020 Objective:	Related to Maternal, Infant, and Child Health (MICH) Objective 7.1. Reduce cesarean births among low-risk women with no prior cesarean (baseline: 26.5%, Target: 23.9%)
Data Sources and Data Issues:	Birth Certificates
Significance:	Cesarean delivery can be a life-saving procedure for certain medical indications. However, for most low-risk pregnancies, cesarean delivery poses avoidable maternal risks of morbidity and mortality, including hemorrhage, infection, and blood clots—risks that compound with subsequent cesarean deliveries. Much of the temporal increase in cesarean delivery (over 50% in the past decade), and wide variation across states, hospitals, and practitioners, can be attributed to first-birth cesareans. Moreover, cesarean delivery in low-risk first births may be most amenable to intervention through quality improvement efforts. This low-risk cesarean measure, also known as nulliparous term singleton vertex (NTSV) cesarean, is endorsed by the ACOG, The Joint Commission (PC-02), National Quality Forum (#0471), Center for Medicaid and Medicare Services (CMS) – CHIPRA Child Core Set of Maternity Measures, and the American Medical Association-Physician Consortium for Patient Improvement.

SPM 2 - Percent of children with a preventive services visit in the last year
Population Domain(s) – Child Health

Measure Status:	Active
Goal:	To increase the number of children who have a preventive services visit.
Definition:	**Numerator:** Parent report of children, ages 1 through 11, with a preventive services visit in the past year from the survey. **Denominator:** Number of children, ages 1 through 11. **Unit Type:** Percentage **Unit Number:** 100
Healthy People 2020 Objective:	Is not linked to any Healthy People 2020 Objective.
Data Sources and Data Issues:	Behavioral Risk Factor Surveillance System (BRFSS), Maternal, Child and Adolescent Division Module.
Significance:	Increased use of clinical preventive services is a strategy aimed at improving the health of infants and children. The main goal of early preventive services is to provide opportunities to identify risks for the development of disease and implement preventive measures, or to detect an illness or disease in the earliest more treatable stages for adequate and early intervention. Children with chronic conditions also benefit of preventive service visits providing the opportunity to focus treatment on achieving as good as health as possible. Promoting visits to the doctor when the child is healthy provides the opportunity to evaluate growth and development, evaluate oral health, provide immunizations, and anticipatory guidance to parents. Screening for developmental delay and emotional disturbances at early ages provides a window of opportunity to help identify children which will benefit from early stimulation and therapies to help them attain their maximum potential. These services prevent and detect conditions and diseases in their earlier, more treatable stages, significantly reducing the risk of illness, disability, early death, and expensive medical care. Anticipatory guidance delivered to parents during preventive visits provide them the opportunity to learn strategies to protect their children from unintentional injuries, choose healthy lifestyles, understand developmental stages and how to stimulate optimum growth and development, and how to cope with the changes that occur during childhood. The early periodic screening diagnosis and treatment (EPSDT) requirements of the population served by the GIP is achieved by promoting the Puerto Rico Preventive Pediatric Service Guidelines (PRPPSG). The PPRPPSG follow the recommendations of the Bright Futures Guidelines of the American Academy of Pediatrics and the United States Preventive Service Task Force. Recommendations include itinerary for preventive visits, developmental screening test, screening labs, comple

SPM 3 - Percentage of children with ASD that are diagnosed at age 3 years or earlier.
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	By 2021, increase by 10% the proportion of children with ASD diagnosed by 3 years of age.
Definition:	**Numerator:** Number of children with ASD diagnosed by 36 months of age. **Denominator:** Number of children 0 to 18 years of age diagnosed with ASD in Puerto Rico. **Unit Type:** Percentage **Unit Number:** 100
Healthy People 2020 Objective:	MICH-29.2: Increase the proportion of children with ASD having a first evaluation by 36 months of age.
Data Sources and Data Issues:	PR ASD Registry Data. This is a new Registry. Preliminary baseline and targets to be determined in January, 2017.
Significance:	This is a measurement of the effectiveness of the activities and system capacity for the early identification and intervention of children with ASD younger than 3 years old.

SPM 4 - Prevalence at birth of neural tube defects.
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	By 2021 decrease by 10% the NTDs prevalence at birth. Baseline: 10/10,000 live births
Definition:	**Numerator:** Number of live births with NTD in Puerto Rico. **Denominator:** Number of live births in Puerto Rico. **Unit Type:** Rate **Unit Number:** 10,000
Healthy People 2020 Objective:	MICH-28: Reduce the occurrence of neural tube defects to 30.8 cases per 100,000 live births.
Data Sources and Data Issues:	PR-BDSS Data
Significance:	This is a measurement of the effectiveness of NTD prevention activities.

SPM 6 - Percent of EHR and tele-health system implementation phases completed.
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	By 2021, the CSHCN Program Regional Pediatric Centers will have an operational Electronic Health Record (EHR) and tele-health systems implemented.
Definition:	**Numerator:** Number of EHR system implementation phases completed **Denominator:** Total of implementation phases (15) **Unit Type:** Percentage **Unit Number:** 100
Healthy People 2020 Objective:	N/A
Data Sources and Data Issues:	N/A
Significance:	This is a measurement of the implementation progress of the HER system at the CSHCN Program.

Form 10
State Outcome Measure (SOM) Detail Sheets

State: Puerto Rico

No State Outcome Measures were created by the State.

Form 10
Evidence-Based or –Informed Strategy Measures (ESM) Detail Sheets

State: Puerto Rico

ESM 1.4 - Reduce the percent of uninsured women in reproductive age in Puerto Rico, by September 2017-2021 (ongoing)
NPM 1 – Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Measure Status:	Active
Goal:	At least 1% of uninsured women in reproductive age in Puerto Rico, by September 2017 (ongoing).
Definition:	**Numerator:** Number of WRA uninsured. **Denominator:** Total population of WRA. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	PRHIA, ICO, US Census.
Significance:	Many persons are uninsured due to decreasing employer sponsored insurance coverage and rising health care costs. Uninsured women of reproductive age lead to many public health problems for women in general, and for newborns due to lack or limited prenatal care. Decreasing the number of uninsured is a key goal of the Affordable Care Act (ACA), which provides Medicaid coverage to many low-income individuals. In order to reach populations that are uninsured, the MCAH staff (community health workers, health educators, home visiting nurses) will include outreach to uninsured women and refer for Medicaid Program eligibility evaluation. This will strengthen compliance with the Affordable Care Act and assist in assuring more women have access to the Preventive Health Services and Prenatal Services.

ESM 3.2 - Evaluation and classification of the hospitals in Puerto Rico according to the maternal and perinatal care guidelines will be completed by September 2018
NPM 3 – Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)

Measure Status:	Inactive - Completed
Goal:	A report regarding the findings of the hospitals classification levels assessment in Puerto Rico will be completed by September 2018.
Definition:	**Numerator:** N/A. This is a qualitative measure regarding the completeness of a product or an action in a specific date. **Denominator:** N/A. This is a qualitative measure regarding the completeness of a product or an action in a specific date. **Unit Type:** Text **Unit Number:** Yes/No
Data Sources and Data Issues:	Program logs, reports and produced documents.
Significance:	The maternal and perinatal care guidelines for the classification of Hospitals in PR adapted from the American College of Obstetrician Gynecology and the American Academy of Pediatrics will be developed by a group of stakeholders and interdisciplinary experts on maternal and newborn care. These guidelines will be used to evaluate and reclassify hospitals in Puerto Rico in an effort to identify resources and needs of the health care delivery system available for optimum maternal and newborn care. Regionalization of perinatal care is one strategy chosen by COIIN in an effort to improve Maternal and Infant Death rates. Evaluating hospitals is a first step in implementing changes.

ESM 3.7 - The use of LOCATe as an instrument to promote quality improvement in Neonatal and Maternal Care services by September 2020.
NPM 3 – Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)

Measure Status:	Active
Goal:	1.To visit 85% of participating hospitals in LOCATE to promote quality improvement in Neonatal and Maternal Care Services by September 2020.
Definition:	**Numerator:** Number of LOCATe participating hospitals visited by MCAH personnel. **Denominator:** Number of hospitals that participated in LOCATe. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	Program logs, reports and produced documents.
Significance:	LOCATe's primary goals are to produce a standardized assessment, facilitate stakeholder conversations and minimize burden for respondents. Furthermore, LOCATe addresses gaps in the evidence, identifies opportunities to improve guideline wording that supports more consistent translation into state policy and increases opportunities for quality improvement efforts at the facility and state level. Thus, in order to achieve quality improvement in maternal and neonatal care provided by PR's birthing facilities it is necessary to have an open communication with these facilities and share the information LOCATe provides and epidemiologic data relevant to maternal neonatal care of their institution. Institutions may recognize their limitations in providing higher level care when needed and therefore the importance of establishing a network of hospitals to refer and transfer high risk pregnant women. The goals is to visit at least 85% of participating hospitals by September 2020 taking into consideration that 84% of all the birthing facilities of PR consented to participate en LOCATe.

ESM 4.1 - The percent of Puerto Rico Home Visiting Program (HVP) participants who ever breastfed by September 2017-2021 (ongoing)
NPM 4 – A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months

Measure Status:	Active
Goal:	At least 81.7% Puerto Rico Home Visiting Program participants report ever breastfed by September 2017 (ongoing).
Definition:	**Numerator:** The number HVP participants report ever breastfed. **Denominator:** The number HVP participants. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	HVP Program Reports.
Significance:	Mothers who receive post-partum breastfeeding support are more likely to continue to breastfeed beyond the neonatal period. Because increase in the number of mothers breastfeeding is one of the aims of the MCAH program, the HVN will promote and offer breastfeeding education and support to all participants. The efforts will be monitored by the number of mothers who achieve the goal of breastfeeding successfully. This monitoring is important to evaluate the success of the interventions and propose modifications to the strategies.

ESM 10.2 - The percent of youths in schools and communities reached with the PR Youth Health Literacy Toolkit that increase their awareness regarding how to use the health care system (pre-post survey) by September 2017-2021 (ongoing)
NPM 10 – Percent of adolescents, ages 12 through 17, with a preventive medical visit in the past year.

Measure Status:	Active
Goal:	By Sept 2017, 50% of youths reached with the PR Youth Health Literacy Toolkit increased their awareness regarding how to use the health care system.
Definition:	**Numerator:** The number of youth surveyed after receiving PR-YHLT with increased perception of how to use the healthcare system. **Denominator:** The number of youth reached with the PR- YHLT. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	PRYHLT Pre and post intervention surveys.
Significance:	The patient Protection and Affordable Care Act of 2010, defines health literacy as the degree to which an individual has the capacity to obtain, communicate, process and understand health information and services to make the appropriate health decisions. Young people need to be empowered to make informed and appropriate decisions about health, including attending the annual health visit and participate in treatments. Cultural competency is vital in the implementation of public health initiatives. The development of a culturally competent PR Youth Health Literacy Toolkit will help to empower Puertorrican youths about health including the importance to attend the annual health visit using PR cultural context and specific situations. The development of this toolkit will incorporate the experience from the piloting programs with YHPs island wide.

ESM 11.6 - Percent of CSHCNP families that report they receive the information they need.
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	For 2020, at least 92% of CSHCNP families report they receive, or are referred to receive, the information they need.
Definition:	**Numerator:** Number of participant families in the CSHCNP Family Survey that report they receive the information needed. **Denominator:** Number of CSHCNP families that participate in the CSHCNP Family Survey. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	CSHCNP Family Survey
Significance:	This measure will give information on Program's performing in relation to giving families the information they need.

ESM 11.7 - Percent of families that report they feel more confident managing child's condition thanks to the information and support received at the CSHCNP.
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	For 2020, at least 95.5% CSHCNP families report they feel more confident managing child's condition thanks to information and support received from the CSHCN Program.
Definition:	**Numerator:** Number of participant families in the CSHCNP Family Survey that report they feel more confident managing child's condition after CSHCNP intervention. **Denominator:** Number of CSHCNP families that participate of the CSHCNP Family Survey. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	CSHCN Program Family Satisfaction Survey
Significance:	This measure will help us know impact of CSHCNP services on caregivers' degree of confidence to manage child's condition.

ESM 12.7 - Percent of CSHCNP families with YSHCN who were successfully contacted to notify them about the importance of transition to an adult health care provider.
NPM 12 – Percent of adolescents with and without special health care needs, ages 12 through 17, who received services necessary to make transitions to adult health care

Measure Status:	Active
Goal:	For 2020, at least 10% of CSHCNP families with YSHCN 14 years of age or more were successfully contacted to notify them about the transition to an adult health care provider.
Definition:	**Numerator:** Number of YSHCN 14 years old or more at the CSHCNP who were successfully contacted **Denominator:** Number of YSHCN 14 years old or more at the CSHCNP **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	CSHCNP records
Significance:	This measure gives information on how are we performing the second got transition core element: identifying and monitoring.

ESM 12.8 - Percent of YSHCN at the CSHCNP who are given the Transition Readiness Assessment.
NPM 12 – Percent of adolescents with and without special health care needs, ages 12 through 17, who received services necessary to make transitions to adult health care

Measure Status:	Active
Goal:	For 2020, at least 10% of YSHCN identified at the CSHCNP will have been assessed for transition readiness.
Definition:	**Numerator:** Number of CSHCNP YSHCN who have been assessed for transition readiness. **Denominator:** Number of YSHCN families that were identified and successfully contacted to inform about the importance of transition to an adult health care provider. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	CSHCNP records
Significance:	This measure gives information on the degree that families are willing to receive support for transitioning to an adult health care provider.

ESM 13.2.1 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) screened for high risk for caries and referred for early oral preventive services in Puerto Rico by September 2017-2021 (ongoing)
NPM 13.2 – Percent of children, ages 1 through 17, who had a preventive dental visit in the past year

Measure Status:	Active
Goal:	At least 50% of completed referrals of the Puerto Rico Home Visiting Program infants identified at high risk for caries by September 2021 (ongoing).
Definition:	**Numerator:** The number of HVP infants identified at high risk for caries who receive referrals for preventive oral care. **Denominator:** The number of HVP infants identified at high risk for caries. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	Program logs, reports and produced documents.
Significance:	Oral health has an impact on general wellbeing throughout life. Risks for the development of caries in infant are well known and a screening test to identify high risk infants by health professionals is recommended by the American Dental Association. To improve the early identification of high risk infant for dental caries a screening test will be developed for use by the HVN. The screening test will be accompanied by an intervention plan for oral care and prevention of caries Early identification for prompt dental evaluation and early fluoride prevention is aimed at decreasing the incidence of early childhood caries. Follow up of completed referrals will serve to evaluate the effectiveness of HVN interventions.

ESM 13.2.2 - The percent of infants of 6 months or more in the Home Visiting Program (HVP) at high risk for caries who received early oral preventive services in Puerto Rico by September 2020-2025 (ongoing)
NPM 13.2 – Percent of children, ages 1 through 17, who had a preventive dental visit in the past year

Measure Status:	Active
ESM Subgroup(s):	Children 0 through 5
Goal:	At least 50% of completed referrals of the Puerto Rico Home Visiting Program infants identified at high risk for caries by September 2025 (ongoing).
Definition:	**Numerator:** The number of completed referrals of HVP infants identified by high risk for caries to receive preventive oral care. **Denominator:** The number of HVP infants identified at high risk for cares who receive referrals for preventive oral care. **Unit Type:** Percentage **Unit Number:** 100
Data Sources and Data Issues:	Program logs, reports and produced documents.
Significance:	Oral health has an impact on general wellbeing throughout life. Risks for the development of caries in infant are well known and a screening test to identify high risk infants by health professionals is recommended by the American Dental Association. To improve the early identification of high risk infant for dental caries a screening test will be developed for use by the HVN. The screening test will be accompanied by an intervention plan for oral care and prevention of caries Early identification for prompt dental evaluation and early fluoride prevention is aimed at decreasing the incidence of early childhood caries. Follow up of completed referrals will serve to evaluate the effectiveness of HVN interventions.

Form 11
Other State Data

State: Puerto Rico

The Form 11 data are available for review via the link below.

Form 11 Data