



# Puerto Rico Maternal, Infant & Early Childhood Home Visiting Program Territory Wide Needs Assessment Update



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About the Cover Page

The image in the cover page is from a Familias Saludables Puerto Rico participant whose mother consented for the use of the image on this document and shared the following:

"FSPR wow! What can I say? To begin with, it has been a very enriching and uplifting experience for me and my family. The support is addictive. FSPR supported me with my most important challenge, which was finishing high school while being a mother. I look forward to seeing and hearing from our beloved home visitor each week. It is so rewarding and relaxing. You end up with new wings.

My partner and I had fun together while taking the picture of my baby looking for the perfect position and well, that adds love, togetherness and motivation for the whole family relationship. We were inspired!

Thank you, thank you for everything."



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## List of Acronyms

|          |   |
|----------|---|
| ACUDEN   | Administration for the Care and Integral Development of Childhood |
| ADFAN    | Assistant Administration for Prevention and Community Services    |
| ASES     | Administration for Health Insurance                               |
| CAPTA    | Child Abuse Prevention and Treatment Act                          |
| CDC      | Centers for Disease Control and Prevention                        |
| EBP      | Evidence Based Practices  |
| EHS      | Early Head Start  |
| FQHC     | Federally Qualified Health Center                                 |
| FRS      | Family Resource Specialist  |
| FSPR     | Familias Saludables Puerto Rico                                   |
| FSS      | Family Support Specialist   |
| GGK      | Growing Great Kids  |
| HFA      | Healthy Families America  |
| HRSA     | Health Resources & Services Administration                        |
| HS       | Head Start  |
| HSI      | Healthy Start Initiative  |
| LIA      | Local Implementing Agencies                                       |
| MCAHD    | Maternal, Child and Adolescent Health Division                    |
| MHAASA   | Mental Health and Anti-Addiction Services Administration          |
| MIECHV   | Maternal, Infant and Early Childhood Home Visiting Program        |
| PR       | Puerto Rico   |
| PR-DF    | Puerto Rico Department of the Family                              |
| PR-DoH   | Puerto Rico Department of Health                                  |
| PR-PRAMS | Puerto Rico Pregnancy Risk Assessment Monitoring System           |
| PW-WDC   | Pregnant Women and Women with Dependent Children                  |
| SAMHSA   | Substance Abuse and Mental Health Services Administration.        |
| SIR      | Supplemental Information Request                                  |
| SUID     | Sudden Unexpected Infant Death                                    |
| TMI      | Third Mission Institute   |
| US       | Unites States   |
| UPR      | University of Puerto Rico   |
| WIC      | Women, Infants & Children Nutrition Program                       |

## 2020 Puerto Rico Maternal, Infant & Early Childhood Territory Wide Home Visiting Needs Assessment Update

### Introduction

Puerto Rico – a territory of the US – is a small (3,508 sq. mi.) but densely populated island located in the Caribbean approximately 1,000 miles southeast of Miami, Florida. According to the US Community Survey<sup>1</sup>, the island population estimate was 3.2 million for 2019 which translates to approximately 900 inhabitants per square mile. Puerto Rico occupies roughly the same area and presents the same numeric population as Connecticut. Puerto Rico remains a Spanish speaking country with the vast majority of residents identifying themselves as Latino (98.2%), and 93.6%<sup>2</sup> reporting Spanish as their primary language. People born in PR are US Citizens and are extended all the privileges of citizenship except for casting a vote for the President of the US. In 1952 Puerto Rico was granted the status of Commonwealth. Although most federal welfare benefit programs are received in PR, local benefits tend to be lower than those of the 50 states.

During the second half of the 20<sup>th</sup> century Puerto Rico underwent rapid socioeconomic development. Life expectancy increased from 40 to 74 years during this period. However, during the last 15 years Puerto Rico has been severely impacted by a host of adverse events: An economic recession which began in 2006; Bankruptcy proceedings after defaulting on its massive debt; An out-migration wave which has caused Puerto Rico's population to decline by more than 16%; A category 5 hurricane which struck the island in September of 2017 and a swarm of ongoing earthquakes, with a magnitude 6.4 earthquake in January 7, 2020, have further complicated economic challenges and spurred further migration. In addition, a worldwide pandemic was declared during the early part of 2020. The COVID-19 pandemic has provoked lockdowns to protect the public health but has limited the availability of services for families in need.

In 2019 Puerto Rico had a median household income of \$25,388 — the lowest of any state or territory in the United States. Moreover, 43.5% of the population of Puerto Rico lived under the poverty level, 14.1% of the civilian labor force was unemployed, and only 45.1% of individuals 16 years of age and over participated in the labor force.<sup>3</sup>

Not surprisingly, the children of Puerto Rico have been intensely affected by the various psychosocial consequences that have been linked to living under such circumstances. According to the 2018 Kids Count Data Book published by the Annie E. Casey Foundation and the Instituto del Desarrollo de la Juventud, when compared to children in the mainland United States, children in Puerto Rico are more likely to fail nine out of ten key indicators of child well-being, including facing higher levels of risk for low birth weight, teen idleness, and poverty. The child poverty rate for Puerto Rico (52.4%) is more than three times the level in the US as a whole (18%), while more than half (54%) of children live in families in which no parent has full-time, year-round employment a figure nearly twice the national rate (27%).

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<sup>1</sup> US Census Bureau (2019). American Community Survey. Table ID PEPANRES. Extracted from data.census.gov

<sup>2</sup> US Census Bureau (2019). American Community Survey. Table ID C16006. Extracted from data.census.gov

<sup>3</sup> US Census Bureau (2019). American Community Survey. Table ID CP03. Extracted from data.census.gov



Home visiting is a prevention strategy used to support pregnant women and new parents to promote maternal, infant and child health, and prevent child abuse and neglect. It addresses parent child interaction, child development, school readiness, physical and mental health, and family self-sufficiency. Regular screenings are conducted to identify possible health and developmental issues. Across the nation, high-quality home visiting programs offer vital support to parents who voluntarily enroll as they deal with the challenges of raising babies and young children<sup>4</sup>. Visits focus on linking pregnant women with prenatal care, promoting strong parent-child attachment, coaching parents on learning activities that foster their child's development and supporting their role as the child's first and most important teacher and advocate.

This report presents an assessment of the need for maternal, infant, and early childhood home visiting services in Puerto Rico. In conducting the Needs Assessment, we have followed the steps outlined by the Maternal, Child and Adolescent Health Division (MCAHD) of the Puerto Rico Department of Health (PR-DoH) and the Federal Health Resources & Services Administration (HRSA) in the Supplemental Information Request (SIR)<sup>5</sup> for the submission of the Puerto Rico Maternal, Infant and Early Childhood Home Visiting Program (MIECHV) Territory Wide Needs Assessment Update 2020.

## Background

### 1. 2010 Needs Assessment

In 2010, a needs and capacity assessment was conducted to identify the communities and populations most in need for early childhood home visiting programs, to ascertain the existing capacity to serve the needs, and to guide the geographical deployment of the Puerto Rico Maternal, Infant and Early Childhood Home Visiting Program. The indicators of need were categorized into *Health indicators* (including low birth weight, infant mortality, premature birth, inadequate prenatal care), *Social-Emotional Concerns* (including child maltreatment and neglect, adolescent parenting, as well as alcohol and drug dependence and abuse), and *Socio-Economic Concerns* (including poverty, crime, school dropout, and unemployment). The most obvious result of the needs assessment was the recognition that the majority of the island municipalities had elevated levels of maternal and child health risk and need for a home visiting program particularly in community clusters located in the central mountainous region (municipalities of Comerío, Barranquitas, Orocovis, Jayuya, and Villalba) and in the coastal east and southeast (municipalities of Loíza, Canóvanas, Juncos, Naguabo, Humacao, Yabucoa, Maunabo, and the island municipality of Vieques).<sup>6</sup>

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<sup>4</sup> Home Visiting: Improving Outcomes for Children. (11/15/2019). <https://www.ncsl.org/>

<sup>5</sup> Maternal, Infant, and Early Childhood Home Visiting Program. (2019). *Supplemental Information Request (SIR) for the Submission of the Territory Statewide ("Territorywide") Needs Assessment Update* (pp. 1–8).

<sup>6</sup> Puerto Rico Department of Health. (2010). *Assessment of Need for Home Visiting Programs in Puerto Rico* (pp. 1–133). San Juan, Puerto Rico.

Map 1. Puerto Rico's municipalities



## 2. Municipality and Host Implementer Selection

Upon completing the needs and capacity assessment, PR-DoH convened an Advisory Board to assist in selecting the communities, population, and intervention models for the Puerto Rico MIECHV Program, and to provide ongoing advice in its implementation. In May 2011, the Advisory Board recommended initiating the implementation of the program in the two municipalities that showed the highest need and had the resources required to sustain the program: Barranquitas and Orocovis. The local implementing agency (LIA) selected was Salud Integral en la Montaña which is a Federally Qualified Health Center (FQHC) that offers services in both municipalities.<sup>7</sup>

On September 2012, supplementary funds were received, and the Advisory Board recommended two more sites, Maunabo and Jayuya, to be added to the service area. For these municipalities the FQHC Centro de Salud de Servicios Primarios de Salud de Patillas and the Universidad Metropolitana Jayuya were contracted as LIAs. On 2016, the FSPR State Advisory Board recommended the Centro de Salud de Servicios Primarios de Salud de Patillas to include Patillas in the target service areas.

## 3. Model and Curriculum Selection

For the selection of the model to be implemented, an adaptation was made to the selection procedures recommended by the Substance Abuse and Mental Health Services Administration (SAMHSA) to determine Relevance (Conceptual Fit), Appropriateness (Practical Fit), and Effectiveness (Scientific Evidence) of the practices. The Scientific Partner convened the members of the Advisory Board and two panels of local experts, including the members of the Advisory Board and the MCAHD staff, to review the recommended implementation models that met the HRSA criteria for evidence of effectiveness.

Healthy Families America (HFA) was identified by the expert panel as the most appropriate and relevant evidence-based home visiting model for implementation in

<sup>7</sup> Center for Evaluation and Sociomedical Research. (2011). *Report for The Selection of Target Municipality & Home Visiting Program Sponsored by Funds of The Affordable Care Act* (pp. 1–10). San Juan, Puerto Rico.

Puerto Rico and Growing Great Kids (GGK) was selected as the evidence-based curriculum to be implemented.<sup>8</sup>

#### 4. Implementation

HFA expects implementers to be culturally sensible with their target population.<sup>9</sup> Continuous evaluation and quality assurance, participant and staff satisfaction assessment, Advisory Board recommendations, and HFA Best Practice standards were considered for these adaptations. The HFA Model practices were culturally adapted, and some innovations were introduced, such as developing and standardizing a Transition Visit, translating and adapting HFA Tier 2 Training and GGK Tiers 2 & 3 Trainings, and offering these trainings to FSPR staff. Further adaptations to GGK Curriculum included: continuously revising curriculum materials for language and cultural relevance, and developing protocols needed for this population such as Birthing Plans, Crisis Intervention Protocol, and Domestic Violence Protocol and Safety Plan. This evidence-based home visiting program has been known as Familias Saludables Puerto Rico.

### 2020 Needs Assessment Update

Researchers affiliated to Third Mission Institute (TMI) of the Carlos Albizu University have collaborated as Scientific Partners of the MIECHV Program in Puerto Rico since 2010. TMI researchers conducted the 2010 Home Visiting Needs Assessment and advised in the selection of municipalities, host implementers, evidence-based Home Visiting Model, and Curriculum. In July of 2019, TMI was awarded funds through the MCAHD to serve as Scientific Partner in the Affordable Care Act Maternal, Infant & Early Childhood Home Visiting Program Territory Wide Needs Assessment Update 2020.

#### 1. Tasks

The Needs Assessment Update followed the steps outlined by the MCAHD and the Federal Department of Health and Human Services as presented in the Supplemental Information Request for the submission of the Puerto Rico MIECHV Territory Wide Needs Assessment Update 2020. We used the methodology recommended in the Guide to Conducting the MIECHV Statewide Needs Assessment Update.<sup>10</sup> As such, this Needs Assessment Update has included five tasks:

1. Review of other agencies' needs assessments and reports – Coordinate with and take into account relevant needs assessments of agencies that are part of the early childhood system.
2. Identify communities with concentrations of risk - Assemble a collection of health and socio-economic indicators and integrate them into a risk index to characterize communities in Puerto Rico in terms of their need for maternal, infant, and early childhood home visiting services.

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<sup>8</sup> Center for Evaluation and Sociomedical Research. (2011). *Report for The Selection of Home Visiting Program Curriculum Sponsored by Funds of the Affordable Care Act* (pp. 1–10). San Juan, Puerto Rico.

<sup>9</sup> Healthy Families America. (2018). *HFA Best Practice Standards* (pp. 1–220).

<sup>10</sup> HRSA Maternal & Child Health. (2019). *A Guide to Conducting the Maternal, Infant, and Early Childhood Home Visiting Program Statewide Needs Assessment Update* (pp. 1–38).

3. Identify the quality and capacity of existing programs - Develop an inventory of each MIECHV local implementing agency and other providers of home visiting throughout the island.
4. Capacity for providing substance abuse treatment - Collect data to describe the range of substance use disorder treatment and counseling services available in Puerto Rico for pregnant or parenting women.
5. Assessing community readiness for implementation of evidence-based home visiting models and related services - Assess readiness for implementation: Do existing evidence-based home visiting programs in Puerto Rico have the capacity to serve more children and families? What resources would be needed for expansion? What agencies or organizations might be able to house and provide the necessary administrative support for a new home visiting program?

## 2. Methods

The methods employed to complete each task are detailed under each task's section. Across tasks, a general methodological strategy of diversifying sources and types of data and of seeking broad feedback on the data was established. This general approach consisted of a three-pronged strategy:

### i. Collection of reports and raw indicator data

First, we collected indicator data from agency websites or through formal requests. The data obtained was integrated into a project database. State agency reports and needs assessments were also requested. Reports were collected from the PR-DoH, the Puerto Rico Department of the Family (PR-DF), the Mental Health and Anti Addiction Services Administration (MHAASA), the Healthy Start Initiative, and Head Start programs.

### ii. Focus groups and semi structured interviews with stakeholders and key informants

Qualitative data inform us of the nuances and complexities at the local levels, providing detailed evidence which is often not accessible through quantitative sources. An important step in the Needs Assessment Update was the integration of qualitative information. Participant recruitment for these sessions attempted to reach diversity and representation of all relevant programs and qualified informants (i.e., program participants, government officials, directors of community-based service organizations, direct service providers, and community leaders). Each semi-structured interview and focus-group session was recorded and transcribed, and a systematic content analysis was performed on each transcribed interview or focus-group session. For each report, we analyzed strengths, resources, and unmet needs of home visiting programs at state level, at-risk communities, and at community-based child abuse prevention programs.

### iii. Stakeholder participation and input

At each stage in the implementation of the Needs Assessment Update, the Advisory Committee, comprised of all interested stakeholders, were asked to review the work completed and submit recommendations: The Advisory Committee reviewed and provided recommendations on the overall plan and the types of indicators data that should be collected, the Advisory Committee assisted in developing a comprehensive inventory of existing Home Visiting Programs. The Advisory Committee also reviewed the

methods and findings of each task of the Needs Assessment Update and submitted comments, as well as recommended conclusions and recommendations.

This three-pronged strategy was designed so as to arrive at a 360° assessment on the need for services and to maximize the utility of the available information – which is often lacking in precise estimates or detailed descriptions – by integrating heterogeneous sources of data (i.e., quantitative and qualitative data, formal reports and studies, and expert advice from the Advisory Committee) and deriving conclusions.

### **3. Organization of this report**

Sections 1 thru 5 of the Needs Assessment Methods and Findings offer a detailed account of the methods and findings of each task. A final section of the report lists the conclusions and recommendations of researchers and the Advisory Committee. An electronic dataset containing all the raw data collected as part of this Needs Assessment has been furnished separately.

## **Needs Assessment Methods and Findings**

### **1. Review of other agencies' needs assessments and reports**

Because home visiting programs are more effective when they are part of an early childhood system<sup>11</sup>, we coordinated with several state agencies to review recent Needs Assessments and annual reports. We coordinated with the PR-DoH to acquire and review the Title V MCH State Program Needs Assessment. We also coordinated with the Administration for the Care and Integral Development of Childhood (ACUDEN-Spanish acronym) of the PR-DFC to obtain and review the findings of their community assessment report. Urban Strategies was also contacted for the Healthy Start Initiative Needs Assessment. Finally, we contacted ADFAN to obtain and review the findings of assessments of community-based and prevention-focused programs, including the Child Abuse Prevention and Treatment Act (CAPTA) inventory. We requested reports of up to three years.

### **2017 Urban Strategies Healthy Start Initiative Grant Proposal Needs Assessment Section<sup>12</sup>**

The Healthy Start Initiative (HSI) is a HRSA initiative that aims to improve health outcomes before, during, and after pregnancy, and reduce racial/ethnic differences in rates of infant death and adverse perinatal outcomes. This funding stream provides grants to high-risk communities with infant mortality rates at least 1.5 times the US national average and high rates of other adverse perinatal outcomes (e.g., low birthweight, preterm birth, maternal morbidity and mortality). HSI works to reduce the disparity in health status between the general population and members of racial or ethnic minority groups.<sup>13</sup> In 2018 this grant was awarded to Urban Strategies, a non-profit organization that manages Head Starts and Early Head Starts in the municipalities of Bayamón, Ciales, and Ponce.

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<sup>11</sup> HRSA Maternal & Child Health. (2019). A Guide to Conducting the Maternal, Infant, and Early Childhood Home Visiting Program Statewide Needs Assessment Update (pp. 1–38).

<sup>12</sup> 2017 Healthy Start Initiative: The Puerto Rico Healthy Start Initiative: Eliminating Disparities at Center-South Corridor Grant Proposal.

<sup>13</sup> Healthy Start Initiative: Eliminating Disparities in Perinatal Health. (2018). <https://www.hrsa.gov/grants/funding/hrsa-19-049>

Now they complement their services with *Comienzo Saludable*, the local name for the HSI program.

In their 2017 grant proposal needs assessment section, *Comienzo Saludable* reported that recent consolidated vital statistics show that compared to the US mainland, PR has a 23% higher rate of preterm birth, a 35% higher rate of low birth weight, 38% higher infant mortality rate, 67% higher teen birth rate, and 75% higher rate of unintended pregnancies. In addition, the cesarean rate on the island is 46%.

In terms of morbidity, birth defects affect 1 in every 33 babies born in the US each year. Accounting for about 1 in 5 infant deaths, making them the leading cause of infant death in the United States. In Puerto Rico, during 2016 a total of 252 congenital anomalies were documented, of these 13.9% were reported in the HSI service area. Another possible cause of infant death is child abuse and neglect. In Puerto Rico, child abuse and neglect rates are estimated in 9.4 per 1,000 children. During 2012-2013, the Puerto Rico Department of the Family received a total of 19,160 referrals for situations of abuse with children 5 years of age or less, of which 39.8% were due to physical abuse. Regarding the prevalence of HIV/AIDS on the island, PR-DoH 2016 HIV/AIDS Surveillance data indicates a high rate of HIV/AIDS cases (20,332).

The HSI grant proposal needs assessment section also highlights that an additional challenge that affects mostly Puerto Rico and the Caribbean is the Zika virus. During 2016-2017, Puerto Rico had the highest number of symptomatic Zika virus infections in the US and its territories. Zika virus infection during pregnancy can cause severe fetal brain defects (e.g. microcephaly) and has been linked to pregnancy loss and other fetal and infant developmental problems. Most pregnancies in Puerto Rico are unintended (65%). About 138,000 out of the 715,000 women aged 15–44 years in Puerto Rico are potentially added to these statistics of unintended pregnancy. Zika generated an urgent public health need to remove barriers and to increase contraceptive access for women who want to delay or avoid pregnancy.

### **2019 Consolidated Community Assessment Report for ACUDEN Head Start<sup>14</sup>**

ACUDEN is the branch of the PR-DF that implements Head Start (HS) and Early Head Start (EHS). It is the largest HS/EHS concessionary in Puerto Rico. Their 2019 Consolidated Community Assessment Report states that there has been a generalized tendency to a decrease in their target population that is associated to a decrease in young families in reproductive age, an increase in the elderly population, a higher rate of families moving to the mainland in search for better opportunities, the impact of the Zika campaign that included a massive promotion of free IUDs to women in reproductive age, and the increase of death in youth due to criminality. ACUDEN also reports that as a result of Hurricane Maria's devastation they have registered an increase of homeless families in their enrollments. In 2018 ACUDEN had a 3% for HS and a 7% for EHS of their registered participants without a home, a significant increase when compared to 2017 data which was .3% and 1.2, respectively.

In terms of physical health, ACUDEN reports that, among their registered participants, 20% (n=791) have disabilities and 6.5% (n=26) have a developmental delay. The five most

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<sup>14</sup> Departamento de la Familia: ACUDEN Programa Head Start. (2019). *Informe de la Evaluación Comunitaria (EC) Consolidada de ACUDEN* (pp. 1–12).

prevalent nutritional conditions among their early childhood participants are anemia, lactose intolerance, allergies, constipation, and low weight. The report identifies an island wide need for health care specialists, including pediatric oncologists, neurologists and geneticists. ACUDEN reports that, after Hurricane Maria, the closing of many pediatric clinics, laboratories, hospitals, emergency rooms, and primary care clinics had a direct effect in the delay and lack of health care services. In addition, the change of the government medical insurance from Plan de Mi Salud to Plan Vital has provoked a reduction in available dentists to offer services to the early childhood population.

In terms of mental health, their community study reflects limited access to primary and secondary prevention services. Some associated factors are lack of funding for mental health services, difficulty in the recruitment of mental health service providers, resistance of these providers to offer services to children under 5 y/o, and a predominant use of the medical model without considering the components of children's development and their psychosocial environment.

### **ADFAN Family First 2020-2024 Child and Family Services Plan<sup>15</sup>**

ADFAN is the branch of the PR-DF that implements the following programs: Social Emergencies, Integrated Community Services, Social Services for the Elderly and Adults with Disabilities, Services for Families with Children, Community Development Services, and Supervision and Regulation of Residential Facilities for Children. Among their services for families with children under CAPTA, ADFAN offers a home visiting program called Nidos Seguros. Due to the Family First Law, they are restructuring their services infrastructure. In 2018, ADFAN requested to the federal government a waiver to start implementation on 2021. As part of the pre-implementation activities ADFAN developed the Family First 2020-2024 Child and Family Services Plan. In that plan they analyzed their services and developed a plan to increase the quality of their services through the implementation of Family First, which requires, among other things, evidence-based home visiting programs to prevent child maltreatment in early childhood. In their assessment of performance, ADFAN found that only 17.9% (7/39) of the families with cases in the administration that had their children in-home (not foster care) received services to protect their children and prevent removal or re-entry into foster care. It was also found that 0% (0/48) received risk and safety assessment and management. These findings underscore the need for evidence-based home visiting services that address child maltreatment prevention.

### **Puerto Rico Title V 2020 Health Needs Assessment of the PR-DoH MCAHD<sup>16</sup>**

The PR-DoH houses two home visiting programs, the Title V Home Visiting Program and the MIECHV Program. To obtain information on Maternal, child, and adolescent needs for the Title V 2020 Health Needs Assessment, they surveyed 500 women aged 18-49 years that received services in one of the participating Federally Qualified Health Centers (FQHC) and 190 health care providers of those FQHCs, analyzed 199 back-page comments from the Puerto Rico Pregnancy Risk Assessment Monitoring System (PR-PRAMS) telephone interviews, and interviewed seven (7) female staff with no children

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<sup>15</sup> Administration for Families and Children of Puerto Rico. (2020). *Child and Family Services Plan* (pp. 1–250).

<sup>16</sup> Puerto Rico Department of Health: Maternal, Child and Adolescent Health Division. (2020). *Puerto Rico Health Need Assessment 2020* (pp. 1–72).

from the MCAHD (Central Level). They also interviewed 12 key persons from the Special Needs Health Care Component and conducted 7 focus groups with a total of 35 families that received services from it. The assessment identifies needs organized by domains.

The 5 five identified needs in the Women/Maternal Health Domain were:

1. Depression, stress and anxiety - Depression and anxiety were in the top five conditions three months before pregnancy as reported by women who had a live birth.
2. Communication and sensitivity of the provider – Respondents reported unfair treatment, no response to their questions, failure to give them explanations, having a C-Section, and no breastfeeding support from nurses during their stay in the hospital.
3. Health conditions in women in reproductive age – Almost half of respondents identified that the preventive practice that women in reproductive age perform less frequently is the preventive medical visit. Diabetes and high blood pressure identification is decreasing in women of all ages, but it's more significantly reported in women 35 to 54 y/o when compared to younger women. Preventive oral check-ups are also important during the preconception period.
4. Health conditions during pregnancy – Conditions reported by vital statistics and survey respondents were gestational diabetes, preeclampsia, eclampsia, anemia, anxiety, depression and thyroid problems. Oral health during pregnancy is also related to poor pregnancy outcomes. Women who had a live birth mainly reported not having a routine dental cleaning visit because they could not find a dentist or hygienist that would provide services to pregnant women.
5. Nutrition during pregnancy - About 33% of respondents identified inadequate nutrition during pregnancy as a habit that mostly affects this population.

The five identified needs in the Perinatal/Infant Health Domain were:

1. Causes of infant mortality - The identified leading causes of infant death were congenital malformations, conditions originated during the perinatal period, and sleep-related Sudden Unexpected Infant Deaths (SUIDs).
2. Infant development - Title V Home Visiting Program performs ASQ-3 and ASQ:SE-2 screening tests to participant infants. By 2018, 7.3% of screened infants presented high risk screening scores. All of them were referred to different services according to their needs. An identified risk factor for developmental delays was infant exposition to electronic devices.
3. Perinatal Death - Perinatal mortality was 7/1,000 live births in 2018.
4. Abuse and Neglect - The PR-PRAMS data reported in 2017 that 3.3% of women who had a live birth reported physical abuse during pregnancy, decreasing to 2.6% in 2018. On the other hand, according to data of the Puerto Rico Department of the Family, the cases of child abuse and neglect have increased from 14.8% in 2016 to 43.1% in 2018.
5. Asthma - About 22% of respondents identified asthma and allergies as the condition that mostly affects infants.



The five identified needs in the Child Health Domain were:

1. Child preventive visits - About 28% of FQHCs participants reported that the prevention practice parents less perform is taking their children to their annual preventive visits.
2. Mental health - According to the Puerto Rico Behavioral Risk Factor Surveillance System, the percent of children 1 to 11 y/o receiving treatment for depression, anxiety or behavioral problems increased from 84.3% in 2016 to 90.1% in 2017. The percent of children diagnosed has decreased from 18.9% in 2016 to 15% in 2017,
3. Child obesity - according to Puerto Rico Women, Infants & Children Nutrition Program (WIC), the percent of participating children 2 to 5 y/o with a BMI  $\geq$  85 has significantly increased ( $p < 0.05$ ) from 16.2% in 2016 to 18.6% in 2018.
4. Immunization - The fact that there are few pediatricians who vaccinate children may force parents to seek alternate ways to receive this service.
5. Asthma - About 44% of respondents identified asthma and allergies as a need that affects children 1 to 9 y/o.

## **2. Communities with concentrations of risk**

The second task of the Needs Assessment consisted in the development of a risk index to rank-order communities in Puerto Rico in terms of their need for maternal, infant, and early childhood home visiting services. This task entailed identifying quantitative indicators of need and combining them to calculate an aggregated index of need.

### **Operational Definition of 'Community'**

We operationally defined 'community' as 'municipality'. There are certain advantages to using municipality as the level of analysis for needs assessments in Puerto Rico. The entire island territory in Puerto Rico is contained within its 78 municipalities. Municipalities comprise the smallest civil division and each municipality has a municipal government infrastructure. Furthermore, Municipalities are, for the most part, small units – comprised of, on average, 45 sq. mi. and 49,000 residents. Finally, and perhaps more importantly, all data collection systems in Puerto Rico collect municipality of residence and municipality of occurrence of the event.

### **Selection of Indicators of Risk**

Prior to selecting the quantitative indicators, a number of criteria were set for all candidate indicators to meet:

1. Should be causally linked to maternal and child health (including risk of child maltreatment/abuse) or highly correlated with maternal and child health.
2. Should be continuously or periodically measured and at least three years of data should be available.
3. Should be measured at the level of municipality or imputation of rates at the level of municipality should be possible.

A list of candidate indicators was developed from a review of the research literature, recommendations from US agencies (i.e., HRSA, CDC and SAMHSA), and the prior Needs Assessment conducted in 2010. From the initial list of candidate indicators, those which

were not collected in Puerto Rico (e.g., school dropouts) were removed. Finally, the Advisory Committee was asked to review the list of available indicators and make recommendations to add or remove indicators. Table 1 shows the final set of indicators selected by the Advisory Committee.

**Table 1.** Final set of indicators.

| Domain                    | Indicator  |
|---------------------------|--|
| Maltreatment Risk         | 1. Substantiated cases of child abuse/maltreatment                   |
|                           | 2. Children 3 yrs. old or less visiting emergency rooms for injuries |
|                           | 3. Formal complaints of domestic violence                            |
|                           | 4. Admission to public tier substance abuse treatment services       |
| Health Susceptibility     | 5. Low birth weight  |
|                           | 6. Births of adolescent mothers                                      |
|                           | 7. Infant mortality  |
|                           | 8. Pre-term births   |
| Socio-Economic Challenges | 9. Children living under poverty                                     |
|                           | 10. Unemployment   |
|                           | 11. Labor participation rates  |
|                           | 12. Population 25 years old or more with post high school education  |

**Data Collection and Cleaning**

Data was collected from its source either through formal requests or by downloading it from the source’s website if available (e.g., US Census Community Survey data). Upon arrival, each indicator series was examined for integrity, comprehensiveness, and coherence. Indicator series had to be available for at least three years, for all 78 Puerto Rico municipalities, and the shape of the annual curve could not show jumps of more than 30% unless a clear explanation could rule out changes in measurement definitions or measurement methods (i.e., artificial trends). Communications with officials in charge of collecting the data at the source helped ascertain recent changes in operational definitions or methodological changes in data collection. Statistical distributions and comparisons across time and geography (municipalities) were used to identify extreme or outlier values.

To make the indicators comparable across Municipalities, all indicator values were averaged over the most recent three available years, converted to per capita rates (using population estimates of the US Census for 2018), and then standardized.

**Data Reduction and Index Development**

The 12-indicator dataset was combined into a single index using a linear function

$$y_m = w_1r_1 + \dots + w_i r_i$$

Where  $y_m$  is the total index sum for municipality  $m$ , and  $w_i r_i$  is the weighted per capita rate of indicator  $i$ .

The weights for each indicator were determined by the Advisory Board using the Criteria Weighting Method as adapted by the CDC for community needs assessments.<sup>17</sup> Each member of the Advisory Board was asked to assess the relevance of each indicator towards a global index of need. The assessments were converted into numerical values using the following scheme:

- Of no relevance = 0.0
- Of some relevance = 1.0
- Of moderate relevance = 1.5
- Of a lot of relevance = 2.0

For each indicator, the valuations were averaged and applied to the linear function described above. The resulting combined index was normalized with a mean of 70 and a standard deviation of 15.

Table 2 describes the need indicator data collected. For each indicator the table shows its source and the amount of years and events in the collected data.

**Table 2.** Indicator data collected\* for the calculation of the global index of need.

| Indicator   | Source   | Years*  | Events |
|---|--|---------|--------|
| 1. Substantiated cases of child abuse/maltreatment                  | Puerto Rico Department of the Family                                 | 2010-19 | 91,964 |
| 2. Children 3 yrs old or less visiting emergency rooms for injuries | Puerto Rico Health Insurance Administration                          | 2015-18 | 5,582  |
| 3. Formal complaints of domestic violence                           | Puerto Rico Police   | 2016-19 | 32,689 |
| 4. Admission to public tier substance abuse treatment services      | Puerto Rico Mental Health and Anti Addiction Services Administration | 2015-18 | 58,660 |
| 5. Low birth weight   | Puerto Rico Demographic Registry                                     | 2007-17 | 48,258 |
| 6. Births of adolescent mothers                                     | Puerto Rico Demographic Registry                                     | 2007-17 | 66,368 |
| 7. Infant mortality   | Puerto Rico Demographic Registry                                     | 2007-17 | 3,234  |

<sup>17</sup> Centers for Disease Control and Prevention. (2019). Prioritization section from APEXPH in Practice.pdf. <https://www.cdc.gov>.

| Indicator   | Source                           | Years*  | Events |
|---|----------------------------------|---------|--------|
| 8. Pre-term births  | Puerto Rico Demographic Registry | 2007-17 | 61,679 |
| 9. Children living under poverty                                    | U.S. Community Survey            | 2018    | **     |
| 10. Unemployment  | U.S. Community Survey            | 2018    | **     |
| 11. Labor participation rates                                       | U.S. Community Survey            | 2018    | **     |
| 12. Population 25 years old or more with post high school education | U.S. Community Survey            | 2018    | **     |

\*The three most recent years of data were used to calculate average events and rates per capita.

\*\*U.S. Community Survey is based on a continuous household community survey and aggregated across years; sample sizes vary.

A Microsoft Excel® workbook furnished separately to this report contains a worksheet which details the three-year average amount of events and the per capita rates of the 12 indicators of need for each municipality. To help visualize how each risk indicator was distributed among communities, thematic maps were plotted with the indicator rates. The maps are shown in the Appendix (page 42). Taken together, the maps suggest three zones of concentration of high need: municipalities in the southeast coast, in the central mountainous zone, and in the southwest coast.

Upon inspecting the indicator data, the members of the Advisory Board assessed the relevance of each indicator with a four-point scale (shown below). Assessments were averaged and used as weights to combine the 12 indicators into a global index of need. Table 3 shows the calculated weight for each indicator.

- Of no relevance = 0.0
- Of some relevance = 1.0
- Of moderate relevance = 1.5
- Of a lot of relevance = 2.0

**Table 3.** Indicator weights.

| Domain            | Indicator   | Weight |
|-------------------|---|--------|
| Maltreatment Risk | 1. Substantiated cases of child abuse/maltreatment                  | 1.82   |
|                   | 2. Children 3 yr. old or less visiting emergency rooms for injuries | 1.54   |
|                   | 3. Formal complaints of domestic violence                           | 1.68   |
|                   | 4. Admission to public tier substance abuse treatment services      | 0.75   |

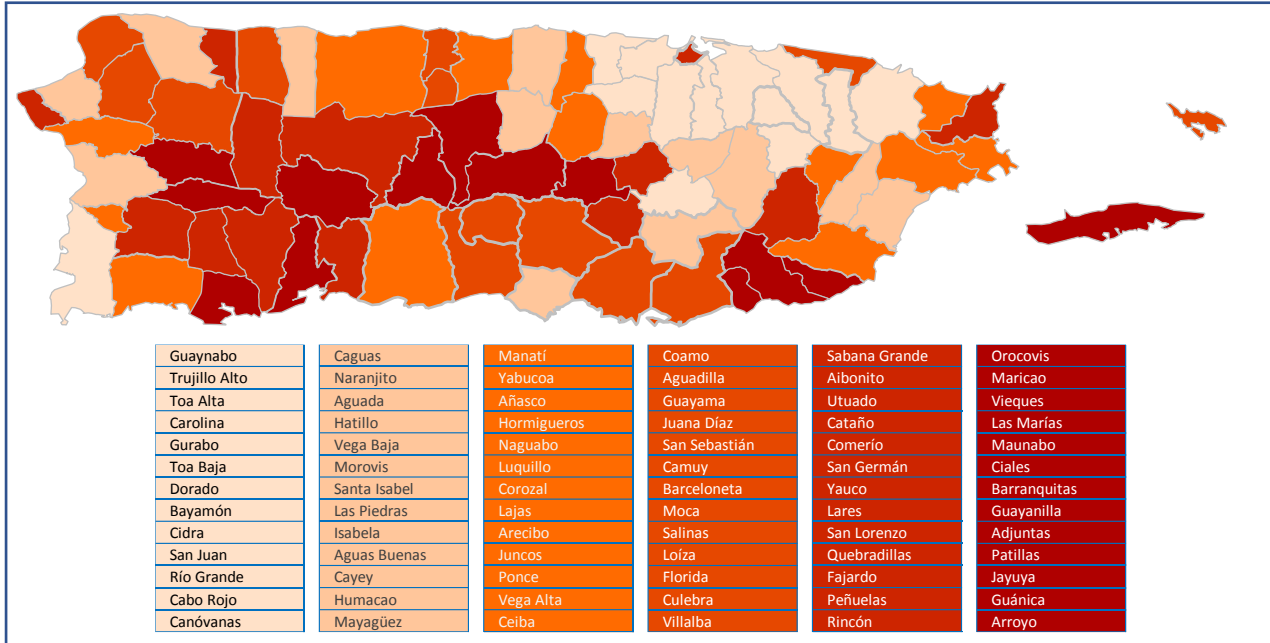
| Domain                    | Indicator   | Weight |
|---------------------------|---|--------|
| Health Susceptibility     | 5. Low birth weight                                       | 1.00   |
|                           | 6. Births of adolescent mothers                           | 1.79   |
|                           | 7. Infant mortality                                       | 1.96   |
|                           | 8. Pre-term births  | 1.25   |
| Socio-Economic Challenges | 9. Children living under poverty                          | 1.25   |
|                           | 10. Unemployment  | 1.29   |
|                           | 11. Labor participation rates                             | 1.86   |
|                           | 12. Educational attainment of population 25 to 34 yr. old | 1.64   |

Table 4 shows the calculated global index of need for each municipality. Map 2 shows the municipalities grouped into six levels of need. The map reproduces the general geographic distribution of need which had been identified in the maps showing individual indicators. Three zones of concentration of high need: municipalities in the southeast coast, in the central mountainous zone, and in the southwest coast.

**Table 4.** Calculated global index of need by Municipality.

| Municipality | Score  | Municipality | Score | Municipality | Score | Municipality  | Score | Municipality  | Score |
|--------------|--------|--------------|-------|--------------|-------|---------------|-------|---------------|-------|
| Adjuntas     | 85.93  | Cataño       | 77.33 | Gurabo       | 39.93 | Maunabo       | 84.51 | San Juan      | 48.47 |
| Aguada       | 55.10  | Cayey        | 63.30 | Hatillo      | 55.64 | Mayagüez      | 64.33 | San Lorenzo   | 80.25 |
| Aguadilla    | 70.30  | Ceiba        | 68.54 | Hormigueros  | 65.16 | Moca          | 72.09 | San Sebastián | 71.19 |
| Aguas Buenas | 63.19  | Ciales       | 84.95 | Humacao      | 63.52 | Morovis       | 58.06 | Santa Isabel  | 59.46 |
| Aibonito     | 75.94  | Cidra        | 48.02 | Isabela      | 59.69 | Naguabo       | 65.35 | Toa Alta      | 35.65 |
| Añasco       | 65.06  | Coamo        | 70.09 | Jayuya       | 92.89 | Naranjito     | 54.55 | Toa Baja      | 41.05 |
| Arecibo      | 66.43  | Comerio      | 78.64 | Juana Díaz   | 71.02 | Orocovis      | 81.36 | Trujillo Alto | 33.97 |
| Arroyo       | 100.00 | Corozal      | 66.09 | Juncos       | 67.34 | Patillas      | 91.47 | Utuado        | 76.13 |
| Barceloneta  | 71.97  | Culebra      | 74.19 | Lajas        | 66.32 | Peñuelas      | 80.67 | Vega Alta     | 68.42 |
| Barranquitas | 85.76  | Dorado       | 44.34 | Lares        | 79.14 | Ponce         | 67.58 | Vega Baja     | 57.61 |
| Bayamón      | 45.87  | Fajardo      | 80.55 | Las Marías   | 84.51 | Quebradillas  | 80.34 | Vieques       | 83.96 |
| Cabo Rojo    | 51.52  | Florida      | 73.63 | Las Piedras  | 59.47 | Rincón        | 81.17 | Villalba      | 75.22 |
| Caguas       | 52.59  | Guánica      | 94.45 | Loíza        | 73.60 | Río Grande    | 49.41 | Yabucoa       | 64.74 |
| Camuy        | 71.49  | Guayama      | 70.90 | Luquillo     | 66.06 | Sabana Grande | 75.48 | Yauco         | 78.99 |
| Canóvanas    | 51.99  | Guayanilla   | 85.80 | Manatí       | 64.50 | Salinas       | 73.21 |               |       |
| Carolina     | 38.64  | Guaynabo     | 24.39 | Maricao      | 81.63 | San Germán    | 78.79 |               |       |

Map 2. Municipalities grouped into six levels of need.



### 3. Quality and capacity of existing programs or initiatives for early childhood home visiting

#### Capacity

To identify **capacity**, an inventory of each local implementing agency and other providers of home visiting throughout the island was developed. Information about non-MIECHV funded home visiting programs was assessed during an Advisory Board meeting and through outreach efforts to state and local agencies. Five home visiting programs were identified. 1) **Familias Saludables Puerto Rico** 2) **Comienzo Saludable** 3) **Programa de Visitas al Hogar** (Home Visiting Program) 4) **Avanzando Juntos**, and 5) **Nidos Seguros**.

The inventory, shown in Table 5, includes the program name and type, funder, description of services offered, area served, program capacity, and the number of individuals and families who have received services.

**Table 5.** Inventory of actual home visiting services in Puerto Rico.

| Program Name  | Funder   | Population Served  | Service Offered   | Enrollment Capacity  | # Families in Past Year   |
|---|--|--|---|--|---------------------------|
| Familias Saludables Puerto Rico<br><br>(Healthy Families Puerto Rico) | Funded by HRSA with MIECHV funds<br>Administered by PR-DoH MCAHD | Families of pregnant women until child is 3 years old in the municipalities of:<br>Jayuya<br>Orocovis<br>Barranquitas<br>Maunabo<br>Patillas | Uses Health Families America evidence-based model and Growing Great Kids evidence-based home-visiting curriculum.<br><br>Home visits focus on aspects related to pregnancy, health, | 128 families annually<br><br>Not at full capacity at the present moment. | 139 parents<br>104 babies |

| Program Name                              | Funder  | Population Served   | Service Offered   | Enrollment Capacity   | # Families in Past Year   |
|---|---|---|---|---|---------------------------|
|   |   |   | child's development stages, and positive parenting strategies. Developmental screenings and relevant services referrals are offered.  |   |                           |
| Comienzo Saludable<br><br>(Healthy Start) | Funded by HRSA with HSI funds<br><br>Administered by Urban Strategies | Program serves pregnant women, babies from 0 to 18 months, couples and/or men of those couples and/or babies in the municipalities of:<br>Ciales<br>Jayuya<br>Ponce<br>Santa Isabel<br>Juana Díaz<br>Salinas<br>Guayama<br>Arroyo | Uses Growing Great Kids evidence-based home visiting curriculum and other components of their program use EBPs or promising practices.<br><br>Services include an individual service plan that may incorporate: <ul style="list-style-type: none"> <li>• home visits</li> <li>• service coordination (including immunizations, early head start, food care, housing, food stamps, and others depending on families' needs)</li> <li>• parenting education</li> <li>• health education</li> <li>• group prenatal clinical care</li> <li>• mental health services</li> <li>• services to manage substance use problems</li> <li>• services to manage gender violence</li> <li>• transportation to appointments</li> </ul> | 750 individuals annually<br><br>Not at full capacity at the present moment. | 229 parents<br>169 babies |
| Programa de Visitas al Hogar              | Funded by HRSA with Title V funds<br><br>Administered by PR-DoH MCAHD | Pregnant women until the child is 24 months old in 72 municipalities of Puerto Rico   | Uses evidence-informed practices, but are not affiliated to any EBP model or curriculum.  | Each Home Visiting Nurse must keep 30-35 families active.                   | 3,202 families            |

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| Program Name   | Funder  | Population Served  | Service Offered   | Enrollment Capacity   | # Families in Past Year |
|--|---|--|---|---|-------------------------|
| (Home Visiting Program)                              |   | (except FSPR municipalities)   | Case management and personalized service coordination for the specific needs of families.   | There are 82 nurses.<br><br>Not at full capacity at the present moment.   |                         |
| Avanzando Juntos<br><br>(Early Intervention Program) | Funded by Department of Education - Office of Special Education Programs (OSEP)                                   | Families with children of up to three years with developmental delays in every municipality of Puerto Rico   | Uses the evidence-based Routine Model and they are in the process of implementing a coaching EBP.<br><br>Early detection of developmental delays and support children to meet milestones through speech therapy, occupational therapy, and physical and psychological therapy. Support families along the process with managing expectations, frustrations, and strengthening parenting skills. | There is no maximum number of participants. Services must be provided to all eligible children.<br><br>Not at full capacity at the present moment.  | 2,555 children          |
| Nidos Seguros<br><br>(Safe Nests)                    | Funded by state funds Administered by Assistant Administration for Prevention and Community Services of the PR-DF | Adolescent mothers ages 13-21 from pregnancy until baby is 36 months old in the municipalities of:<br>Añasco<br>Mayagüez<br>Cabo Rojo<br>Hormigueros<br>Maricao<br>Lajas<br>San Germán<br>Sabana Grande<br>Guánica | Did not report using any EBP.<br><br>Home visits to educate and empower the mothers. The topics covered by the nurses in the visits correspond to the specific stage the participants are in and the particular needs of the family.  | Each nurse can have 25 participants. There is 1 nurse in the Mayaguez region, 2 nurses in the Humacao region, and 1 nurse in the Ponce region.<br><br>Not at full capacity at the present moment. | 124 participants        |



To identify the **quality of program services** provided, individual semi-structured interviews took place with the Program Directors/Supervisors of each home visiting program. Each interview was recorded and transcribed, and a content analysis for SIR indicators was performed. Indicators assessed were: a) how existing home-visiting programs address indicators of high risk, b) cultural and language needs of communities, c) buy-in for evidence-based home visiting d) home-visiting staff qualifications and development opportunities, and e) program strengths and weaknesses. Also, **gaps and barriers** in implementing home visiting programs were assessed. The information below was collected from the interviews conducted with the Directors/Supervisors of the home visiting programs and a documental revision.

## **Familias Saludables Puerto Rico (Healthy Families Puerto Rico)**

### **Quality**

- a) Addressing indicators of risk:** FSPR serves the municipalities of Orocovis, Barranquitas, Jayuya, Maunabo, and Patillas, all considered high-risk municipalities. The program targets mothers of any age, giving priority to adolescent mothers. It uses home visits to promote better prenatal and maternal and child health, healthy development of infants and children, greater school readiness, and a reduction in the incidence of child abuse. Likewise, it aims to improve parenting skills, increase family socioeconomic status, and improve coordination of community resources and support, which all seek to prevent child maltreatment and domestic violence. Participation in the FSPR program is free and voluntary.

Indicators of high needs are addressed through the stage-by-stage GK modules to guide families in developing healthy parenting skills up to the child's three years of age. In addition, services are coordinated with other agencies to attend to the specific needs of families.

The home visitors educate the participating families on aspects related to pregnancy, provide guidance on the baby's development stages and develop positive parenting strategies together with the mothers and/or fathers. In addition, the program offers screening to identify lags in development, high-risk behaviors, abuse or neglect and the corresponding referrals are made. The program also coordinates referrals for immunizations, WIC, food stamps, housing, physical and mental health (including medical health insurance), substance use, domestic violence services, transition to Head Start, and any other relevant service needed by the families.

- b) Addressing cultural and language needs of communities:** The curriculum is offered in Spanish, and some participants have requested English. Some staff from the Orocovis local implementing agency (LIA) is also qualified in sign language to tend to the deaf community. There is a transition visit between evaluation and home-visiting to increase trust and engagement. At the beginning, the visits are weekly and as the family is complying with the established goals, the intensity of the visits is decreased to twice a month, monthly and finally quarterly. This is to generate greater attachment, respect, security at home and autonomy. All goals and plans are developed with the participant family and they are encouraged continuously to follow their plan using their identified strengths and resources.

- c) **EBP buy-in:** FSPR is open to expansion of increasing capacity of current program, which uses the Healthy Families America evidence-based home visiting model and the Growing Great Kids evidence-based curriculum
- d) **Staff qualifications and development opportunities:** It has a Program Coordinator in the central offices with the PR-DoH, which subawards three implementers (two Federally Qualified Health Centers and a university) as local implementing agencies (LIAs). Each LIA has a Supervisor, and a Data Manager. The Barranquitas and Orocovis LIA has five home visitors, known as Family Support Specialists (FSS), and one family evaluator or Family Resource Specialist (FRS). The LIA for Maunabo and Patillas has one FRS and two staffers that have hybrid positions as FRS/FSS. The Jayuya LIA has one FRS and two FSS. Staff is required to have a background in social work or related field in order to be a home visitor or family evaluator. Supervisors are required to have a master's degree and be fully bilingual. In Orocovis, staff has been trained in sign language to better serve a deaf community that is located in the municipality. All staff is trained and certified in the evidence-based model and curriculum and receives continuous training by TMI to meet emerging needs. Although there was some staff turnover due to the recent catastrophic hurricanes, staff retention tends to be good given Program benefits.<sup>18</sup>
- e) **Program strengths and weaknesses:** The Program implements the HFA evidence-based home visiting model and uses the GGK evidence-based curriculum. All materials are in Spanish and have been adapted to the Puerto Rican population including multigenerational families. Policies and Procedures are established and clear and they also have a substantial community resources database. The Program has a local scientific partner, Third Mission Institute (TMI), that serves as evaluator, in addition to offering technical assistance and training to meet continuously emerging needs and model adaptation. Additional trainings have been developed and implemented to meet local needs such as domestic violence, father engagement, trauma informed care, Motivational Interviewing, Zika, autism spectrum, developmental delays, hygiene, and maltreatment prevention. All of the served municipalities have some level of mental health services and primary health services through collaborations and local advisory committees that facilitate supportive services. The Program is strengths-based, uses reflective supervision, and has favorable communication between all parts. Supervisors informed that home visitors' efforts are acknowledged and rewarded with incentives, staff is guided through reflective supervision, and team-building strategies are implemented to help feel staff feel heard and tended to. Staff are also provided with electronic equipment that has allowed them to gather data and continue to work remotely throughout the pandemic, thus not affecting home visits.

### Gaps and barriers

- a) Many participants have rather limited information on healthy parenting, and have a general disregard for education, so many of them have difficulty completing

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<sup>18</sup> Familias Saludables Puerto Rico. (2018). *Análisis de Satisfacción y Rotación del Personal del Programa Familias Saludables Puerto Rico* (pp. 1–17). San Juan, Puerto Rico.

studies. Being in remote areas, adequate telecommunication is a challenge. Lack of reliable transportation is a significant issue since it limits program participants in seeking supportive services, which are limited in their rural regions. Also, for this reason, many families do not assist to group activities. The areas families live in are many times difficult to access due to natural phenomena such as landslides. The biggest challenge reported has been the natural disasters, including the earthquakes and hurricanes, but overall, Hurricane María. Staff, as well as participants, were affected; many were left homeless, areas were difficult to access, they lacked basic services such as running water for months, and hence many families left the island seeking more stability. Things have been getting more stable as months go by, yet adverse conditions still persist. This has further adversely affected mental health in the community. There are 11 participants receiving mental health services. Supervisors reported concern about participants with diagnosis that are not receiving services. They informed that reasons for participants not receiving these services include that participants don't like them, it interferes with their jobs, lack of transportation, or having to wait too long for an appointment. There are also 10 participating families with children receiving special needs services, such as speech and occupational therapy, and 2 waiting for diagnosis. In terms of areas of opportunities expressed by the program, a mental health EBP was identified to support pregnant women, but it has not been taken further.

## **Comienzo Saludable (Healthy Start)**

### **Quality**

- a) Addressing indicators of risk:** *Comienzo Saludable* is described as a program to support families in strengths-based parenting skills. As they state, early intervention programs have proved to be vital in guaranteeing children and families' general wellbeing. According to the Program Supervisor, this prevention program is seen as valuable in not only helping families but also in helping staff develop professionally. *Comienzo Saludable* offers services in Ciales, Jayuya, Ponce, Santa Isabel, Juana Díaz, Salinas, Guayama, and Arroyo. To avoid duplicity of services in Jayuya, the Program collaborates with FSPR in referring participants that qualify for home visiting in that municipality. If FSPR is full to capacity or if the child is older than 2 weeks and no family evaluation has been completed, *Comienzo Saludable* offers the home visiting services. On the other hand, participants that move out of FSPR target municipalities to municipalities that *Comienzo Saludable* serves are referred to *Comienzo Saludable*, thus enhancing continuation of services. Also, a participant of FSPR can participate from other services offered by *Comienzo Saludable*. Although there is not yet an official MOU between FSPR and *Comienzo Saludable*, there are verbal agreements. FSPR and *Comienzo Saludable* work together for the benefit of the population in need.<sup>19</sup>

High-risk indicators, such as abuse, are addressed with parenting education. In terms of health disparities and lack of access to services, the Program Director informed that they work with Doula services and support groups with a prenatal

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<sup>19</sup> 2017 Healthy Start Initiative: The Puerto Rico Healthy Start Initiative: Eliminating Disparities at Center-South Corridor Grant Proposal.

care curriculum which includes medical and educational services in the same appointment. Regarding economic disparities, the program connects families with the services they need such as housing and food, among others.

- b) Addressing cultural and language needs of communities:** All the EBPs used in this program have been adapted to and validated in Puerto Rico. According to the Program Supervisor, services have been tailored to make them more accessible and responsive to emerging needs, including participants with disabilities. Families have evaluated the service positively for all the knowledge acquired during the service.
- c) EBP buy-in:** In terms of EBPs, *Comienzo Saludable* applies EBPs in every one of their services including the Becoming a Mom/Comenzando Bien March of Dimes curriculum for supportive pregnancy groups, Growing Great Kids for home visiting, Parenting Fundamentals for group parenting skills training, Program P for fathers support, and Acceptance Based Behavioral Therapy and Motivational Interviewing for psychological services. In addition, their doulas use the Community-Based doula model, which is evidence informed.
- d) Staff qualifications and development opportunities:** In terms of organizational capacity, this program has two organizations working hand in hand with the planning and design, one being TMI as academic experts, and Urban Strategies which is more focused on administration. Programmatically there is one supervisor, one technical assistance staff, and two co-principal investigators. The project serves 4 regions supported by: 8 home visitors, 4 integral care coordinators, 6 doulas, 1 coordinator and 1 facilitator who works specifically with fathers, 4 breastfeeding consultants, and 4 mental health specialists. They will soon have an infant-mother health coordinator and at the moment consult with a neonatal specialist. Staff hold degrees on multiple levels, from certificates to master's degrees in the areas of: doula, breastfeeding, social work, education, social sciences, public health administration, and psychology. All program staff have been trained and certified in EBPs that are being used. As reported, staffing has not been an issue. During the interview, the Program Supervisor informed that the Program presented growth opportunities for all, and that staff needs are rapidly identified and tended to. At the moment there is one Coordinator vacancy since the previous coordinator did not meet program goals. The Program Supervisor described the organizational climate as one characterized by constant communication, teamwork, and where staff have reported feeling supported and with high levels of satisfaction. Program Supervisor added that they have regular meetings to support staff and provide adequate supervision.
- e) Program strengths and weaknesses:** The Program Supervisor informed that having two organizations working hand in hand was beneficial for the decision-making process in the Program, since it made it possible to implement rapid changes that other projects take longer to implement.

### Gaps and barriers

- a)** In terms of areas of opportunity, it was mentioned the project is still in its early stage. Therefore, there is not a written Policies and Procedures Manual and staff are continuously adjusting to what better meets the present needs. In terms of

infrastructure, the program still lacks a physical office in some municipalities, whereas others are facing virtual access problems with the pandemic. Participants tend to live in remote areas, some which are difficult to access, with significant economic disparities, and thus many lack transportation or transportation services to help them get needed services, particularly mental health services. Additional staff training is needed to tend to issues of domestic violence and hygiene. Program coordinators are already seeking to having these needs met.

## **Programa de Visitas al Hogar (Home Visiting Program)**

### **Quality**

- a) Addressing indicators of risk:** The Program Coordinator described the program as a source of education and empowerment for the most vulnerable mothers and families. This program works with high risk communities by identifying risk indicators and strengths of each family. Home visiting nurses do screenings for maternal depression, intimate partner violence, substance use (drug, alcohol, and tobacco), child development and oral health. They also make referrals to appropriate services as needed and offer health education on a variety of topics on maternal and infant/child health. A Mental Health Consultant (PHD in Psychology) provides training and support to the program nurses to effectively manage participants' emotional, behavioral, and mental health problems. Mothers are admitted when pregnant and receive three visits within the first month of being admitted to the program. Then for the first 13 weeks of pregnancy they receive visits every four weeks; from week 14-33 they receive visits every 2 weeks; and from week 34 to birth they receive weekly visits. After the baby is born, they receive three visits, one week apart; from month 2-6 of baby's life they receive visits every two weeks; and from baby's 7-24 months, they receive monthly visits. Participants receive visits at school and/or at home. Nurses fill out paper forms on each visit and report them monthly; these statistics are then digitized and sent to the Central office. Home visitors also offer coordination with supportive services.
- b) Addressing cultural and language needs of communities:** Validated screening instruments are used, and all materials are in Spanish, gender neutral, and have been tested with participants.<sup>20</sup>
- c) EBP buy-in:** The Program is based on the Nurse Family Partnerships evidence-based model, with a focus on biopsychosocial practices; they are not directly affiliated with the organization.
- d) Staff qualifications and development opportunities:** This Program is run by a Coordinator under PR-DoH MCAHD with Title V funds. It has 82 nurses visiting 3,202 families across the whole island, except in the municipalities where FSPR offers services and Maricao. Each nurse has a maximum of 35 families under his or her care. The Coordinator ensures that program goals and objectives are met and that the interventions are carried out according to the protocol. The Coordinator is supervised by the director of this division in the PR-DoH. An Evaluator monitors

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<sup>20</sup> Puerto Rico Department of Health: Maternal, Child and Adolescent Health Division. (2020). *Puerto Rico Health Need Assessment 2020* (pp. 1-72).

monthly and annual reports required by the funder, assesses all services provided by home visitors together with the Coordinator. She participates in developing proposals, research, and other necessary studies. The Program has a Policies and Procedures Manual readily accessible that guides all processes. The MCAHD Program's regional offices are led by a regional director who responds to the MCAHD Director, a regional Home Visiting Program supervisor who supervises home visiting nurses and guides them in evaluation and case management. The Coordinator informs that supervisors and nurses have a strong professional relationship where they complement each other's strengths. The interviewed staff reported that there is limited professional growth opportunity within the Program.

- e) **Program strengths and weaknesses:** The Program has a psychological consultant in their central team that provides guidance on psychological and mental health issues and offers training to support mother and infant mental health.

### Gaps and barriers

- a) The Program presents many areas for opportunities with the past and present challenges. The Program Coordinator acknowledged a need for strengthening Motivational Interviewing skills and managing mental health issues. It was reported that contracting is also a challenge given the bureaucratic process required by the PR-DoH. Regional offices house the regional director, Home Visiting Program supervisor and ancillary staff, while nurses at the municipal level are usually co-located with other government agencies, challenging the fluidity of organizational processes. Also, given the situations in Puerto Rico, they express a need to develop better emergency response protocols. Staff lacks the necessary equipment to go remote virtually (computers, laptops, tablets, etc.). This has been particularly challenging with the pandemic. Supervisors still hold virtual weekly meetings with nurses and continuously communicate through text messages; nurses have effectively been able to offer services by phone. They recommend this be a method to include in the emergency protocol and necessary equipment be acquired. Psychosocial and dental services, already scarce, have been made more difficult to access with the disasters and current pandemic. Many participants live in remote areas and others in public housing often marred by violence, which puts nurses' safety at risk. There is also a demographic challenge where the birth rate is decreasing so recruiting has become more difficult. The Program Coordinator expressed that they are seeking solutions as a Program to address these identified challenges.

### Avanzando Juntos (Early Intervention Program)

#### Quality

- a) **Addressing indicators of risk:** This program, unlike the others, is a home visiting program aimed exclusively at serving children with developmental delays. It is perceived as fundamental to guaranteeing children's health and wellbeing. For this reason, the staff expressed interest in the services being accessible to all in need. There is a total of seven regional centers across the island in: San Juan, Bayamón, Arecibo, Mayagüez, Ponce, Fajardo, and Caguas; servicing a total of 2,555 participants. The program seeks early detection of developmental delays and supports children and families with services to meet milestones. It also supports

families along the process with managing expectations, frustrations, and strengthening parenting skills. Families are also supported in coordinating supplemental services. Evaluation is strengths-based, and family diversity is incorporated in everything that is developed. Staff registers participant information in a database and complete progress notes.

- b) Addressing cultural and language needs of communities:** All of the practices used are adapted to the Puerto Rican population and offered in Spanish. Program treatment plans, materials, and evaluation results are written in a manner that families can easily understand.
- c) EBP buy-in:** The Program uses the Routine Model EBP and they are in the process of implementing a Coaching EBP since the Program has the necessary personnel and infrastructure required to manage it. They also have an MOU with the Institute for Developmental Delays in the University of Puerto Rico Medical Sciences Campus, which helps to develop curricula and train personnel.
- d) Staff qualifications and development opportunities:** In terms of organizational structure, the Program has one Program Coordinator in the central office, one Program Evaluator for quality assurance, one Data Manager, and one Pediatric Consultant that assists in developing individualized service plans. Each regional center has a local Supervisor, Data Entry person, Service Coordinators and nurses hired by PR-DoH. Service providers such as psychologists, social workers, and therapists are hired by the local implementers.
- e) Program strengths and weaknesses:** The Program Coordinator described the organizational climate as strong, where teamwork is encouraged and every professional's best competencies are used to meet Program goals. Supervision is always provided, and staff needs are met with training.

### **Gaps and Barriers**

- a)** Areas of opportunity identified by the Program staff include staff turnover due to them being subcontracted by a private company where staff perceived that salaries are not competitive enough and opportunities for professional growth inside the institute are limited. However, staff supports each other with teamwork in helping families receive needed services. Another significant challenge is program sustainability, since funding is dependent upon children born annually and the birth rate is declining. This has limited the amount and availability of services, since there's less staff (i.e. one staffer may have 50 participating children) and waiting lists are not allowed. The Program Coordinator lacks access to the central data system which sometimes can hinder her administrative work. Service providers are also faced with the challenge of families living in remote areas and lacking the means to reach other services due to transportation and economic hardship. The current pandemic has also presented an additional challenge in staff being able to provide remote services virtually or by phone and materials have not been available to families in remote areas. The personnel interviewed stated a need to develop a plan at the PR-DoH for virtual services. As of the final editing of this report, virtual services had already begun to be offered.

## Nidos Seguros (Safe Nests)

### Quality

- a) Addressing indicators of risk:** This program is administered by the Assistant Administration for Prevention and Community Services (ADFAN) of the Puerto Rico Department of the Family (PR-DF) under Title II of the "Child Abuse Prevention and Treatment Act" (CAPTA).<sup>21</sup> Nidos Seguros follows the same protocols and guidelines as the PR-DoH Home Visiting Program. In fact, their nurses were trained by Title V staff. The main difference between these two groups is the population served. ADFAN offers this service to young pregnant women in state custody and in communities between the ages 13 to 21.

Nidos Seguros nurses offer support, guidance, education and coordination of necessary services during pregnancy, childbirth and up to 36 months of age of the child. In addition to the home visits, participants have continuous 24/7 communication with their assigned nurse who offers counseling, support, education, strategies to increase protective capacities, develop healthy attachments, promote breastfeeding and coordinate other necessary services during pregnancy and labor. In addition, they perform screening of physical and emotional development of infants and children up to 24 months of age. High-risk indicators are addressed by maintaining communication with community leaders. These leaders know the risks that communities face every day and guide visiting nurses around these situations and provide advice on which days families should not be visited. They receive participants referred from other PR-DF programs, WIC, public housing projects, schools, and community organizations. Nurses evaluate the participant's history, risk behaviors such as substance use, and develops a plan. Topics that are worked on include: shaken baby syndrome, withdrawal syndrome, breastfeeding, developmental stages, mental health, and domestic violence, among others. Visits take an average of 1.5 to 2hrs, depending on the mothers' needs.

- b) Addressing cultural and language needs of communities:** They use materials that have a simple language and is easy for mothers to understand; some personnel dominate sign language. Participants have evaluated the program and its materials as satisfactory and say the information provided is useful in everyday life.
- c) EBP buy-in:** Although this program does not incorporate any EBPs, they work in collaboration with other PR-DF departments to help meet these mothers' needs. The Program also uses the PR-DF Policies and Procedures manual to guide them. Weekly and monthly reports are regionally prepared and sent to central offices. These reports inform of the nurse's efforts to meet goals.
- d) Staff qualifications and development opportunities:** The organizational structure includes one Associate Director, one Supervisor and one nurse per region; there used to be more nurses but due to cuts in funding it has been reduced. Nurses must have a bachelor's degree and be licensed. Nurses have a maximum caseload of 25 participants. There is 1 nurse in the Mayaguez region, 2 nurses in the Humacao region, and 1 nurse in the Ponce region. The organization's

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<sup>21</sup> Administration for Families and Children of Puerto Rico. (2020). *Child and Family Services Plan* (pp. 1–250).



structure, staff commitment, and teamwork were identified program strengths. Staff has weekly case discussion meetings that include participants' and legal PR-DF custodians. Opportunities for growth for the staff within the organization were not identified.

- e) Program strengths and weaknesses:** The Program's significant strengths reported are helping mothers with postpartum depression and including the whole family in the maternity process. Also, most of their adolescent mothers begin breastfeeding in the first month after childbirth and about one third continue or reinstate their studies after having their baby. Nidos Seguros nurses also increase awareness of the interconceptional period and family planning.<sup>22</sup>

### **Gaps and Barriers**

- a)** Areas of opportunities identified by the Program Supervisor include improving organizational structure to allow for additional hiring and making it quicker. Also, equipment to mobilize their services, such as laptops, were deemed necessary. Staff also sees opportunity for further training in mental health disorders, the autism spectrum, and developmental delays. Challenges staff face is that many participants live in high-risk violent communities or communities that are difficult to access. Many lack access to basic services such as nearby pharmacies. Program staff works in collaboration with community leaders to be able to gain access to participants. Lowering of the birth rate has been identified as a challenge for participant recruitment; Program staff suggests increasing participants' eligibility age to 23 years of age. They have lost target population due to recent disasters such as Hurricane María and earthquakes.

### **Other public and private organizations that serve the maternal, infant, and early childhood population in Puerto Rico**

Even though only five home visiting programs were identified, Puerto Rico has a myriad of organizations and agencies that support maternal and early childhood health. The PR-DoH created a list of public and private organizations that collaborate with them in the provision of services for the maternal, infant, and early childhood population in Puerto Rico.<sup>23</sup> These collaborations are key in the betterment of maternal health throughout the Island.

- Insurance Commissioner Office and PR Health Insurance Administration
- Puerto Rico Department of Education
- Puerto Rico Department of the Family
- Head Start and Early Head Start Programs
- PR Institute of Statistics
- University of Puerto Rico (UPR) – Agricultural Extension

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<sup>22</sup> Departamento de la Familia: Administración de Familias y Niños (ADFAN). (2015). *Memorial Explicativo del Presupuesto Recomendado* (pp. 1–72).

<sup>23</sup> Puerto Rico Department of Health: Maternal, Child and Adolescent Health Division. (2020). *Puerto Rico Health Need Assessment 2020* (pp. 1–72).

- Health and Justice Center, San Juan Bautista School of Medicine
- Institute on Developmental Disabilities, UPR Medical Science Campus
- PR Family to Family Health Information Center
- UPR Medical Science Campus
- PR-Neonatal Screening Laboratory
- United Way
- March of Dimes
- PR Hospitals Association
- American Academy of Pediatrics Puerto Rico Chapter, PR Pediatric Society
- Puerto Rico Association of Primary Health Care
- Highway Safety Commission
- Oral Health Alliance
- Maternal, Child, and Adolescent Health Program Breastfeeding Alliance: La Leche League PR, Proyecto Lacta, PR Breastfeeding Coalition, Promani, ASI, Quality Office of La Fortaleza, Women and Patient Procurator
- Institute for Youth Development
- PR Boys and Girls Club
- Pro Familia (Planned Parenthood)
- Puerto Rico American College of Obstetrics and Gynecologists
- PR Society of Pediatric Dentistry
- Proyecto Nacer
- Maternal Fetal Medicine Specialist
- Apoyo a Padres de Niños con Impedimentos (APNI)
- Sociedad de Educación y Rehabilitación (SER) de PR
- Movimiento para Alcance de Vida Independiente (MAVI)
- Office of Advocacy for People with Disabilities
- PR-PKU Association

Head Start/Early Head Start Programs also provide several services which take place in the home, but they are not considered home visiting services for this needs assessment because the home visits are complementary to the programs and not the focus of program service. Head Start Programs target children 3 to 5 while Early Head Start Programs focuses on infants from birth to 3 and their mothers. The largest Head Start/Early Head Start concessionary in Puerto Rico is directed by the Administration for the Care and Integral Development of Childhood. There are 11 delegated agencies which

operate the centers and actual classrooms in 27 municipalities.<sup>24</sup> At this juncture, there are 177 ACUDEN Head Start and Early Head Start Centers. In addition to the state managed concessionaries, Puerto Rico also has 72 private HS/EHS concessionaries in the municipalities of Bayamón, Caguas, Cataño, Ciales, Coamo, Corozal, Río Grande San Juan, Trujillo Alto, and Vega Alta. All families participating in HS and EHS must receive at least two visits annually from the program teachers.

EHS targets low-income infants, toddlers, pregnant women and their families. The programs enhance children's physical, social, emotional, and intellectual development; assist pregnant women to access comprehensive prenatal and postpartum care; support parent's efforts to fulfill their parental roles; and help parents move toward self-sufficiency. However, in adherence to EHS performance standards, a Family Partnership Agreement process is used to develop an individual set of services which meet the needs of the particular family while honoring family goals and strengths. This agreement might include services provided in the home; however, home visiting is not required nor is a specific curriculum followed. Once the infant is born, services focus on transitioning to enrollment in EHS programs and typically include one home visit after delivery to ensure the well-being of the mother and child.

#### **4. Capacity for providing substance abuse treatment**

The fourth task of the Needs Assessment consisted in the collection and analyses of data on the capacity of providing substance abuse treatment for pregnant women and women with children. This task entailed collecting data from several sources and integrating it to determine gaps in service capacity and availability.

Specifically, this task's objectives were:

1. To describe the range of substance use disorder treatment and counseling services available in Puerto Rico for pregnant or parenting women.
2. To identify gaps in the current level of availability and comprehensiveness to meet the need for substance abuse treatment services.
3. To describe barriers to receiving treatment faced by pregnant or parenting women.

#### **Data Sources**

Four sources of data were examined for information on the availability of drug treatment services for pregnant women and women with children in Puerto Rico:

1) The Substance Abuse and Mental Health Services Administration (SAMHSA) of the US Department of Health and Human Services conducts an annual survey of treatment facilities in all US states and Puerto Rico. This study is known as the National Survey of Substance Abuse Treatment Services (N-SSATS) and collects information on all treatment and ancillary services offered by stand-alone drug treatment programs, including special services such as programs or groups for pregnant and parenting women. The most recent public use survey data (2018) was downloaded from N-SSATS' website.<sup>25</sup> This N-SSATS'

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<sup>24</sup> Departamento de la Familia: ACUDEN Programa Head Start. (2019). *Informe de la Evaluación Comunitaria (EC) Consolidada de ACUDEN* (pp. 1–12).

<sup>25</sup> National Survey of Substance Abuse Treatment Services (N-SSATS). (2020).

<https://www.dasis.samhsa.gov/dasis2/nssats.htm>

2018 dataset contains data on 12,319 facilities throughout the US and 108 in Puerto Rico. The response rate for the 2018 Puerto Rico survey administration was 79.6%. Information on the geographic location of the facilities was extracted from the SAMHSA's Facility Locator website. The dataset downloaded from this site contained geographic information for 97 of the 108 facilities from Puerto Rico.

2) The Administration for Health Insurance (ASES – its acronym in Spanish) of the Commonwealth of Puerto Rico provides publicly funded health insurance to the medically-indigent population of Puerto Rico. Eligibility in the program follows Medicaid criteria and all claims are received and processed by ASES. During 2018, the publicly funded health insurance program covered 1.2 million lives or 35% of the island population. Claim data was extracted for the most recent three years (2016-18). All claims of female patients ages 15 through 44 with a substance abuse diagnostic code were extracted annually. A total of 763,699 claims were extracted.

3) The Mental Health and Anti-Addiction Services Administration (MHAASA) of the Commonwealth of Puerto Rico submits an annual plan to SAMHSA. In this plan, MHAASA provides estimates on the level of need for pregnant women or women with children. MHAASA also operates a publicly funded substance abuse treatment program. Data on treatment admission for the three-year period 2016-18 was extracted for analyses. A total of 814 records of women ages 15 through 44 were extracted.

4) The data from the above three sources were complemented with data from two focus group sessions conducted among Home Visitors from current Home Visiting programs. Home Visitors were invited to attend the focus group discussion on access to substance abuse services. In these focus groups, availability of services were discussed in terms of physical proximity, ease of admission, costs, comprehensiveness of ancillary services particularly those required by pregnant or parenting women. A total of 13 Home Visitors participated in the focus group sessions.

**Findings**

**N-SSATS Survey Results**

Table 6 shows the types of substance abuse treatment programs available in Puerto Rico in 2018. The table shows that Puerto Rico has all the most common treatment modalities. The historical emphasis on inpatient care in Puerto Rico can also be appreciated: 63.9% of facilities are characterized as Residential – non hospital – and Hospital Inpatient.

**Table 6.** Type of care of substance abuse treatment facilities in Puerto Rico, N-SSATS Survey Results 2018.

| Substance Abuse Treatment Facilities                          | n         | %           |
|---|-----------|-------------|
| <b>Outpatient</b>   | <b>50</b> | <b>46.3</b> |
| Regular   | 39        | 36.1        |
| Intensive   | 16        | 14.8        |
| Day treatment/partial hospitalization                         | 19        | 17.6        |
| Detoxification  | 13        | 12.0        |
| Medication assisted<br>(Methadone, buprenorphine, naltrexone) | 25        | 23.1        |

| Substance Abuse Treatment Facilities | n          | %            |
|--------------------------------------|------------|--------------|
| <b>Residential (non-hospital)</b>    | <b>54</b>  | <b>50.0</b>  |
| Short term ( $\leq 30$ days)         | 11         | 10.2         |
| Long term ( $> 30$ days)             | 54         | 50.0         |
| Detoxification                       | 13         | 12.0         |
| <b>Hospital inpatient</b>            | <b>15</b>  | <b>13.9</b>  |
| Treatment                            | 12         | 11.1         |
| Detoxification                       | 14         | 13.0         |
| <b>Total</b>                         | <b>108</b> | <b>100.0</b> |

Table 7 however, shows how limited substance abuse services are for child-rearing women. Of the 108 facilities in Puerto Rico, one third (38.0%) has women-specific programming but only less than 10% has children-specific services. Only eight facilities reported program components for both women and their children.

**Table 7.** Substance abuse treatment facilities with services for women and children in Puerto Rico, N-SSATS Survey Results 2018.

| Facility has program components for:         | n  | %    |
|--|----|------|
| Women, pregnant or postpartum women          | 41 | 38.0 |
| Clients' children                            | 10 | 9.3  |
| Both components for women and their children | 8  | 7.4  |

Map 15 compares the location of the treatment facilities and the location of the communities in highest need for Home Visiting Services. There is a clear concentration of treatment facilities around the San Juan Metro Area. Of the 108 facilities, only five (4.6%) are located within the territory of the 13 communities in highest need for Home Visiting Services.

**Map 3.** Location of the 108 existing substance abuse treatment facilities and the 13 communities found to be at greatest need for home visiting programs in Puerto Rico, N-SSATS Survey Results 2018.

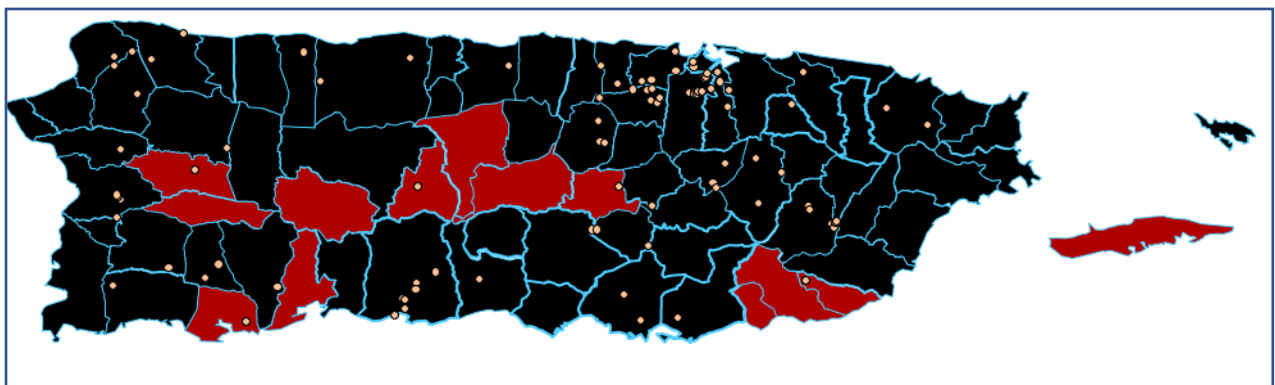


Table 8 lists the number of facilities by municipality.

**Table 8.** Amount of substance abuse treatment facilities by municipality in Puerto Rico, N-SSATS Survey Results 2018\*.

| Municipality | Tx Facilities | Municipality | Tx Facilities | Municipality | Tx Facilities | Municipality  | Tx Facilities |
|--------------|---------------|--------------|---------------|--------------|---------------|---------------|---------------|
| Adjuntas     | 0             | Cidra        | 2             | Lajas        | 0             | Río Grande    | 0             |
| Aguada       | 0             | Coamo        | 0             | Lares        | 0             | Sabana Grande | 1             |
| Aguadilla    | 3             | Comerio      | 0             | Las Marías   | 1             | Salinas       | 1             |
| Aguas Buenas | 0             | Corozal      | 0             | Las Piedras  | 1             | San Germán    | 1             |
| Aibonito     | 3             | Culebra      | 0             | Loíza        | 1             | San Juan      | 19            |
| Añasco       | 1             | Dorado       | 0             | Luquillo     | 1             | San Lorenzo   | 1             |
| Arecibo      | 2             | Fajardo      | 1             | Manatí       | 0             | San Sebastián | 1             |
| Arroyo       | 0             | Florida      | 0             | Maricao      | 0             | Santa Isabel  | 0             |
| Barceloneta  | 0             | Guánica      | 1             | Maunabo      | 0             | Toa Alta      | 3             |
| Barranquitas | 0             | Guayama      | 2             | Mayagüez     | 4             | Toa Baja      | 1             |
| Bayamón      | 11            | Guayanilla   | 0             | Moca         | 1             | Trujillo Alto | 2             |
| Cabo Rojo    | 2             | Guaynabo     | 1             | Morovis      | 0             | Utuado        | 0             |
| Caguas       | 3             | Gurabo       | 1             | Naguabo      | 0             | Vega Alta     | 0             |
| Camuy        | 0             | Hatillo      | 1             | Naranjito    | 2             | Vega Baja     | 1             |
| Canóvanas    | 1             | Hormigueros  | 0             | Orocovis     | 0             | Vieques       | 0             |
| Carolina     | 0             | Humacao      | 4             | Patillas     | 0             | Villalba      | 0             |
| Cataño       | 0             | Isabela      | 1             | Peñuelas     | 0             | Yabucoa       | 1             |
| Cayey        | 1             | Jayuya       | 0             | Ponce        | 9             | Yauco         | 1             |
| Ceiba        | 0             | Juana Díaz   | 1             | Quebradillas | 0             |               |               |
| Ciales       | 0             | Juncos       | 2             | Rincón       | 0             |               |               |

\* Data extracted from SAMHSA Facility Locator (<https://findtreatment.samhsa.gov/locator>)

### Current Use of Substance Abuse Treatment Services

Table 9 shows the amount of women ages 15 through 44 who received substance abuse treatment services during 2018 through either the ASES' health insurance program or MHAASA's state-funded treatment system. The table breaks down treatment users by municipality. A total of 170 women from the 13 Municipalities found to be in highest need for Home Visiting services received substance abuse treatment services during 2018. This number amounts to a per capita rate of 2.8 per 1,000 women ages 15 through 44. Women residing in the other Municipalities who received substance abuse treatment services during 2018 were 4,836, a per capita rate of 4.0. Thus, women from the Municipalities found to be in highest need for Home Visiting services were only 70% as likely to receive substance abuse treatment services as women residing in Municipalities not in highest need.

**Table 9.** Number of women 15 to 44 years old who received substance abuse services by municipality in Puerto Rico, ASES and MHAASA 2018.

| Municipality | Amount | Rate* | Municipality | Amount | Rate* | Municipality  | Amount | Rate* |
|--------------|--------|-------|--------------|--------|-------|---------------|--------|-------|
| Adjuntas     | 6      | 1.8   | Fajardo      | 31     | 5.3   | Naguabo       | 16     | 2.8   |
| Aguada       | 21     | 3.0   | Florida      | 5      | 2.1   | Naranjito     | 17     | 3.2   |
| Aguadilla    | 56     | 5.8   | Guánica      | 44     | 15.2  | Orocovis      | 27     | 6.8   |
| Aguas Buenas | 13     | 2.6   | Guayama      | 17     | 2.2   | Patillas      | 11     | 3.8   |
| Aibonito     | 45     | 11.1  | Guayanilla   | 40     | 11.5  | Peñuelas      | 9      | 2.3   |
| Añasco       | 37     | 7.4   | Guaynabo     | 22     | 1.4   | Ponce         | 152    | 6.0   |
| Arecibo      | 30     | 1.9   | Gurabo       | 6      | 0.6   | Quebradillas  | 11     | 2.4   |
| Arroyo       | 19     | 5.2   | Hatillo      | 14     | 1.8   | Rincón        | 17     | 6.9   |
| Barceloneta  | 16     | 3.1   | Hormigueros  | 8      | 2.9   | Río Grande    | 36     | 3.8   |
| Barranquitas | 30     | 5.4   | Humacao      | 35     | 3.6   | Sabana Grande | 17     | 4.1   |
| Bayamón      | 114    | 3.4   | Isabela      | 118    | 15.0  | Salinas       | 15     | 2.8   |
| Cabo Rojo    | 32     | 3.5   | Jayuya       | 7      | 2.5   | San Germán    | 22     | 4.0   |
| Caguas       | 102    | 4.0   | Juana Díaz   | 35     | 3.7   | San Juan      | 392    | 6.0   |
| Camuy        | 15     | 2.5   | Juncos       | 22     | 2.6   | San Lorenzo   | 16     | 2.2   |
| Canóvanas    | 17     | 1.9   | Lajas        | 14     | 3.6   | San Sebastián | 40     | 6.2   |
| Carolina     | 73     | 2.4   | Lares        | 11     | 2.4   | Santa Isabel  | 12     | 2.5   |
| Cataño       | 21     | 4.4   | Las Marías   | 14     | 9.6   | Toa Alta      | 33     | 2.1   |
| Cayey        | 22     | 2.6   | Las Piedras  | 29     | 3.7   | Toa Baja      | 27     | 1.7   |
| Ceiba        | 11     | 5.1   | Loíza        | 16     | 3.0   | Trujillo Alto | 27     | 2.0   |
| Ciales       | 12     | 4.1   | Luquillo     | 18     | 4.9   | Utuado        | 11     | 2.1   |
| Cidra        | 35     | 4.5   | Manatí       | 34     | 4.6   | Vega Alta     | 22     | 2.9   |
| Coamo        | 26     | 3.5   | Maricao      | 4      | 4.0   | Vega Baja     | 45     | 4.5   |
| Comerio      | 7      | 1.9   | Maunabo      | 4      | 2.2   | Vieques       | 2      | 1.5   |
| Corozal      | 13     | 2.0   | Mayagüez     | 76     | 5.3   | Villalba      | 15     | 3.5   |
| Culebra      | 4      | 12.2  | Moca         | 31     | 4.3   | Yabucoa       | 12     | 1.9   |
| Dorado       | 19     | 2.6   | Morovis      | 30     | 4.8   | Yauco         | 18     | 2.9   |

\* = per 1,000 pop

### Barriers: Focus Group Results

Focus groups with staff from FSPR and Comienzo Saludables were held online via Zoom® to assess on a deeper level what the experience had been with substance abuse in high risk communities. Participants included Family Resource Specialists, Family Support Specialists, Supervisors and Data Managers from FSPR, as well as Home Visitors and Coordinators from Comienzo Saludable. Sessions were recorded and later transcribed, and a content analysis was performed. The findings were as follows:

Focus group participants strongly converged on assessing the existing substance abuse treatment capacity as inadequate, particularly in the geographic location of existing services (i.e., too distant from patients' homes) and the lack of services for women with children.

Notably, none of the programs had a participant require substance abuse services. This implies that demand for substance abuse services among Home Visiting participants is currently low. However, they did have some experience with participants' male partners requiring substance abuse services. Understandably, staff expressed lack of knowledge on the specifics of the existing programs (e.g., ancillary services, types of therapies offered). More importantly, it was expressed that residents in the communities being intervened generally lacked information on the availability of programs.

Geographic location was mentioned as a barrier to services by all focus group participants. Substance abuse treatment facilities are concentrated in the San Juan Metro Area and in the major cities, leaving rural and inland communities with close to no services. A number of complications attempting to identify transportation for potential clients were expressed.

Lack of services for women with children was the other major barrier attested by a majority of focus group participants. They stated that without childcare it was very difficult for their participants to access any services, including substance abuse services if needed.

### **Barriers: MHAASA Analyses**

As part of its annual block grant proposal to the US federal government, MHAASA identifies service gaps for special populations such as pregnant women and women with dependent children (PW-WDC). MHAASA's most recent block grant proposal fundamentally echoes the results of the focus group sessions discussed above.<sup>26</sup> MHAASA officials identified the following service gaps for pregnant women and women with dependent children:

- Access to means of transportation to reach service sites, especially for more rural areas and geographic areas with more scarce service providers.
- More equitable and geographically distributed treatment services, especially for rural communities.
- More training for pediatricians, general physicians and other providers of physical health and support services related to mental health and substance abuse and the needs of the affected populations to promote integrated primary care and behavioral health services.
- The primary need for PW-WDC is the expansion of gender-specific services within treatment settings, preferably including integrated Primary Care and Mental Health and Substance Abuse treatment services. Often this population must obtain prenatal care, primary care, mainstream benefits and other services from a multitude of agencies, most of which are concentrated in more urban areas.

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<sup>26</sup> Mental Health and Anti Addiction Administration. 2020 Block Grant Application. Unpublished document.



- Broader distribution of service sites and expanded services are needed for special populations, particularly PW-WDC. Puerto Rico has only one Residential Treatment Center in San Juan for 37 clients where PW-WDC can receive treatment and can have their infants with them until 3 years of age. Funding is not available for more services.
- Public transportation is a need, particularly for special populations. This gap affects all of Puerto Rico, but particularly more rural geographic areas.
- There is a need for flexible hour employment for PW-WDC in recovery from Mental Health and/or Substance Use disorders, complicated by persistent stigma toward this population.

### **Opportunities for Collaboration with Public and Private Partners**

There are in Puerto Rico two main providers of substance abuse and mental health services: ASES' health insurance program for the medically indigent (Medicaid and state combined funding) and MHAASA's state and federally funded treatment system. All three FSPR LIAs have formal agreements with both programs to refer participants. In addition, there are a number of community based programs, most being faith based residential programs, that LIAs work with for referrals.

MHAASA's substance abuse program is the single largest provider of both mental health and substance abuse services, including services for opioid abusing women. In addition, the fact that a great majority (>90%) of our participants have medical insurance coverage through Medicaid, provides them the alternative of receiving services by the providers under contract with ASES. Officials of MHAASA and ASES are members of our Advisory Board where challenges with securing services are discussed.

Participants screening positive to depression or who abuse substances are referred initially to the mental health provider under the ASES program and, if waiting time is longer than 1 week or if the participant is not satisfied with the provider, the participant is then referred to a MHAASA service facility. These referral agreements are strengthened through informal agreements that facilitate ancillary services such as transportation and childcare. According to the focus group participants, the main limitation of the existing programs is the geographical distance of existing service sites.

In addition, one of our LIAs (Salud Integral en la Montaña (SIM)) offers substance abuse counseling services in its clinic in Naranjito – about a 30-45 minute drive from participants' residences. This service is available to all SIM patients. Two of our LIAs are Federally Qualified Health Center and have clinical social workers and case managers to provide support in referrals.

### **Integration of Findings**

Substance abuse services for child-rearing women in Puerto Rico are limited. Only one third (38.0%) of the 108 facilities offering substance abuse services in Puerto Rico, had women-specific programming. Less than 10% had children-specific services. Program components for both women and their children were found in only 8 facilities

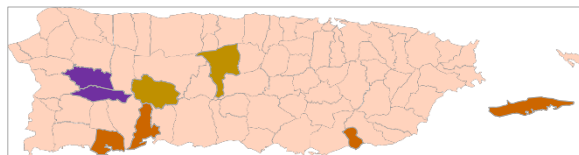
A clear concentration around the San Juan Metro Area was found in the geographic distribution of the substance abuse service facilities. Of the 108 facilities, only five (4.6%) were located within the 13 communities in highest need for Home Visiting Services. We

was estimated that women residing in the Municipalities found to be in highest need for Home Visiting services were only 70% as likely to receive substance abuse treatment services as women residing in Municipalities not in highest need.

Focus group participants assessed the existing substance abuse treatment capacity as inadequate. Of particular emphasis, participants mentioned too far distances from homes to facilities. Lack of services for women with children were also mentioned a limited. MHAASA's most recent block grant proposal fundamentally echoed the results of the focus group sessions.

### 5. *Assessing community readiness for implementation of evidence-based home visiting models and related services*

Community readiness is defined by the Tri-Ethnic Center for Prevention Research as the degree to which a community is willing and prepared to take action on an issue. Based on the indicator data and its analysis presented in Section 2 above (page 10), the investigators, in collaboration with the the Advisory Board, developed a combined index of risk and identified the top thirteen Municipalities at risk. Of these 13 Municipalities, the current MIECHV program operates in five of them and there is little need to amplify the readiness information already accumulated. Thus, readiness was assessed in the remaining eight municipalities. The eight municipalities were grouped into three groups according to type of location – Coastal Municipalities (Guayanilla, Guánica, Arroyo, and Vieques), Central Mountainous Municipalities (Adjuntas and Ciales) and Western Municipalities (Maricao and Las Marías). The map at right shows how the municipalities were grouped for the readiness assessment.



● Western Municipalities, ● Coastal Municipalities, ● Central Mountainous Municipalities

To assess **readiness for implementation of evidence-based home visiting models and related services**, a focus group for each high risk municipality group was facilitated using a structured interview where the following questions were assessed: Do existing evidence-based home visiting programs in Puerto Rico have the capacity to serve more children and families? What resources would be needed for expansion? What agencies or organizations might be able to house and provide the necessary administrative support for a new home visiting program? What assets might the host organization bring to support a new home visiting program? What resources would be needed to implement home visiting services in the at-risk communities? What challenges can be anticipated in implementing a new home visiting program, and what are some possible solutions? What is the level of community buy-in for home visiting programs? What sectors in the at-risk communities lend the strongest support? What community agencies have the potential to support home visiting programs?

Focus group sessions were recorded and later transcribed and a content analysis was performed using codes emerging from the focus group questions.

Community stakeholders from each high-risk group were contacted and invited to participate in a focus-group session to assess readiness. The Western municipalities focus group had program staff from Migrant Health Center, WIC, the Nidos Seguros Program, and the Title V Nurses Home Visiting Program. A total of 7 persons participated in this focus

group. The Coastal municipalities focus group was conducted with 9 participants from Migrant Health Center, Avanzando Juntos, Title V Nurses Home Visiting Program, Head Start and Early Head Start, community leaders, Familias Saludables Puerto Rico, and Comienzo Saludable. The Central Mountainous focus group had 7 participants from the Mental Health and Anti-Addiction Services Administration (MHAASA), Avanzando Juntos, Title V Nurses Home Visiting Program, Puerto Rico Administration of Children and Families (ADFAN), WIC, and Familias Saludables Puerto Rico.

### **Western Municipalities (Maricao and Las Marías)**

Among its strengths, focus group participants identified that by interagency collaboration and working in collaboration with churches, the needs of women with children have been able to be met in the areas of: birthing classes, parenting skills, medical services, social work, Zika and autism awareness, nutrition and breastfeeding, vaccination accessibility, and developmental delays. This collaboration has allowed them to support families during the pandemic. However, many significant challenges were identified; these include: that families that live in remote areas are difficult to access, they lack basic services, and have little or no telecommunication. Families are also in profound economic hardship, many working agricultural jobs that have been put on hold due to earthquakes and the pandemic, and lack transportation to move to other areas to seek necessary services. This for example has led for babies that are being born to not be registered, since the nearby Demographic Registries have been closed. The consequence of this is that they then lack the necessary paperwork that would make services such as medical services, food aid, and others, impossible to access since they are not registered in the system.

Many professionals are also hesitant to travel to these zones to provide services and those that reside in the zones often lack the necessary equipment (computers and telephones). Programs participating in the focus group did not report using any EBPs. Many areas of opportunities to respond to these challenges were identified. These include taking services to remote areas, making policies and program requisites more flexible so participants can have their needs met, consider cultural adaptations that take into account the remote areas these participants live in, and provide mental health support. More economic resources and funding were seen as necessary to strengthen the existing programs with trainings in EBPs, materials, equipment, and transportation. Participants did not see the need of introducing new service organizations in the zone but instead they did mention the need to support existing entities in providing training and organizational support to strengthening their service capacity for implementing evidence-based practices.

### **Coastal Municipalities (Guayanilla, Guánica, Arroyo and Vieques)**

Comparatively, the coastal region has many more resources available. Among identified strengths were that most of these municipalities had an evidence-based home visiting program that use the Growing Great Kids curriculum. Also, the Title V home-visiting nursing program and Head Start programs provide services for mothers at home and at school. Therefore, families receive services in parenting skills, nutrition, education, and relief (food and clothing). This is important since participants mentioned that many times, these services are the only support families have. All programs participating in the focus group reported being able to adapt and continue providing services during the pandemic and

all of them have the capacity to receive more participants. Challenges identified by focus group participants included Early Head Start programs closing. Several reasons were attributed: (1) lack of funding, (2) the natural disasters, particularly Hurricane María which led to workers migrating to other municipalities or the mainland, (3) that home-visitors' safety is at risk when visiting some participants in violent communities so it affects turnover, and (4) that the process to receive services is at times so complex (requiring duplicity of information from participants) that although services are available, many participants disengage in the process of trying to acquire them.

However, some municipalities in this region face further significant challenges. As for the municipalities of Guánica and Guayanilla, being in the epicenter of the swarm of earthquakes, it was reported that all its government service offices had shut down and many of the medical and social services which were previously available, were nonexistent. The earthquakes and recent tropical storms have also had a great impact on the agricultural sector, which is a major fuel for the economy in this region.

The coastal municipality of Vieques has similar challenges, but due to other factors that have been present for years. Vieques is an island-municipality off the northeastern coast of Puerto Rico, accessible by ferries or by plane. Vieques was used by the US Navy as a bombing range and testing ground for a significant part of the 20<sup>th</sup> century, leading to many adverse health consequences for its inhabitants. After significant protests, the US Navy left the island in 2003, yet much of the island remains closed off due to contamination or unexploded bombs that the military has not cleaned up. Further adversities faced by residents in Vieques are lack of medical essential services, particularly after Hurricane María destroyed the only hospital they had.

Creative solutions were proposed to address this region's needs. Some included: creating a coordinated digital database of available services to facilitate referral and participant information being shared, expanding collaboration MOUs, expanding funding to bring in more staff and equipment, develop proposals together for more integrated services, and creating local advisory committees to see what is working and what's not and seek solutions together. It was also recommended that no new service organization be brought but that existing programs be strengthened with EBPs since they already had the organizational capacity and structure required to sustain such practices.

### **Central Mountainous Municipalities (Adjuntas and Ciales)**

The third at-risk region that was assessed for readiness was the Central Mountainous. Many strengths were identified in this region but one that particularly stood out was the support in mental health and developmental delays that was provided. Many of these programs were also able to adapt and continue providing remote services during the pandemic. Program participants have stressed through various means the importance these programs have had in supporting them develop parenting skills, nutrition and breastfeeding awareness, receive medical care and social work support, and providing support with different community and faith-based agencies and churches.

A significant challenge stressed in this region is the lack of trust many participants have and keeping isolated to themselves; they explain that these communities in isolation have higher incest rates and pandemic spread, since culturally many families in this zone lack trust in "outsiders". Another challenge that was mentioned is the lack of services for victims of domestic violence (including services for aggressors and shelters for victims).

Also, many families have strong economic hardships and thus lack basic resources, limited access to sturdy telecommunications, and lack of transportation, all which affect participant services particularly in times of disasters. Areas of opportunities that were identified included strengthening collaboration between agencies, increase funding to increase the existing programs' capacities, make services more readily available to communities with cultural sensitivity and providing additional supports such as transportation. Other adaptations suggested were including curriculums that worked more with gender perspectives and bringing services to the deaf community which is significant in this zone. Mental health services specialized in maternal and infant population was also recommended. Finally, it was suggested that no new service organizations be brought but that the current programs be enhanced and work in collaboration since they already had the organizational capacity and structure necessary to implement an evidence-based home visiting model.

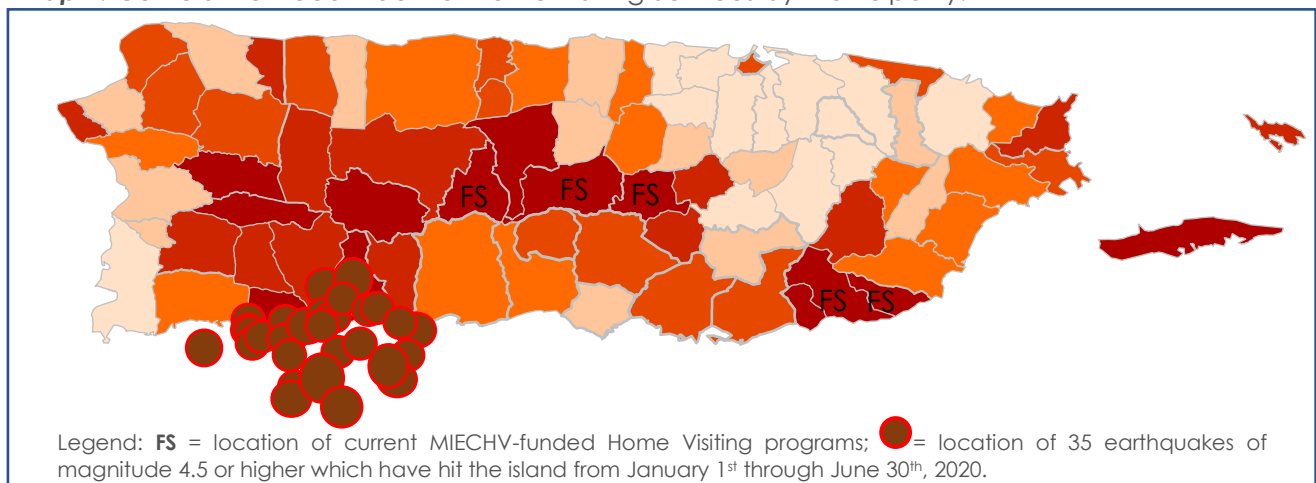
## Conclusions and Recommendations

### 1. Conclusions

The findings discussed in the previous sections yield a number of clear and important conclusions that are summarized and highlighted below:

1. The first and foremost finding of this Needs Assessment is that the majority of the Island communities have elevated levels of maternal and child health risk and need for a Home Visiting program. The combined index of need (map shown below) suggests that communities in the western half and the southern coast are all in need. At particularly high need were found municipalities in the newly emerged earthquake zone and to its north. The map below shows the need index for each municipality and the location of earthquakes of magnitude 4.5 or higher occurring during the first six months of 2020.

**Map 4.** Cumulative Need Index for Home Visiting Services by municipality.



The geographic distribution of need found in this Needs Assessment is similar to that found in the prior 2010 Needs Assessment, **except for municipalities in the southwest coast.** In the prior Needs Assessment, both the central mountainous and municipalities

in the southeastern coast had been identified.<sup>27</sup> As a result, three Home Visiting service areas were established with MIECHV funding and established in these two zones. The map above shows the location of the MIECHV-funded Home Visiting programs known locally as the Familias Saludables (FS) Puerto Rico program. A third high need zone comprised of municipalities in the southwest coast was not found in the 2010 Needs Assessment. This is the zone most gravely impacted by the constant earthquakes being registered around Puerto Rico's region since December 2019. Currently, there is a dearth of services in this region as some have had to close their facilities or relocate.

2. While the geographic distribution of need was similar to that found in the 2010 Needs Assessment, with the exception of municipalities in the southwest coast, the availability of Home Visiting programs was found to have changed considerably with the establishment of Familias Saludables Puerto Rico and the emergence of one other new program since the previous Needs Assessment. Five home visiting programs were identified. Three had been identified in the previous Needs Assessment: 1) The Programa de Visitas al Hogar, 2) Nidos Seguros, and 3) Avanzando Juntos. Two new programs were found to be in operation in this Needs Assessment: 1) Familias Saludables, and 2) Comienzo Saludable. Comparing the amount of participants reported by the existing programs in 2010 and now, we estimate that capacity for offering Home Visiting services increased by 47%.

This Needs Assessment found a robust growth in the capacity of Puerto Rico to offer Home Visiting services – service capacity grew by about 50% in the 10 years since the prior Needs Assessment. Notwithstanding this growth in availability, there is still need for a much broader increase in Home Visiting services.

3. Even though there was a notable increase in the capacity to offer Home Visiting services in Puerto Rico, taken as a whole, the existing programs show a mixed bag of home-grown strategies and evidence-based practices. Of the five existing programs: 1) **Familias Saludables** Puerto Rico uses the Healthy Families America evidence-based home visiting model and the Growing Great Kids curriculum, which is also an EBP. 2) **Comienzo Saludable** doesn't have an evidence-based home visiting model but uses the Growing Great Kids curriculum for home visiting, and some of their other components also use EBPs. 3) **Programa de Visitas al Hogar** uses a curriculum based on an evidence-based model but are not affiliated to this organization, 4) **Avanzando Juntos** uses the Routine Model EBP and they are in the process of implementing a Coaching EBP. Lastly, 5) **Nidos Seguros** does not use any EBP.
4. All reviewed programs had some level of free capacity to increase participation somewhat. This may be one of the reasons why the majority of focus group participants expressed the desire for nurturing and expanding the existing programs instead of bringing into the community new organizations. It was further found that there is still a need to provide support to local organizations to assist in strengthening their capability to deploy EBPs, be it in training and certifications in EBP models or assisting with organizational infrastructure to allow for program expansion. Finally, Title V program (Programa de Visitas al Hogar) and the MIECHV program (Familias Saludables Puerto

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<sup>27</sup> Puerto Rico Department of Health. (2010). Assessment of Need for Home Visiting Programs in Puerto Rico (pp. 1–133). San Juan, Puerto Rico.

Rico) have the same Program Director. This solidifies the organizational structure and makes implementing EBPs across different programs easier.

5. Substance abuse services for child-rearing women in Puerto Rico were found to be limited: only one third (38.0%) had women-specific programming and less than 10% had children-specific services.

Furthermore, the geographic distribution of the facilities showed a clear concentration around the San Juan Metro Area. Of the 108 facilities, only five (4.6%) were located within the 13 communities in highest need for Home Visiting Services. We estimate that women residing in the municipalities in highest need were only 70% as likely to receive substance abuse treatment services as women residing in municipalities not in highest need.

MHAASA's most recent block grant proposal fundamentally echoed the results of the focus group sessions assessing substance abuse treatment capacity as inadequate particularly in terms of geographic location and the lack of services for women with children.

6. Although there is an expressed need and desire for EBPs, community readiness represents some significant setbacks. The most significant setbacks are due to the challenges presented by geographic factors: difficult to access areas in mountainous regions whose difficulties have been even more compounded by recent natural disasters; the danger posed with travelling to such areas has left a dearth of professionals willing to travel to these regions to provide specialized services; the pandemic has further isolated the people in this region and some babies being born are not being registered in the demographic registry (further complicating the access to services available to them such as food and medical assistance); and many participants lack the means of transportation to seek services elsewhere. Another challenge is that due to their locations, these areas also have difficulties with efficient telecommunication services (i.e., telephone and internet), many candidates and active program participants are hard to reach or locate and many have been unable to adapt to the challenges posed by the pandemic when the government system has gone through extended periods of lockdown. Finally, the fiscal issue on the island that has consequently driven austerity measures has posed another layer of challenge by eliminating governmental offices in these regions.

Particular importance should be placed upon the municipalities in the southwestern coast of the island, represented by the municipalities of Guayanilla and Guánica, which is the epicenter of the recent swarm of earthquakes (see **Map** on page 38). Due to this, there has been a displacement of part of its population, and social support systems or organizations have become quite scarce. Furthermore, this area has been further impacted by recent tropical storms which have destroyed crops in a region where agriculture is one of the main sources of income, thus resulting in deepening the economic crisis in the region. A robust body of research evidence showing that an increase in stressors such as emotional trauma due to experiencing disasters and economic depression, combined with a lack of supportive services, increases probabilities of substance use, child maltreatment, and domestic violence.

### 2. Recommendations

A stakeholder meeting was convened on August 21, 2020 to discuss the findings of this Needs Assessment and to request feedback and recommendations from stakeholders. The group reviewed the data and findings and submitted five main recommendations:

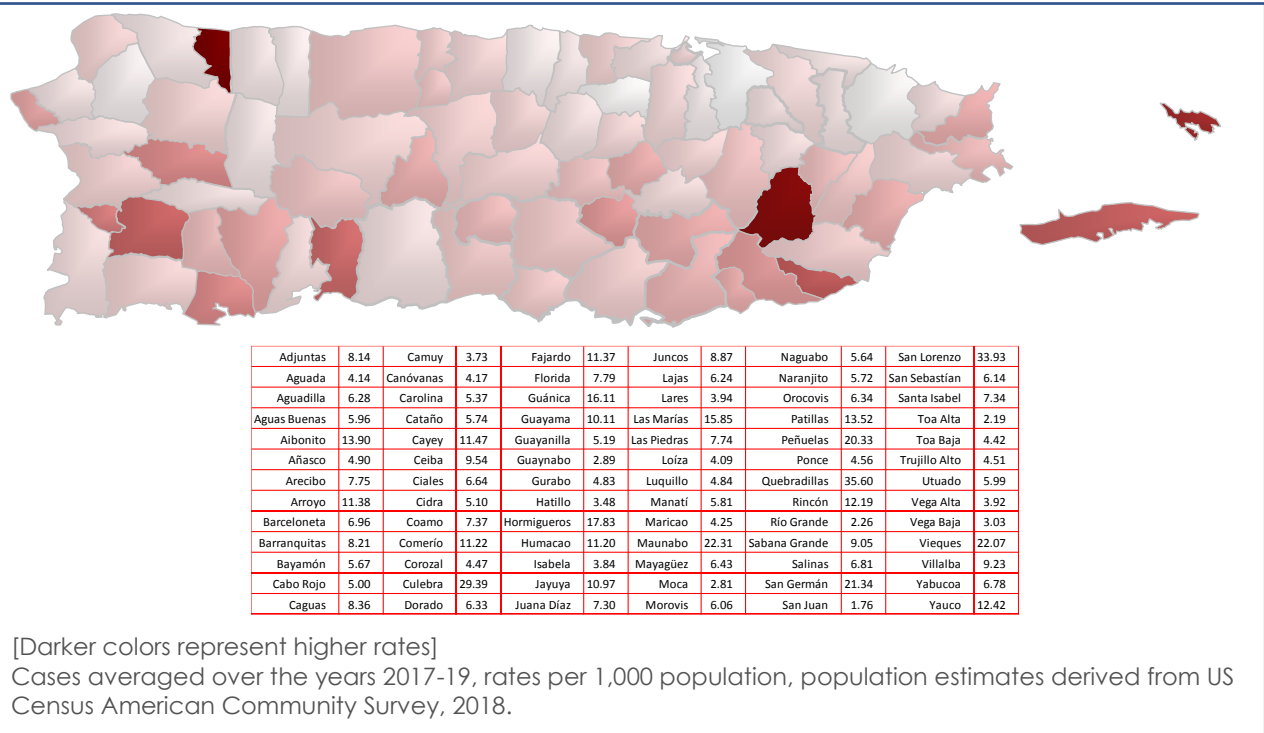
1. Of utmost priority should be the expansion of Home Visiting services to all communities in need. Given Puerto Rico's impoverished health and economic status due to a combined long-lasting economic contraction, continuous natural impacts of hurricanes and earthquakes, and the COVID-19 pandemic, a major effort to substantially expand services to support and strengthen parenting and child rearing should be developed for the people of Puerto Rico.
2. Highest priority should be given to the need of communities in the southwest coast which continue to be impacted by continuous earthquakes since early 2020. Services in these communities have shown an unprecedented contraction as public agencies have had to move their offices out of the zone and many community service organizations have floundered.
3. Existing programs offer a mixed bag of EBPs and unproven strategies. Technical support could be provided to existing programs to strengthen their impact and expand their reach to different communities with proven EBPs. Service organizations in high need zones are eager to expand Home Visiting services but in order to do so these organizations need help strengthening their infrastructure to procure and manage additional sources of funding – particularly federal funding – and to strengthen its expertise to support the introduction and adaptation of EBPs.
4. Substance abuse services for child-rearing women were also found to be scarce and outside the high need zones identified by this Needs Assessment. There is the need to expand these services to cover the needs of child-rearing women in the high need zones.
5. The Statewide Needs Assessment Update contains relevant data and findings of the areas in most need of the maternal and child population. These findings could be used to inform/educate, raise awareness, and elaborate future research and public health policies, in order to direct efforts to the areas in most need of the maternal and child population. Upon further approval from HRSA, the Statewide Needs Assessment Update will be published in the Department of Health website ([www.salud.gov.pr](http://www.salud.gov.pr)) and maternal and child health stakeholders website. Also, this study will be disseminated with the members of the Needs Assessment Advisory Committee.



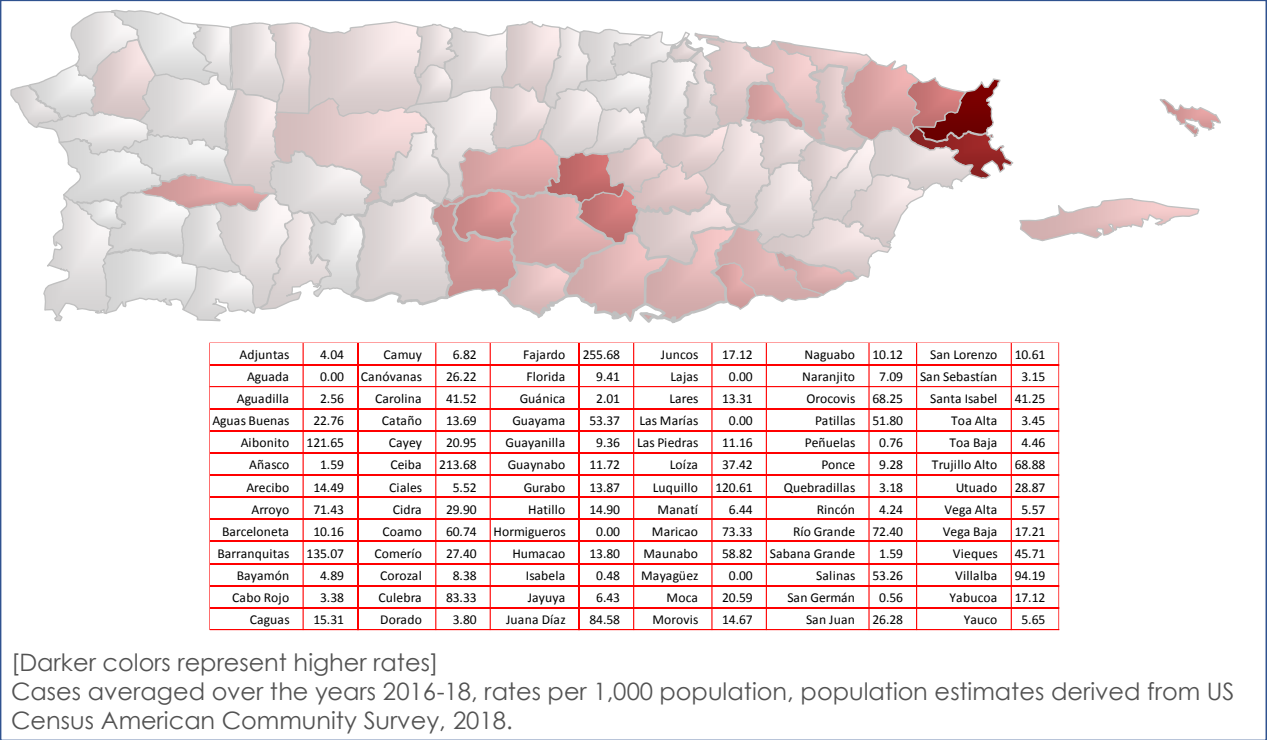
## Appendix: Maps with Indicator Data

To help visualize how each risk indicator was distributed among municipalities, thematic maps were plotted with the indicator rates. The maps are shown in this Appendix. Taken together, the maps suggest three zones of concentration of high need: municipalities in the south west, along the southern coastal area, and in the central mountainous range of the island.

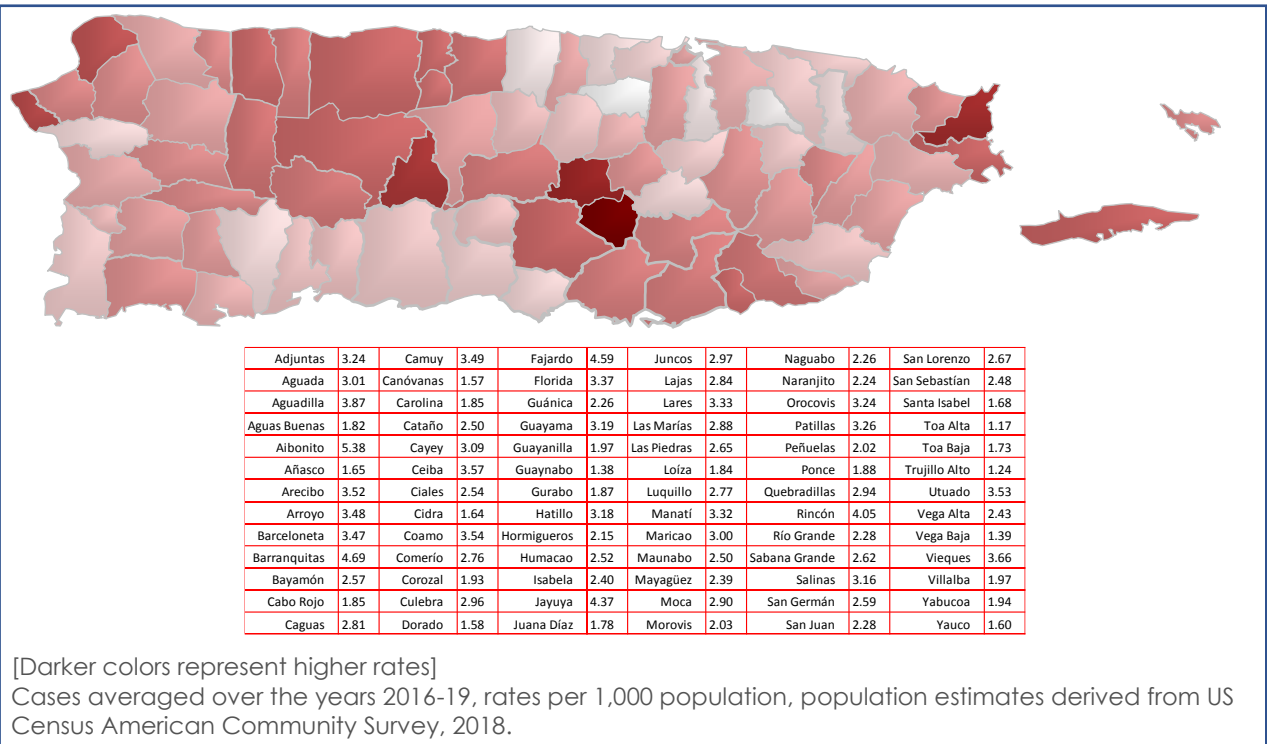
**Map 5.** Average per capita rates of substantiated cases of child abuse/maltreatment by municipality.



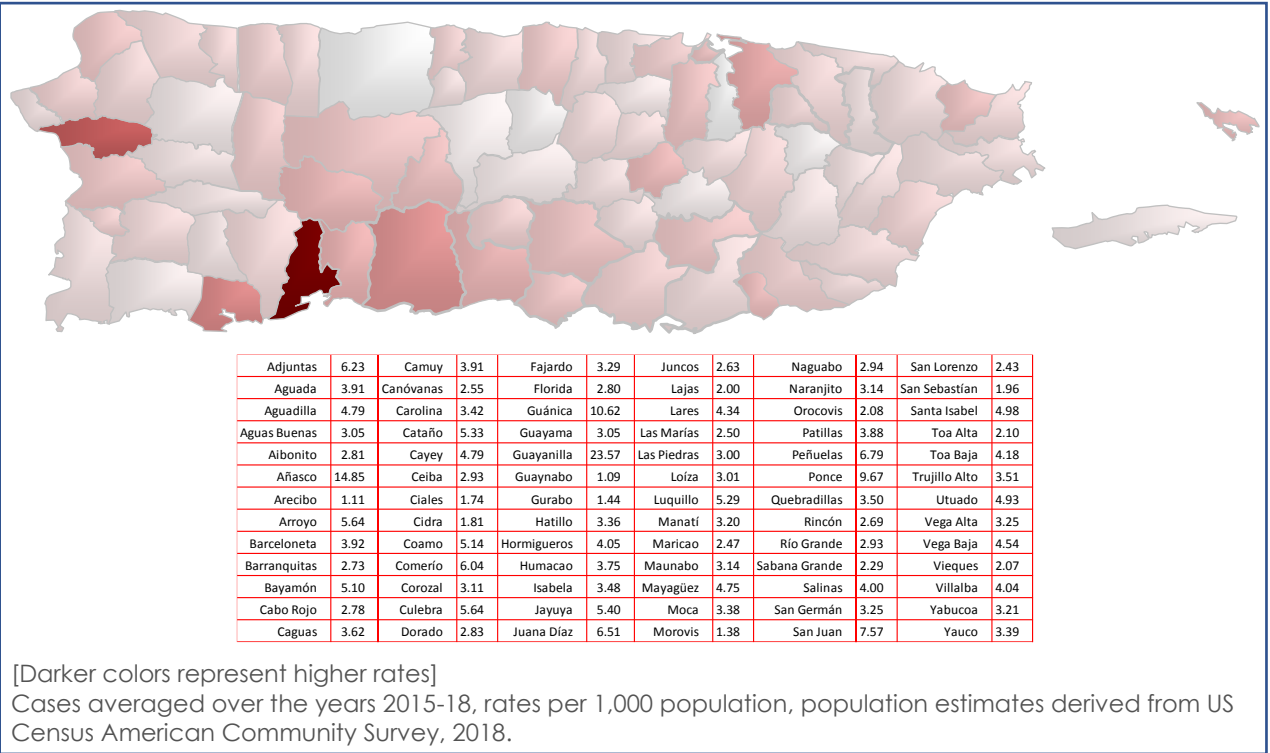
**Map 6.** Average per capita rates of children 3 yrs. old or less visiting emergency rooms for injuries by municipality.



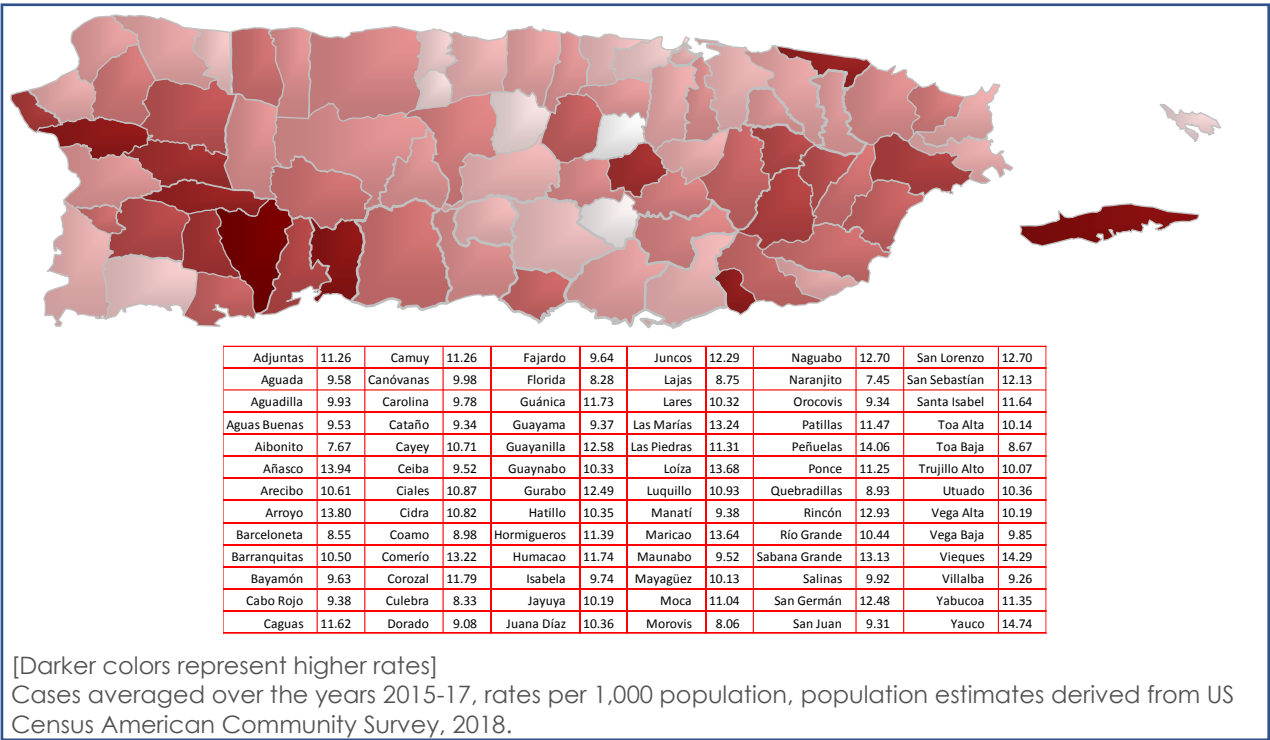
**Map 7.** Average per capita rates of police-filed complaints of domestic violence by municipality.



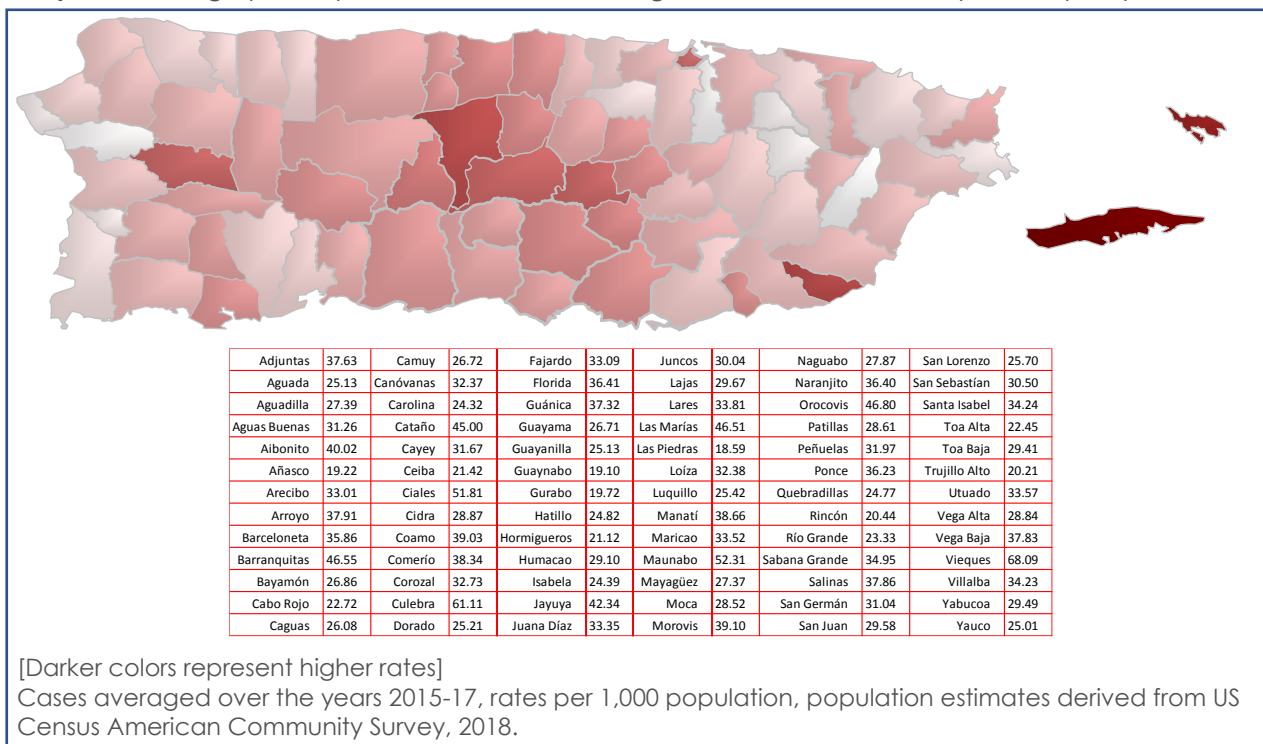
**Map 8.** Average per capita rates of patients admitted to public-tier substance abuse treatment services by municipality.



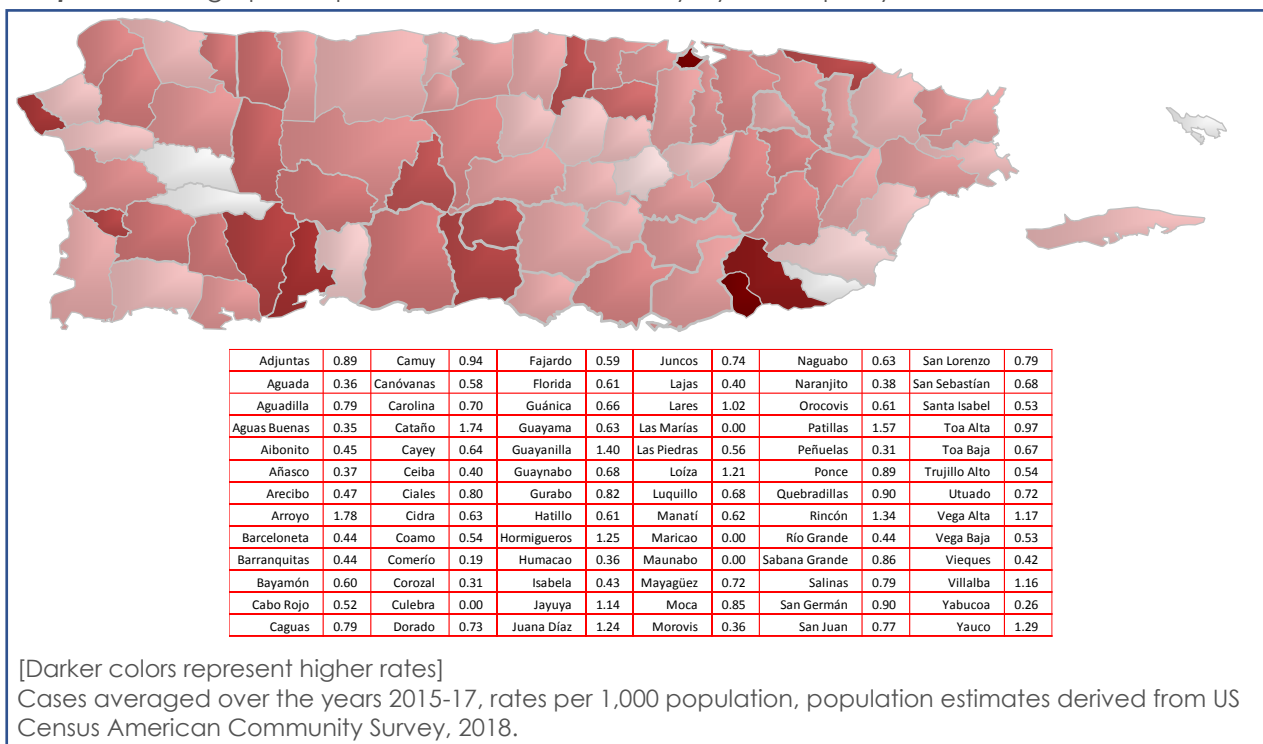
**Map 9.** Average per capita rates of low birth weight by municipality.



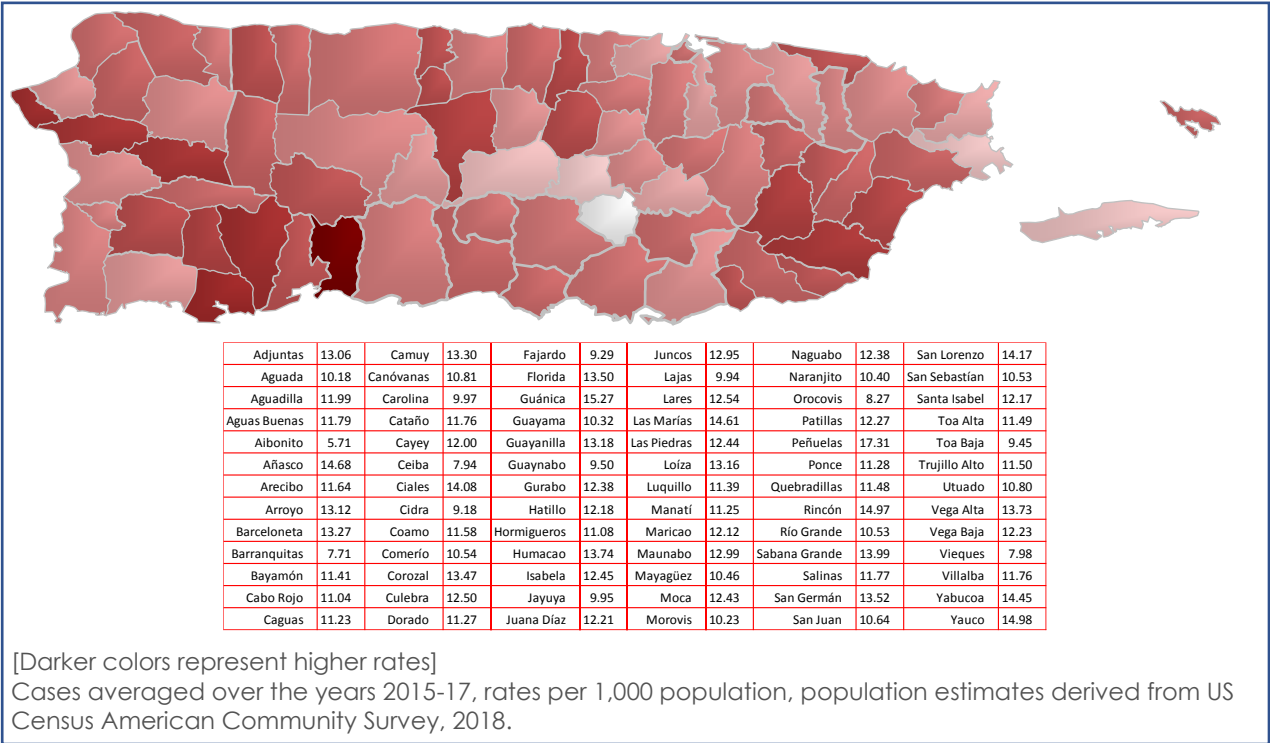
Map 10. Average per capita rates of births among adolescent mothers by municipality.



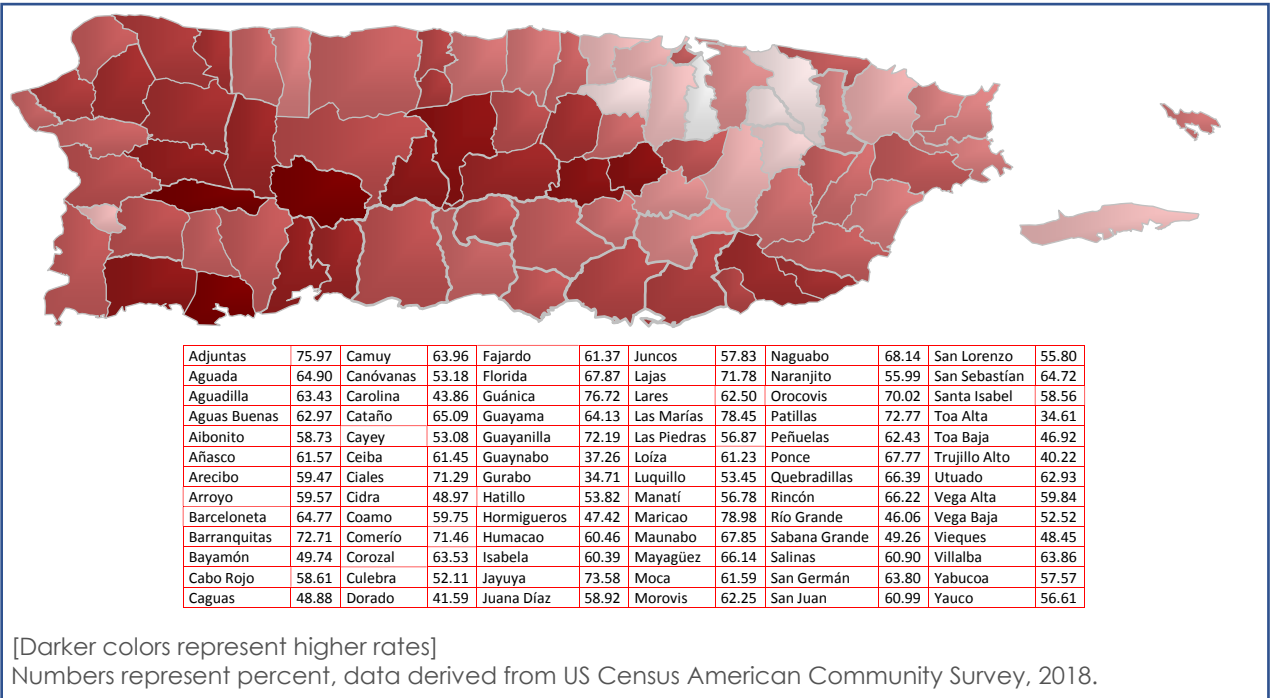
Map 11. Average per capita rates of infant mortality by municipality.



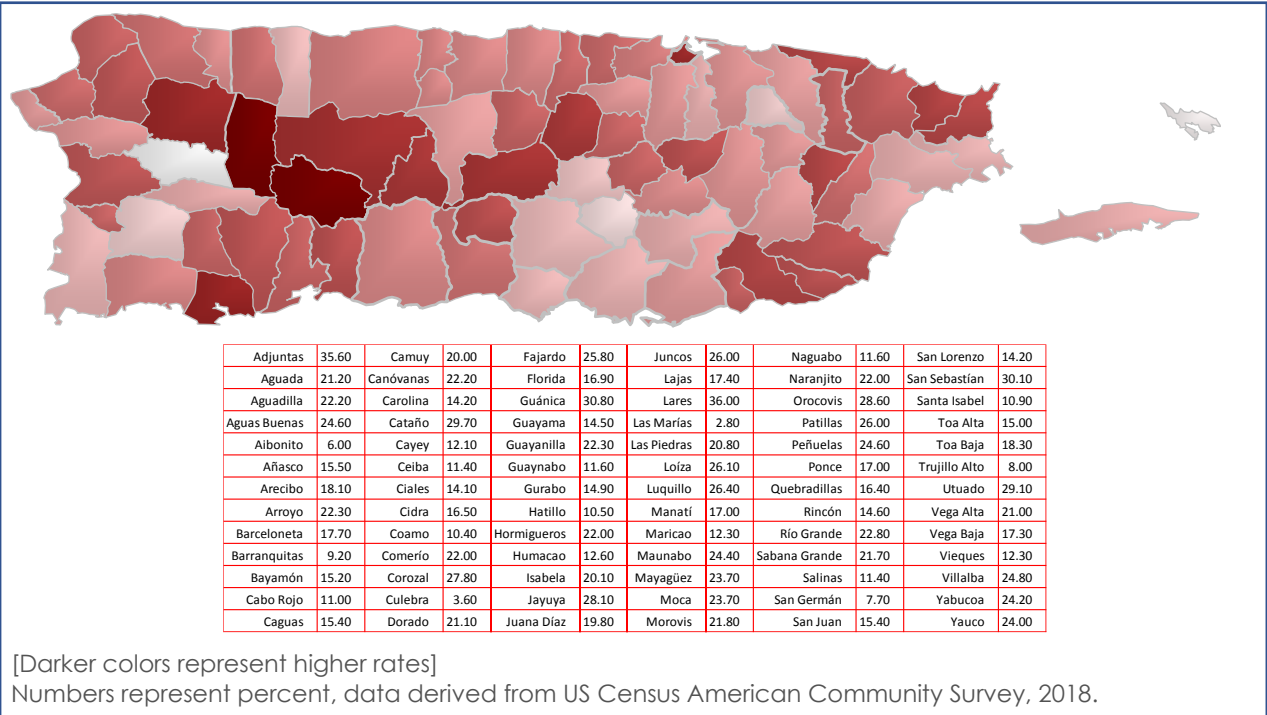
**Map 12.** Average per capita rates of pre-term births by municipality.



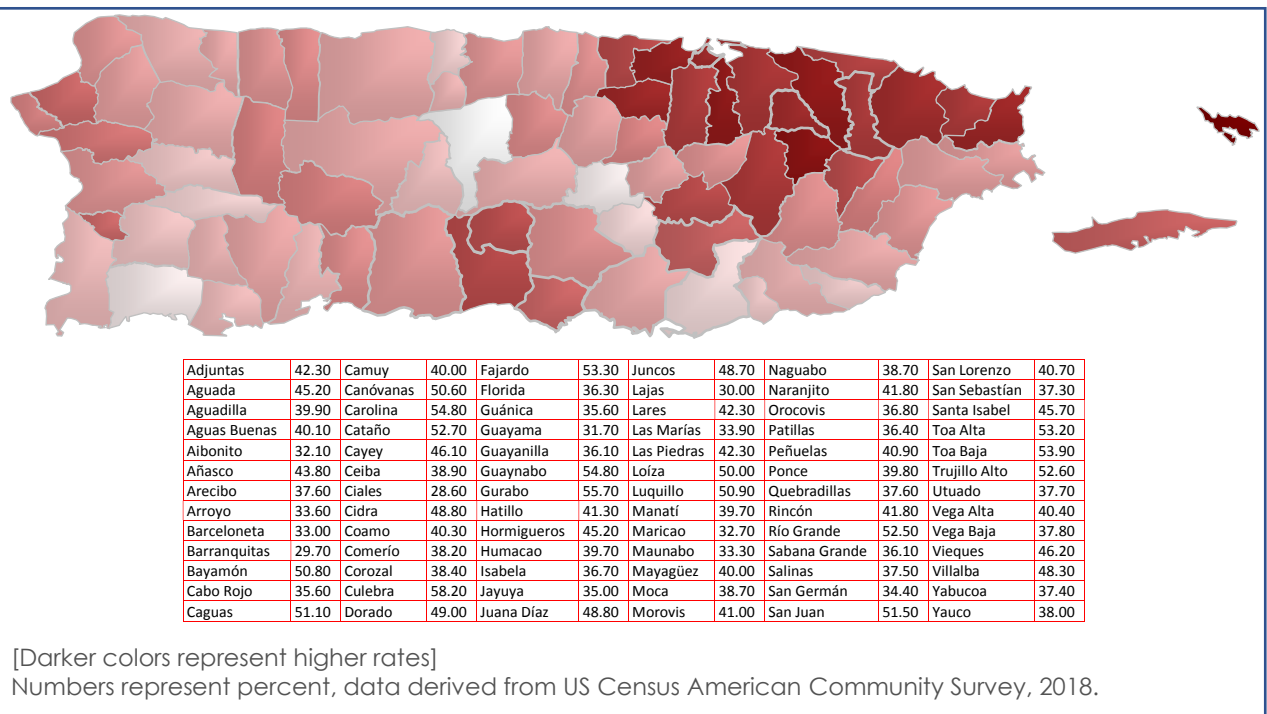
**Map 13.** Percent of children less than 18 years of age living under poverty by municipality.



Map 14. Percent of unemployment by municipality.



Map 15. Labor participation rate by municipality.



**Map 16.** Population 25 years old or older with at least some post-secondary education by municipality.

