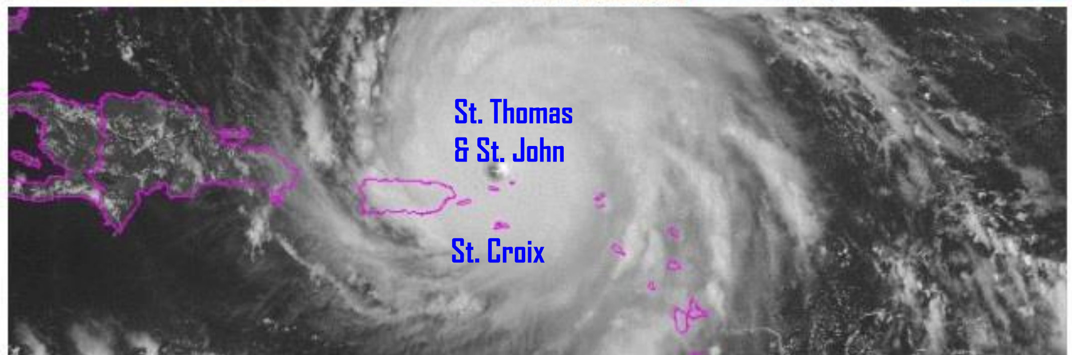
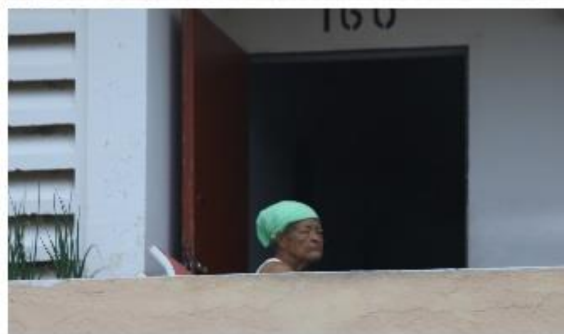
COMMUNITY NEEDS ASSESSMENT: UNDERSTANDING THE NEEDS OF VULNERABLE CHILDREN AND FAMILIES IN THE U.S. VIRGIN ISLANDS POST HURRICANES IRMA AND MARIA





February 2019

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COMMUNITY NEEDS ASSESSMENT: UNDERSTANDING THE NEEDS OF VULNERABLE CHILDREN AND FAMILIES IN THE US VIRGIN ISLANDS POST HURRICANES IRMA AND MARIA

FINAL REPORT
FEBRUARY 2019

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Statement of Conflict of Interest

None of the researchers or authors involved with the study has any affiliations or financial involvements that conflict with the material presented in this report.

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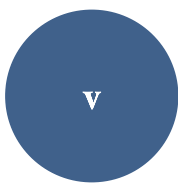

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Executive Summary

In January 2018, the University of the Virgin Islands (UVI), through the Caribbean Exploratory Research Center (CERC), entered into an agreement with the Community Foundation of the Virgin Islands (CFVI) to conduct a community needs assessment. The purpose of the assessment was to determine the health, education, human services, and housing status and needs of children and families in the US Virgin Islands (USVI), post Hurricanes Irma and Maria.

Recognizing the importance of engaging the community in the effort, the research team at CERC utilized a community-based participatory research (CBPR) approach to accomplish the project objectives. This included the establishment of a Community Assessment Committee (CAC) and a Project Advisory Committee (PAC). PAC members included heads (or their representatives) of key government or semi-autonomous agencies, key personnel from community-based organizations (CBOs) or non-governmental organizations (NGOs), a representative of the Community Foundation of the Virgin Islands (CFVI), and members of the core research team.

Seven objectives guided the work of the research team and serve as the framework within which the findings are presented in this report. These objectives were: 1) Describe the USVI community by completing a ***community profile***; 2) Describe/document the current status (post hurricanes) of the ***health*** of children and families; 3) Describe/document the current status (post hurricanes) of the ***education*** of children and families; 4) Describe/document the current status (post hurricanes) of ***select human services*** for children and families; 5) Describe/document the current status (post hurricanes) of ***housing and housing options*** for children and families; 6) Describe/document ***gap areas*** with respect to health programs and services, education and educational services, select human services, and housing and housing options for children and families; and, 7) Describe or document ***priority programmatic and service delivery issues*** in the areas of health, education, select human services, and housing that need urgent attention.

The achievement of project objectives is expected to yield the following outcomes for the Community needs assessment: 1) Documentation of the programs and services available in the USVI post Hurricanes Irma and Maria; 2) Documentation of the needs of USVI children and families post Hurricanes Irma and Maria; 3) Documentation of gaps in services (direct and support) post Hurricanes Irma and Maria; 4) Provision of information to support efforts to address service gaps and age-specific post-disaster interventions to enhance recovery and resilience of children and vulnerable families; and, 5) Provision of information to policy makers and other stakeholders addressing needs of children and vulnerable families, particularly in the areas of health, education, human services, and housing.

Methodology

A concurrent, mixed-methods design was used. Qualitative (key informant interviews, focus group discussions, and community forums) and quantitative (surveys among the school-age population focused on behavioral health issues were used with youth and a compendium of instruments was used with adults) primary data were collected. Additionally, administrative and secondary data were compiled and analyzed. Administrative data were solicited from key agencies and the team reviewed and analyzed available reports, as well as published and unpublished resources.

Study Participants and Data Collection

Both children and adults were included in primary data collection for this study. Children were youth in grades 4 through 6 in public elementary schools (to include 6th graders from one middle school and 4th – 6th graders from one K-8 school) and youth in grades 4 through 12 in parochial and private schools across the Territory. Adult participants were persons ages 18 and older recruited primarily from clients of the two Federally Qualified Health Centers (FQHCs) in the Territory. Other adult participants were key personnel from education, health, human services and housing organizations across the Territory.

Key Findings

While key findings are summarized based on the seven objectives used to guide the development of this Community needs assessment, some overarching statements can be made regarding findings that transcended particular objectives. First, there was consistent information from both qualitative and quantitative data, as well as primary and secondary data, that stress remains a significant health issue for residents in the Territory, in the aftermath of Hurricanes Irma and Maria. This is a reality for both children and adults. Stress emerged as a major challenge for many in the community, including agencies that provide services to vulnerable children and families that are still in the recovery phase and for whom neither the available services nor staffing levels have returned to normalcy. Some families remain displaced and many continue to deal with home repair challenges, including interacting with insurance companies and contractors involved with Federal Emergency Management Agency (FEMA)-related repairs. The needs of our community are myriad in the aftermath of Hurricanes Irma and Maria and while the report provides details on some of those needs, the bullets below attempt to encapsulate the most salient for ease of review by policy-makers, service providers, and funding agencies.

Community Profile

- The USVI is a group of small islands in the Caribbean with a decreasing population that is predominantly Black, multiracial, and multi-ethnic, with the majority of the community being over 35-years old.
- Economic stressors on the predominantly single -sector economy have contributed to high unemployment and conspicuous poverty in the Territory.
- Low educational attainment, high percentage of female single-headed households and a weak economy put significant pressure on the community to provide safety nets in human services, health, education and housing for low and moderate-income families of the Territory.

Health

- There are lingering effects of the hurricanes on the psychological well-being of children and adults.
- Of the study participants, 282 or 60.2% had an overall Center for Epidemiologic Studies Depression Scale-10 (CESD-10) score of 10 or higher, which suggests that for the study participants, 6 in 10 could have depressive symptoms.

- There is evidence that elementary aged students across the Territory may have future issues with Post-Traumatic Stress Disorder (PTSD) as a result of experiencing Hurricane Irma and/or Hurricane Maria and that girls may have more challenges with future PTSD than boys.
- According to findings of this study, approximately 42.5% of the secondary students may be at risk for PTSD.
- Analysis of survey responses reveal possible levels of PTSD symptoms at approximately 57.5% in the adult population surveyed, based on a suggested cut -point of a score of 30 points, with possible scores in the range of 17.
- Other key findings include:
  - FQHCs filled a critical gap for residents whose primary care physicians left the Territory after the hurricanes, as well as for recovery workers who were assigned to St. Croix.
  - Hospitals continue to operate at limited capacity due to damage to physical structure and loss of staff and remain unable to provide some critical medical services.
  - Data from secondary sources reveal major decreases in patient services with the exception of an increase in admissions for behavioral health clients at Roy L. Schneider Hospital (RLS). The Juan Luis Hospital and Medical Center (JLH) is without an inpatient behavioral health unit.
  - There were major challenges accessing current health services data from VIDOH and JFL.

Education

The public education system sustained significant disruptions as a result of Hurricanes Irma and Maria that had immediate implications for the provision of key services, most notably full-day instruction for students. The disruptions extended to school plants being deemed "condemned", resumption of instruction being delayed due to schools being used as shelters, and storage facilities for the school breakfast and lunch program being completely destroyed.

Other key findings include:

- VIDE saw a 20% reduction in overall school enrollment for SY2017-2018 in the months immediately following the hurricane, for a total enrollment of 10,868 in December 2017 with only a fractional percentage of students returning prior to the end of the school year with this reduction continuing into SY2018-2019 as VIDE recorded a fall enrollment of 10,720.
- Almost all after school programs had to be suspended immediately following the hurricanes, and most are not yet back on line.
- Because of the double-session schedules at many of the public schools across the Territory, there was a significant reduction in the number of subsidized school meals provided during SY2017-2018.
- As of December 2018, all modular classrooms had not been erected or cleared for occupancy. The late start to the school year for some schools resulted in modified school days in order to make up the instructional time.

Select Human Services

- Head Start (HS) services are still not functioning optimally due to several centers being off line.
- Data from the Program Information Report (PIR) reflect a reduction in HS enrollment for SY2017-2018 compared to SY2015-2016 and SY2016-2017.
- In 2017-2018 private day care centers dropped to less than 50% of capacity in terms of available space and children enrolled.
- There was an increase in households receiving Supplemental Nutrition Assistance Program (SNAP) benefits in September 2018 compared to August and September 2017.
- Over $30,000,000 in Disaster Supplemental Nutrition Program (D-SNAP) benefits were distributed to eligible residents in the USVI in the aftermath of Hurricanes Irma and Maria.
- Damage to facilities was widespread, impacting service delivery to all ages and also affecting the health of employees.
- The Social Services Block Grant (SSBG) Program affords an avenue for the Virgin Islands Department of Human Services (VIDHS) to provide services to a wide-range of persons in the community who need support.

Housing

- FEMA data estimates as of September 2018 indicated that 23,301 households incurred some damages to their primary residences from one or both hurricanes.
- As a result of Hurricanes Irma and Maria, families in private and public housing, owners and renters experienced significant challenges related to clean-up of water and debris, loss of personal items, emergency repairs, displacement, mobilization to address insurance and more permanent repair requirements, and high levels of stress.
- Recovery to the housing stock involved federal programs and resources as well as private insurance, personal funds, and personal efforts over a 15-month period with the task still unfinished.
- The Virgin Islands Housing Finance Authority (VIHFA) offers several programs to assist the homeless and qualified low and moderate income residents with first-time home ownership.
- The Virgin Islands Housing Authority (VIHA) and VIHFA will be significant partners in the strategy to build resilience in the VI community.
- VIHA houses no-income and low-income families through its public housing inventory – which provides over 3,000 units, and its Housing Choice Voucher Program (HCVP) which provides housing for approximately 1,600 eligible families.
- VIHA's tenant pool in the St. Thomas-St. John District and Territory-wide contracted by 10% and 12%, respectively, from 2016 to 2018, primarily due to the destruction of the Tutu housing community that had to be completely evacuated due to damage from Hurricane Irma. That housing community is slated for demolition.

Voices from the Community

Through Town Hall meetings, Focus Group discussions, and Key Informant interviews, members of the community shared with the Research Team some of their experiences with Hurricanes Irma and Maria; how they were doing over one year after the disruptions, and the extent to which they were able to access needed services. Other information shared revolved around how the disruptions affected key agencies' capacity to deliver services and offer programs at pre-hurricane levels; how staffing levels were impacted, and the status of programs and services more than one year after the two hurricanes.

Ten themes emerged from the study participants' responses to the various questions posed by the Research Team:

- Initial and continuing effects of stress and trauma;
- Surviving; being a survivor; survival;
- Counseling – need for counseling; stigma associated with counseling;
- Displacement from homes; no stable homes; disruption in families;
- Concern for children;
- Vulnerability of the elderly; concern for the elderly;
- Disruption in services; gaps in services;
- Collaboration; cooperation; teamwork;
- Communication; and,
- Need for better planning for future disruptions.

Program and Services Gaps in Key Areas

The Community needs assessment identified a number of program and services gaps that are now visible in the recovery period following the historic interactions with two category 5 hurricanes in September 2017, some of which are enumerated below:

Health

- Availability and delivery of behavioral health services for children, adolescents and their families remains a major health service gap in the Territory.
- Insufficient school counselors to meet the behavioral health needs of the children in the Territory's public schools.
- Limited access to dental care services that existed prior to the hurricanes remains a major service gap, with the only provider that accepts Medicaid having a wait list of 4000 for dental services on the island of St. Croix.
- Limited capacity in the area of inpatient care in the Territory attributable both to damage to the two hospitals, and the loss of key clinical and non-clinical personnel.

Education

- A lack of resources for counselors to address behavioral health needs of children in the public school system has been identified as a gap in services in the education system.
- Delays exist in the readiness of modular classrooms across the Territory.

- Delays exist in the resumption of the full range of after school programs for youth.

Select Human Services

- HS Program staffing challenges exist, particularly relative to HS teachers and assistant teachers.
- HS children access to initial health screening and adequate health needs follow-up.
- For SY2015-2016 through SY2017-2018, a gap exists in the number of HS children needing medical services and those who have received such services.
- Only 3% of HS children identified as needing preventive dental care in SY2017-2018 received such care.
- The number of HS children with health insurance coverage at the end of the SY2017-2018 was lower than for SY2015-2016 and SY2016-2017.
- Challenges exist with ensuring adequate resources for protective and foster care.
- Challenges exist with program efforts to assist Temporary Assistant for Needy Families (TANF) recipients to get to self-sufficiency.

Housing

- Availability of housing stock due to destruction/damage of family and rental properties.
- Challenges associated with providing safe, affordable housing to a population that is over 50% low and moderate-income, living on small islands with limited land mass and a high cost of living.
- The aging public housing inventory (average age is 50-60 years old) represents a major vulnerability for this sector for future disruptions.

Priority Programmatic and Service Delivery Issues that Need Urgent Attention

Priority Programmatic Issues

Health

- Identify and implement primary and secondary intervention programs to address PTSD and depression in children and adults at the population level.
- Recruit professional staff and providers, particularly in the areas of behavioral health, chronic conditions (diabetes and hypertension), and dental care.
- Strengthen collaborative arrangements with providers outside of the Territory to improve management of clients in the wake of such a disaster, to include plans for evacuation of patients in the eventuality hospital systems fail as occurred in September 2017.

Education

- Fill critical vacancies in the public school system, to include teachers, school nurses and school counselors.
- Establish system to safely store student data in the event of loss due to damage as seen in recent disaster.

Human Services

- Repair and reopen HS centers that closed in the aftermath of the hurricanes.
- Increase access to preventive dental and medical care for the HS population.
- Fill key vacancies in both the HS and EHS programs to optimize service delivery to HS and EHS children and families.
- Examine the low TANF participation in the St. Thomas-St. John district to ensure that the neediest in the district are being reached and served.
- Re-evaluate the approach to Job Opportunities and Basic Skills (JOBS) Program experiences for TANF recipients and how JOBS contributes to the ultimate goal of self-sufficiency.
- Revisit the local criteria for qualification for TANF benefits, particularly the requirements that only single persons can qualify for TANF benefits and that mothers must provide information about their children's fathers in order to meet TANF qualification requirements.

Housing

- The priority programmatic issues related to housing are linked to actions associated with filling the gaps in housing availability and conditions in the Territory.
- It will also be critical to many in the community to develop housing initiatives to reduce the unmet housing needs of vulnerable groups in the community.
- The immediate challenge is providing some level of assistance to the more than 5,300 households that suffered severe or major damage from the catastrophic hurricanes.
- Rebuild/replace the aging housing inventory to ensure hardened structures that better address issues such as accessibility for residents, environmental considerations, energy efficiency, and right-sizing based on smaller family sizes.

Priority Service Delivery Issues

Health

- Repair service delivery sites, particularly for hospitals and VIDOH.
- Replace lost equipment and resources needed to deliver primary and inpatient care to children and families in the USVI.
- Fill critical vacancies in the VIDOH and enhance the delivery of quality health care, to include dental care.
- Fill critical vacancies in the hospitals to build capacity to provide inpatient care.

Education

- Rebuild schools, to include school libraries.

- Restock lost equipment such as promethean boards and computers for classroom instruction.
- Restock lost equipment for programs such as athletic programs, music programs and other enrichment programs.

Human Services

- Rebuild HS classrooms to optimize delivery of services to the HS population.
- Conduct targeted recruitment of staff for key vacancies in the HS and EHS programs.
- Assess viability of re-engineering of JOBS Program and overall approach to self-sufficiency for TANF clients.

Housing

- Develop a communications strategy for the general public to understand and follow the guidelines, actions and timelines of housing repair programs.
- Acknowledge safe, affordable housing as being a critical component of community development.
- Factor in economic, size, and isolation challenges while working to ensure a future where citizens will have a place to live that has a chance of withstanding extreme weather, like hurricanes.

Limitations, Discussion, and Recommendations

Limitations

While the research team made every effort to gather and analyze data from a wide range of stakeholders in the health, education, human services and housing sectors to describe and document the current status of children and families following the devastating effects of Hurricanes Irma and Maria in the USVI, we must acknowledge a few limitations that the users of this report must keep in mind. Efforts to conduct key informant interviews with leadership of some agencies within the health sector were not successful, resulting in some gaps in the information on the health status of the population. However, extensive data on the clients served by the two federally qualified health centers in both districts as well as key informant interviews with the leadership of the two centers offer a solid foundation for the applicability of the findings presented. Further, a convenience sample of adults were recruited for participation in the battery of surveys on psychological health status so findings of the quantitative data may not be generalizable to the total population. Nonetheless, the authors contend that the objectives of the needs assessment to describe and document the health status of children and families have been met due to the fact that the majority of the clients served by the FQHC's would be considered some of the most vulnerable in the USVI.

Finally, an overarching limitation that must be recognized is related to the challenges of accessing and obtaining data on the population. Notwithstanding these limitations, the authors offer the findings of this community needs assessment as an important source of information on the impact of a major natural disaster on children and their families in the USVI.

Discussion

The purpose of this needs assessment was to describe and document the health, education, human services and housing needs of children and families in the wake of Hurricanes Irma and Maria, the two category 5 hurricanes that struck the US Virgin Islands in September 2017. One year following the historic storms, children and adults alike experience symptoms of depression and post-traumatic stress disorder that may be attributable, at least in some part, to their exposure to the traumatic destruction caused by the hurricanes. While this study does not purport to establish cause and effect, evidence from other communities that have had similar experiences suggest a strong link between the experience of going through the hurricanes and negative mental health outcomes. Several points are offered for consideration as important aspects of lessons learned from the needs assessment. These points suggest the overarching need for policy-makers to consider how to address key domains of the social determinants of health and how to engage in responsive, realistic, and community-engaged disaster planning for the vulnerable children and families in the community, and the broader community in a collaborative, integrated way.

Recommendations

The findings of this community needs assessment point to a Territory with the most vulnerable experiencing challenges in five domains of social determinants of health – education, economic stability, the neighborhood and the built environment, social and community context, and health and health care – prioritized CDC (Healthy People 2020). Thus, within the context of the social determinants of health, recommendations are offered to:

Improve the overall health of vulnerable children and families by:

- Providing access to quality healthcare;
- Providing access to preventive health and behavioral health for children;
- Repairing health care facilities; and,
- Providing incentives for building the health care capacity in the Territory.

Improve educational outcomes for our youth by:

- Rebuilding schools, including libraries, with stable internet connectivity and associated instructional technology;
- Providing additional academic support for students who have fallen behind due to disruptions; and,
- Providing support services for teachers.

Increase economic stability of vulnerable families by:

- Re-engineering TANF program to assist families to move out of poverty; and,
- Providing certificate programs through UVI CELL to enhance skills of displaced workers.

Improve neighborhoods and the built environment by:

- Improving health and safety aspects of housing communities; and,
- Supporting vulnerable families to repair damaged homes so they have stable home environments.

Addressing the enumerated domains of the social determinants of health requires urgent attention and action on the part of policy-makers, funders, and service providers that will improve the social determinants for vulnerable children and families in the Territory, thereby strengthening their health and well-being, which is foundational to learning, growing, and earning.

In addition to attention to social determinants of health, the findings speak loudly of the need to begin community-engaged efforts in disaster preparedness planning so as to ensure that community members, but particularly vulnerable children and families possess the tools needed to be prepared for future disruptions. Some key recommendations are provided to improve the community's preparedness for future disruptions. The recommendations are anchored in a community-engaged approach to disaster preparedness planning. To wit, key recommendations offered are:

- Preparedness plans must be intentional in addressing the vulnerable populations in our community, to include the elderly, persons with disabling conditions, children, and the poor.
- Disaster planning needs to include contingencies for instances of limited external assistance.
- Communication protocols associated with disaster preparedness planning should be sensitive to: a) Cultural nuances; b) Educational levels; c) English language proficiency; d) Reliability of communication mediums; e) Appropriate channels for disseminating information; and f) the most appropriate entity/person to lead communication efforts.
- During the planning process, at the community as well as the territorial level, a compendium of strategies to address the emotional, psychological, and social aspects of the aftermath of disasters need to be included.

CHAPTER I. INTRODUCTION

Background

The 2017 hurricane season is one that the people of the United States Virgin Islands (USVI) will not soon forget. Hurricanes Irma and Maria, two category five hurricanes that made landfall in the USVI within a two-week period, were two of the strongest and most harrowing weather events to impact the Caribbean. The *New York Times* (September 2017) declared the one-two punch of Hurricane Irma and Hurricane Maria, 14 days later, as being "especially cruel."

In September 2017, at the peak of a very busy hurricane season, Hurricanes Irma and Maria, two weeks apart, slowly rolled over the USVI and other nearby islands, causing loss of lives and historic destruction of critical infrastructure, the natural environment, homes and community services. Hurricane Irma was directly responsible for three deaths in the USVI (Cangialosi, Latto & Berg, 2018). Damage from Hurricane Irma in the USVI was most notable on St. Thomas and St. John, where 90% of the utility infrastructure was damaged or destroyed and 60% on St. Croix (*Personal communication with then CEO of the Water and Power Authority, November 2017*). On both islands, there was widespread, catastrophic damage based on numerous reports of collapsed homes, businesses, and power lines. Additionally, large portions of the service infrastructure such as the fire and police stations collapsed and the hospitals experienced major damage, requiring the evacuation of dialysis patients, some cancer patients, as well as some patients with other critical health needs that could not be adequately cared for in the damaged facilities.

On St. Croix, about 70% of the homes and structures suffered damage (Cangialosi, et al., 2018). Hurricane Maria added to the destruction and now ranks third among the top five costliest hurricanes to make landfall in the US. Three of the top five costliest hurricanes on record to impact the United States occurred in 2017. Among them, Hurricane Maria has been classified as the costliest hurricane on record to strike Puerto Rico and the U.S Virgin Islands and Irma (2017) ranks fifth (National Hurricane Center). The damage from these two category 5 storms with historically low barometric pressures impacted the entire Territory and every sector of the society at the level necessitating a national disaster declaration.

Recognizing the significant impact that these two hurricanes have had on the US Virgin Islands and its residents, the Community Foundation of the Virgin Islands (CFVI) approached the

University of the Virgin Islands (UVI) regarding collaborating to assess the impact of the two hurricanes on vulnerable children and families in the USVI. Thus, in January 2018, UVI entered into a Memorandum of Agreement (MOA) through the Caribbean Exploratory Research Center (CERC) with CFVI to conduct a community needs assessment (CNA) to determine the status of children and families in the USVI in the aftermath of Hurricanes Irma and Maria (*See Appendix I for a listing of abbreviations and acronyms used in this report.*). The broad foci of the needs assessment encompass health, education, human services, and housing.

Recovery, which continues, has been long and complex, involving many agencies at the local and federal levels and requiring assistance from many groups outside of the Territory. Moving forward, preparing for the next extreme weather event and striving to increase the level of resiliency and preparedness in USVI communities requires the assessment of impacts and identification of needs conducted in a professional and reliable manner.

The very nature and context within which this community needs assessment was undertaken suggested to the core research team that various challenges would emerge during the process. These challenges were anticipated and occurred both in terms of primary data collection, and even more so, with respect to securing secondary data from key agencies, which themselves, are still in recovery and are balancing the realities of addressing the impacts of the disruptions caused by the passage of Hurricanes Irma and Maria, with fulfilling their missions to provide services to the residents of, and, in many instances, visitors to the Territory. These challenges will be observed from the findings of the secondary data included in this report, particularly in the area of health.

Another challenge for the team as the community needs assessment began to take shape revolved around the securing of UVI's Institutional Review Board (IRB) approval for the study, given that the work required the use of human subjects – both minors and adults. The research team experienced an extended gap between the submission of the research application and actual full approval of the project – resulting in a 10-week timeframe from the initial submission of the study application to full IRB approval, enabling the commencement of primary data collection.

As initially envisioned, primary data collection would have been collected from adults only and survey data was proposed to be collected in English only. However, the study was expanded, partly based on a request by the funder to include children, and a recommendation from the Project

Advisory Committee (PAC) to allow for Hispanic-speaking adults to participate in the collection of survey data. This meant, in part, that the research team had to develop the required application to obtain permission to collect data in the public education system in the Territory, as well as seek permission from parochial and private schools to conduct data collection at their school sites. This additional step in primary data collection preparation extended the anticipated timeframe for submitting the research application to the UVI IRB. Further, the need to research and secure survey instruments in Spanish also added time to the initial phase of the study.

Thus, both of these shifts resulted in the IRB application being submitted after the end of UVI's spring semester. Since the majority of UVI's IRB members are teaching faculty, many were not available for summer IRB meetings which led to challenges with establishing a quorum for the IRB meetings after the end of the spring semester. So, though the research team had anticipated data collection in the schools in June 2018 and at the FQHCs in June and July, data collection in the schools and the FQHCs occurred in fall 2018.

Purpose

This community needs assessment was commissioned by the Community Foundation of the Virgin Islands (CFVI) as a project under the KIDS COUNT Initiative to determine the health, education, human services, and housing status and needs of children and families in the US Virgin Islands in the aftermath of Hurricanes Irma and Maria, which devastated the islands during the month of September 2017. CFVI is a philanthropic organization with 28 years of experience in the management of funds that support activities that seek to ensure the highest quality of life for both present and future generations of Virgin Islanders (*https://www.cfvi.net/*). CFVI is one of grantees within the KIDS COUNT network that includes the 50 states, Puerto Rico, and the US Virgin Islands that is funded by the Annie E. Casey Foundation to provide "… a community-by-community picture of the well-being of children and families" (*https://datacenter.kidscount.org/about/state-providers*; np). CFVI has been publishing KIDS COUNT USVI Data Books since 2000 (*https://www.cfvi.net/programs/kids-count.php*; np).

Objectives

Through the Agreement with the Caribbean Exploratory Research Center at the University of the Virgin Islands (UVICERC), utilizing best practice approaches, the community needs assessment focused first on describing the USVI community pre-Hurricanes Irma and Maria,

through the completion of a community profile, based primarily on the use of secondary data. The research team then collected and analyzed data from multiple sources in an effort to provide critical information about the needs of children and families in the areas of health, education, select human services, and housing, and to identify gaps and generate priority issues with respect to existing services and identified needs. It is anticipated that the information provided in this report will be used by policy makers, service providers, and funders – local, regional, and national – to support programs and services to address identified gaps in the four key areas, toward improving the overall health and wellness of the USVI community, and the health and well-being of vulnerable children and families, more particularly.

The research objectives that guided the CNA project align with the agreement between CERC and CFVI and focused on health, education, human services, and housing programs, services, and gaps for vulnerable children and families in the aftermath of Hurricanes Irma and Maria. The seven research objectives are:

1. Describe the USVI community by completing a ***community profile***.
2. Describe/document the current status (post hurricanes) of the ***health*** of children and families.
3. Describe/document the current status (post hurricanes) of the ***education*** of children and families.
4. Describe/document the current status (post hurricanes) of ***select human services*** for children and families.
5. Describe/document the current status (post hurricanes) of ***housing and housing options*** for children and families.
6. Describe/document ***gap areas*** with respect to health programs and services, education and educational services, select human services, and housing and housing options for children and families.
7. Describe/document ***priority programmatic and service delivery issues*** in the areas of health, education, select human services, and housing that need urgent attention.

For objectives 2-5, to describe the current status of the health and education of children and vulnerable families, as well as human services programs and housing, the research team focused on available programs and services; available resources; existing gaps in services; and the identification of priority programmatic and service delivery issues in each of the four areas. Additionally, for objective 2, the research team collected primary data that focused specifically on psychological and behavioral health and well-being, areas of health that are of particular concern in the aftermath of

disruptive events such as the two category five hurricanes that hit the US Virgin Islands in September 2017.

Expected Outcomes

The research team anticipated several positive outcomes from the completion of this research project, to include:

1. Documentation of the programs and services available in the USVI post Hurricanes Irma and Maria;
2. Documentation of the needs of USVI children and families post Hurricanes Irma and Maria;
3. Documentation of gaps in services (direct and support) post Hurricanes Irma and Maria;
4. Provision of information to support efforts to address service gaps and age-specific, post-disaster interventions to enhance recovery and resilience of children and vulnerable families; and,
5. Provision of information to assist policy makers and other stakeholders addressing needs of children and vulnerable families, particularly in the areas of health, education, human services, and housing.

To achieve the project objectives and increase the likelihood of the expected outcomes, the team engaged the community in the needs-assessment process from the project's inception. Representatives of key agencies, both government, and non-government, were invited to participate on a Project Advisory Committee (PAC) to help ensure that the core research team received a broad perspective of the issues to be addressed through the CNA and to increase the extent to which key stakeholders and stakeholder groups would support recommendations coming out of the CNA (Health Research & Educational Trust, 2016). This was operationalized through regular meetings with PAC members and resulted in modification of elements of the research approach, based on feedback from the PAC. Additionally, PAC members provided the core team with secondary data as well as feedback on draft versions of the CNA. Appendix II provides a sample invitation letter as well as a listing of the members of the PAC. The PAC provided guidance to the Community Assessment Committee (CAC) which had responsibility for the management of the project. The CAC was composed of the core research team members and a CFVI representative. (*See Appendix II for a listing of the CAC membership*.)

Chapter II. Methodology

Study Design/Approach

The research team employed a concurrent, mixed-methods design (Creswell, 2009) in carrying out the Community needs assessment (CNA), utilizing secondary and administrative data, as well as primary data. With respect to primary data, both quantitative and qualitative data were collected. Specifically, the team used two established instruments for the collection of behavioral health-related quantitative data from youth (grades 4-6 only for public schools and grades 4-12 for private and parochial schools). A compendium of instruments, which have been previously used in data collection with adults who have experienced disruptive events such as hurricanes, was used to collect quantitative data. Finally, qualitative data were collected, in the form of key informant interviews, focus group discussions, and town hall meetings/community forums (*See Appendix III for selected data collection documents*.).

Study Participants

All youth who were 4th, 5th, and 6th graders attending the Territory's public elementary schools (as well as the only middle school in the St. Thomas-St. John District that included 6th grade) and 4th – 12th grade students from private and parochial schools across the Territory were targeted for participation (*See Appendix IV for a list of schools that participated in the study*.). For the public schools, the decision to focus on elementary school students was based on the fact that all secondary students (grades 7 – 12) from all public schools in the Territory were invited to participate in another study on health behaviors in the spring semester of school year 2017-2018. Adult participants included individuals ages 18 and older who received primary health care services from one of the two Federally Qualified Health Centers (FQHCs) in the USVI; adult educators from the public-school system; administrators and leaders from key agencies that provide services in the areas of health, education, human services, and housing; and members of the general public.

Because of the relatively small number of schools that met the criteria for inclusion in the study, all eligible schools were approached regarding participation. Specifically, the research team sought and received permission from the Commissioner of Education, the Superintendents from both districts, as well as administrators from the public elementary schools who agreed to participate in the study. The VI Department of Education leadership approved the proposed data

collection in the public schools in late spring (May) 2018. Between late spring for SY2017-2018 and early fall SY2018-2019, the research team also targeted all private and parochial schools across the Territory. The majority of eligible private and parochial schools agreed to participate in the study, with only one school on St. Croix and one on St. Thomas declining to participate, while another school on St. Thomas never responded to the invitation to participate in the study.

Sampling

Given the relatively small number of students in the public, private, and parochial schools in the Territory, all students were invited to participate in the school survey. For the public elementary schools (and the one middle school with 6th grade students), there were approximately 2,606, 4th, 5th, and 6th grade students, based on SY2018-2019 enrollment numbers, as of October 2018, obtained from the Office of Planning, Research, and Evaluation (PRE) within the V.I. Department of Education (Retrieved from *https://www.vide.vi/*). For parochial and private schools, the number of enrolled 4th through 12th grade students totaled 1,960, based on enrollment figures provided by participating private and parochial schools, as well as enrollment numbers for the three non-participating schools, as reported for these schools for SY2017-2018, and obtained from PRE (VIDE).

For adult participants included in quantitative data collection, research team members recruited prospective study participants from the client pools of the two Federally Qualified Health Centers (FQHCs). For the St. Thomas East End Medical Center Corporation (STEEMCC), study participants were recruited at the Tutu Park Mall site – the general mall seating area directly outside the general waiting room and also the dental area waiting room. For Frederiksted Health Care, Inc. (FHC), study participants were recruited from three of the five FHC sites on St. Croix, specifically the Frederiksted site, the Sion Farm site, and the North Shore site. A total of 470 adult clients were targeted for participation, 235 on St. Croix and 235 on St. Thomas. For their participation, study participants who completed the survey battery received an incentive in the form of a $15 gift card for shopping at one of the local grocery stores on St. Croix or St. Thomas.

Qualitative data collection included key informant interviews with persons in leadership positions in health, education, human services and housing agencies/organizations. Educators in key roles within the public-school system were also included in focus group discussions. For teacher, counselor, and school nurse focus groups, purposive sampling was used to invite persons

to participate. Members of the general public were invited, through public announcements, to participate in Town Hall meetings held in both the St. Croix and St. Thomas-St. John districts.

Instrumentation and Data Collection

Instrumentation

Instruments for Quantitative Data Collection

The instruments were selected after reviewing the literature and identifying relevant measures that assess factors such as post-traumatic stress disorder, depression, stress, self-efficacy, and resilience, all important psychological and behavioral health considerations post-disaster. All selected instruments are in the public domain and have been used in multiple research studies with the general population (*See Appendix III for copies of key data collection materials used in the study, to include informed consent forms, administration protocols/student assent form, recruitment materials, and data collection instruments used in the study*.). Specifically, the team used the following instruments to inform Objective 2, which focuses on documenting the health status of USVI children and families, post Hurricanes Irma and Maria. Questions included in the brief demographic questionnaire also assisted the team in addressing objectives 3 – 5.

1) *Brief demographic questionnaire*. This 14-item instrument was used to collect information to describe study participants. This is a modified version of an instrument that has been used by the research team in the completion of both a pilot study as well as an environmental scan (Michael, Valmond, Callwood, Francis, & Brown, 2016). In addition to standard demographic items, this questionnaire includes questions to determine pre- and post-hurricane housing status of study participants and their immediate family members; pre- and post-hurricane employment status; child's/children's school schedule(s); and select human services accessed by study participants (pre-and post-hurricane). Key variables from the demographic survey will be included in various analyses to be completed across the instruments used in the study.
2) *Center for Epidemiologic Studies Depression Scale-10 (CESD-10*). This is a 10-item instrument that assesses symptoms of depression in populations including the vulnerable and elderly. This instrument has been used in several research studies and reliability coefficients (Cronbach's alpha) range from .80 to .90 (Eaton, et al., 2004).
3) *Perceived Stress Scale (PSS).* This is a 10-item instrument that has been described in the NIH Toolbox® as a scale of individual perceptions about the nature of events and their relationship to the values and coping resources of an individual. This instrument has been used in other research studies and reliability coefficients (Cronbach's alpha) range from .67 to .91 (Cohen & Wills, 1985).
4) *Post-traumatic stress disorder checklist (PTSD PCL).* This is a self-report screening tool that provides information as to whether an individual has symptoms of post-traumatic stress

disorder. This instrument has been used in research studies and reliability coefficients (Cronbach's alpha) range from .62 to .87 (Weathers, et al., 1999).

5) *Brief COPE.* This is a 28-item instrument that is referenced in the NIH Toolbox® citing instruments with sound psychometric qualities and noting that the Brief COPE is the most widely used scale for assessing coping strategies for adolescents and adults. This instrument has been used in research studies and reliability coefficients (Cronbach's alpha) range from .50 to .90 (Yusoff, Low & Yip, 2010).

6) *General Self-Efficacy Scale (GSES).* This is a 10-item instrument (Likert-type items) that assesses personal competence in dealing with a variety of stressful situations. This instrument has been used in numerous research studies focused on health-related stress and behavior (Schwarzer, 2014). The GSES has excellent reliability, stability, and validity (Schwarzer, 2014), with reliability coefficients (Cronbach's alpha) ranging from .76 to .90 (Schwarzer & Jerusalem, 1995).

7) *Brief Resilience Scale (BRS).* This is a six-item, Likert-type scale used to assess resilience. This instrument has been used in cross-cultural research studies and reliability coefficients (Cronbach's alpha) range from .80 to .91 (Smith, et al., 2008).

8) *Emotion Regulation Questionnaire (ERQ).* This is a 10-item instrument that asks individuals about their emotional life, specifically how they control and manage their emotions. The instrument, also mentioned in the NIH Toolbox® of instruments, has good reliability and validity. Specifically, the reliability coefficients (Cronbach's alpha) range from .73 to .81 (Gross & John, 2003).

9) *The Child PTSD Symptom Scale (CPSS).* This is a 24-item, self-report measure developed to assess for the presence and frequency of PTSD symptoms during the past month in youth who have experienced a traumatic event. The measure also includes a 7-item functional impairment scale which assesses the degree to which PTSD symptoms interfere with a youth's functioning. Based on multiple studies, reliability coefficients (Cronbach's alpha) range from .84 to .91 for total score and from .76 to .86 for subscale scores (Foa, Johnson, Feeny, & Treadwell, 2001; Wevodau, 2016).

10) *Child Trauma Screening Questionnaire (CTSQ)* This is a 10-item, self-report instrument which serves as a risk assessment tool to predict the likely onset of PTSD. The questions are designed to assess traumatic stress reactions in children following a potentially traumatic event. The instrument has good reliability and validity and has been documented to be appropriate for use in research studies. The instrument has acceptable reliability (Cronbach's alpha - .69). (Kenardy, Spence, & Macleod, 2006).

Instruments for Qualitative Data Collection

Protocols were developed for conducting key informant interviews, focus group discussions, and community forums/Town Hall meetings (*See Appendix III.*). The protocols developed were done so that the qualitative data collected would assist the research team in gaining a deeper understanding of the issues related to the key objectives which served to frame the community needs assessment.

Administrative Data and Documents for Secondary Data Review

Census data, community surveys, administrative reports, research reports, de-identified data sets, and unpublished data generated by various agencies were used in support of addressing the research objectives.

Data Collection

Prior to the commencement of primary data collection, student research assistants received training on the use of tablets, through the ACASI system, for quantitative data collection. Student researchers also completed the NIH human subjects' certification and signed confidentiality pledges prior to participating in data collection.

Primary Data Collection

For quantitative data collection with adults, study participants were recruited from the FQHCs on St. Croix and St. Thomas. Participation was voluntary. Data collection at the STEEMCC commenced on October 2, 2018 and ended on November 6, 2018. On St. Croix, data collection from FHC sites commenced on October 16, 2018 and ended on November 7, 2018.

For data collection in the public schools, permission was secured from the leadership of the V.I. Department of Education to administer the CTSQ to all 4th, 5th, and 6th graders attending public elementary schools in the St. Croix and St. Thomas-St. John districts, as well as 6th graders attending the only middle school in the St. Thomas-St. John district and 4th, 5th, and 6th graders attending the only consolidated K-8 school on the island of St. John. Prior to the administration of the CTSQ, a letter explaining the purpose of the study, along with a passive consent form, were sent home to all parents. For public schools enrollees, a total of 42 parents returned the passive consent forms requesting that their children not participate in the study. All students in grades four through six attending public schools in the St. Croix and St. Thomas-St. John District were recruited to complete the CTSQ and assent was also sought from all students for whom parents had not submitted passive consent forms requesting that their children not participate in the study. As mentioned previously (*See page 6*), secondary students in the Territory's public schools were not included in the study since they were involved in a study earlier in the year and the research team was mindful of the time that had been required for the earlier study.

Additionally, the research team reached out to Principals, Headmasters, and Heads of School for all private and parochial schools in the St. Croix and St. Thomas-St. John districts that enrolled students in grades 4 through 12. One school, with only one 4th grader and no students in grades 5 through 12 was excluded from the study. Further, two schools, one in the St. Croix District and one in the St. Thomas-St. John District declined participation. A third school in the St. Thomas-St. John District did not respond to our communication, and due to continued challenges with telephone service in the aftermath of the hurricanes, the research team was unsuccessful in reaching this school after three months of trying to make contact. Once school administrators agreed to participate in the study, school personnel sent letters and passive consent forms to parents for review and action. For the private and parochial school enrollees, 35 parents returned the passive consent forms requesting that their children not participate in the study. (*See Appendix IV for a list of participating schools.*)

For focus group discussions with key public school personnel, the research team reached out to the Superintendents for each school district and sought assistance in the scheduling of focus group discussions. Focus group discussions and key informant interviews occurred over a two-month period, from mid-October through mid-December.

Secondary Data Collection

For secondary and administrative data collection, the research team contacted the heads of key agencies (central government, semi-autonomous agencies, and non-profit organizations), to include the VI Departments of Education, Health, and Human Services; the Lutheran Social Services of the Virgin Islands (LSSVI) the two Federally Qualified Health Centers (FQHCs); the two public hospitals – Juan F. Luis Hospital and Medical Center (JFL) and the Schneider Regional Medical Center (SRMC), as well as the Virgin Islands Housing Authority (VIHA), and the Virgin Islands Housing Finance Authority (VIHFA). Non-profit organizations from which secondary data were requested included the Women's Coalition, Family Resource Center, and the American Red Cross. Data requests were tailored to enable the research team to address the study's research objectives. For health-related data, requests for de-identified data that could speak to morbidity and mortality in child and adult populations since the hurricanes were made to both hospitals, the FQHCs, and the Department of Health. Resources such as the 2014 Virgin Islands Community Survey (2014 VICS produced by UVI ECC), the 2010 USVI Census data, USVI Kids Count and

other critical information sources were utilized to appropriately address the research objectives that guided the research team's efforts. (*See Appendix III for sample letters*.)

Additionally, for information specifically to the HS and EHS programs and services, special permission was requested and received to extract data from Program Information Reports (PIRs) that all HS and EHS program must submit annually. With appropriate permission, data were retrieved from *http://hses.ohs.acf.hhs.gov/pir*. Information on the TANF program was retrieved from *https://www.acf.hhs.gov/ofa/resource/tanf-caseload-data-2018*. No special permission was needed to retrieve TANF program data. Information on the Social Services Block Grant (a consolidated block grant) was retrieved from the VIDHS website.

Informed Consent

Prior to commencing primary data collection, the research team obtained approval from the University's Institutional Review Board (IRB), as IRB Study No. 1248148. In keeping with protection of human subjects, adult study participants read and signed Informed Consent Forms prior to participation. Each study participant also had the opportunity to retain a copy of the Informed Consent Form for her/his records. For student study participants, permission letters and passive consent forms were sent home to parents who were required to return signed forms only in instances where they did not want their children to participate in the study.

Further, students had an opportunity to assent to take the survey. Teachers, who used an administration protocol (*See Appendix III for copies of the administration protocols*.) obtained verbal assent from students and distributed surveys only to students who agreed to complete the surveys (CTSQ for students in grades 4-6 and the CPSS for students in grades 7-12).

Chapter III. Findings

The findings of this Community needs assessment are organized around the research objectives presented earlier in this report. Every effort is made to provide the reader with a clear picture of residents of the US Virgin Islands (USVI), paying particular attention to the social determinants of health in the presentation of the community profile and the four focal areas to be addressed in terms of how vulnerable children and families are faring in the aftermath of Hurricanes Irma and Maria.

With the exception of the findings of the surveys related to health and health status among the school age population and adults, all quantitative data analyzed and shared in the presentation of findings are based on secondary data provided by agencies or organizations or retrieved from websites with relevant data.

The findings are organized around the seven objectives that served as the framework for completing the community needs assessment. Further, sections are used to organize the findings of each of the objectives.

To augment the quantitative data presented, qualitative data from key informant interviews, focus group discussions, and Town Hall meetings/Community Forums are presented through themes highlighting information that speaks to one or more aspects of the study objectives. Qualitative data are presented in a separate section titled *Voices from the Community*.

The two final sections of the chapter present 1) a summary of program and services gaps in the four key areas – health, education, human services, and housing, and 2) priority programmatic and service delivery issues that need urgent attention.

Section I: Community Profile

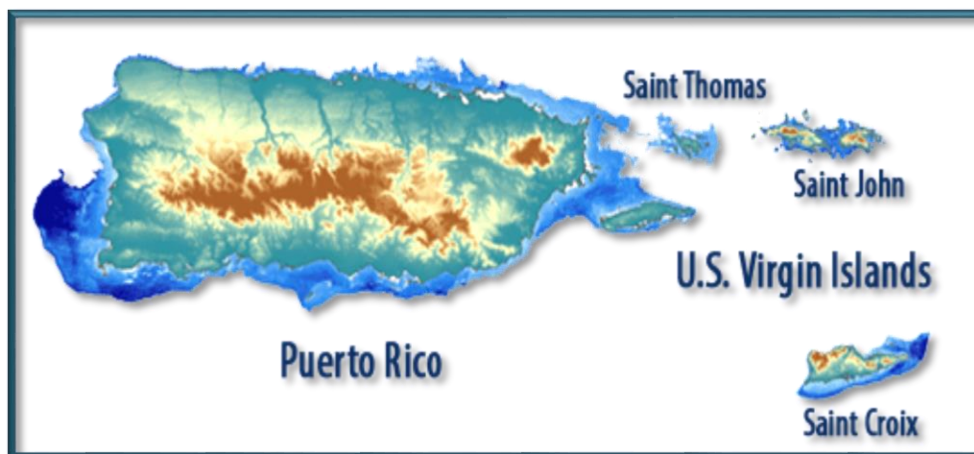
Geographic Location of the US Virgin Islands

The US Virgin Islands (USVI), an unincorporated Territory of the United States, is a group of four small islands and 50 even smaller islets and cays located in the Caribbean archipelago (Figure 1.1) at the eastern edge of the Greater Antilles, 43 miles east of Puerto Rico and more than 1,100 miles from the US Mainland. In the case of the USVI, small means that a population of 102,007 (2014 VICS) live on 133 square miles mostly on St. Croix, 84 sq. miles, St. Thomas, 32 sq. miles, and St. John, 20 sq. miles (Figure 1.2).

Figure 1.1. The Caribbean Archipelago

This Caribbean region (Figure 1.1), including the US Virgin Islands, is susceptible to multiple natural hazards like earthquakes, volcanic eruptions, tsunamis, tropical storms and hurricanes. The environmental effects and the increased intensity of weather events associated with climate change are expected to bring additional burdens such as rising sea levels, exacerbated droughts, and increase in the frequency of heavy rainfalls, coastal erosion and flooding. It is also predicted that temperature shifts will encourage the spread of certain infectious diseases in the region (VIHFA Consolidated plan 2010-2014 retrieved from *https://www.vihfa.gov/sites/default/files/reports/VIConsolidatedPlan.pdf*).

Figure 1.2. The major islands of the US Caribbean- Puerto Rico and the USVI



The position of the islands with the Atlantic Ocean to the north and the Caribbean Sea to the south make these beautiful islands vulnerable to storms and hurricanes every year, especially between June and November (See Figures 1.3 and 1.4).

Figure 1.3. Storm/hurricane tracks across the Caribbean

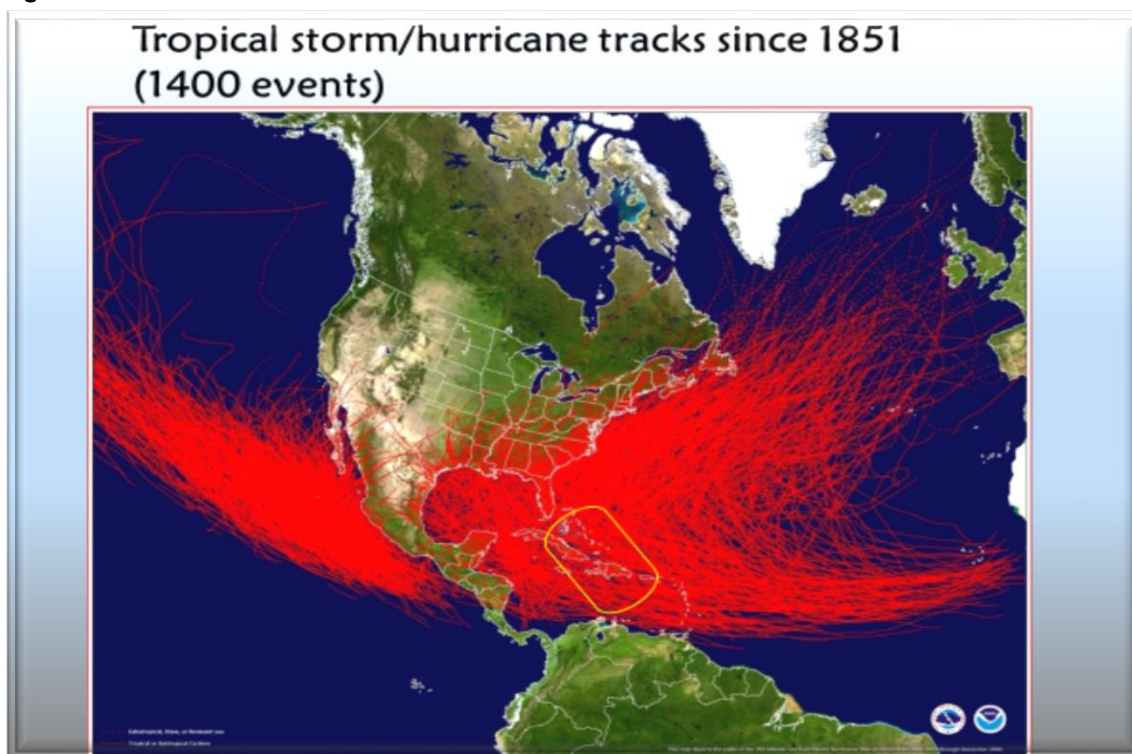
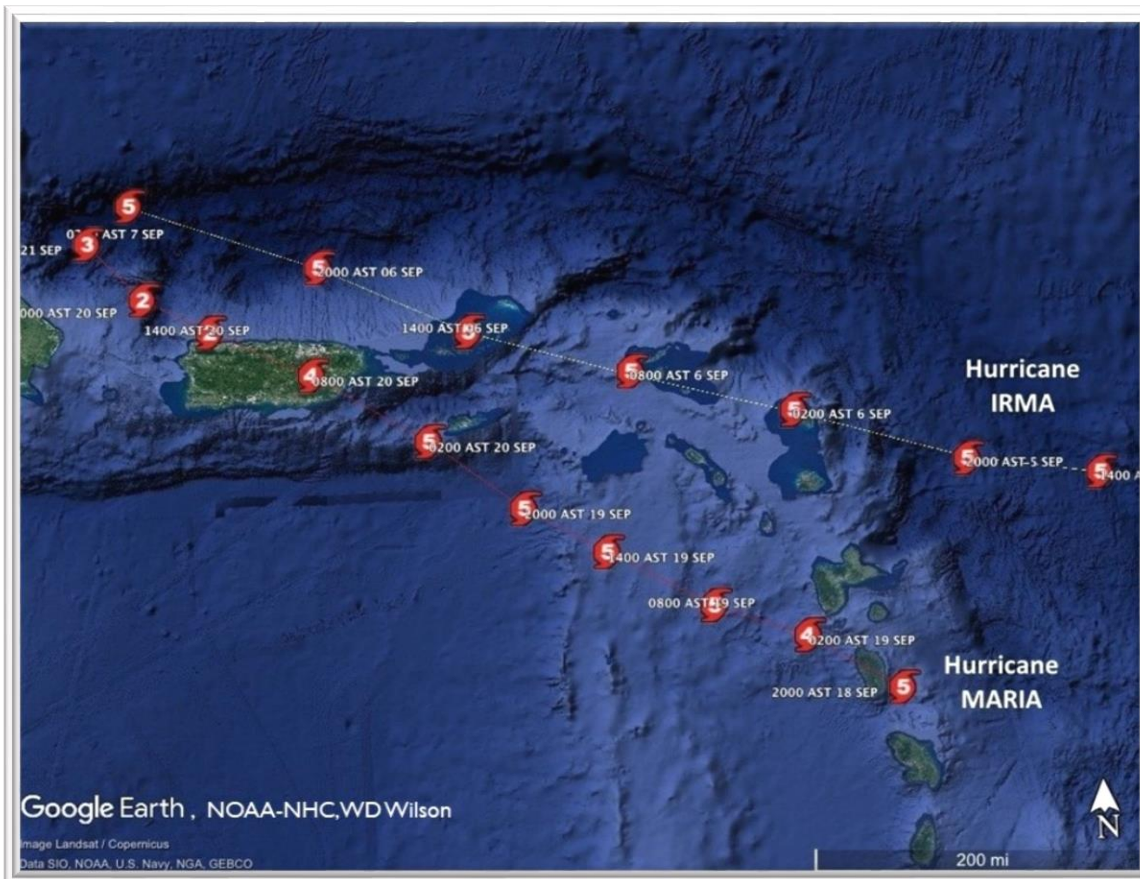


Figure 1.4. September 2017 Tracks of Hurricanes Irma & Maria over the Eastern Caribbean

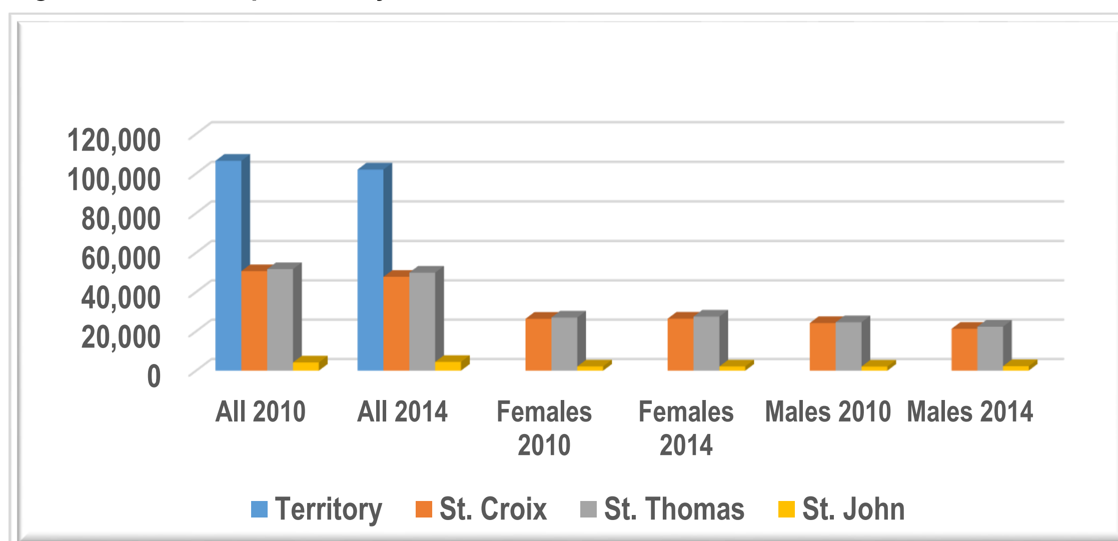


Before the major disruptions of the hurricanes in September 2017, the USVI exhibited characteristics of a small island Territory focused on various aspects of community development within the context of its physical, social and economic attributes and conditions. The elements described in this community profile, which used the best data available for the time period prior to September 2017, are essential to understanding the level of impact of the storms and serve as background for others designing effective recovery and long-term responses for the community.

The US Virgin Islands Population

The US Virgin Islands population has been more than 50% female, multiracial and multiethnic for decades. The Virgin Islands Community Survey (VICS) of 2014 reports a population of 102,007, which is down from the 106,405 individuals reported living in the Territory in 2010 (See Figure 1.5). This is a continuation of the decline in population which began in 2008.

Figure 1.5. USVI Population by Island and Sex: 2010 and 2014



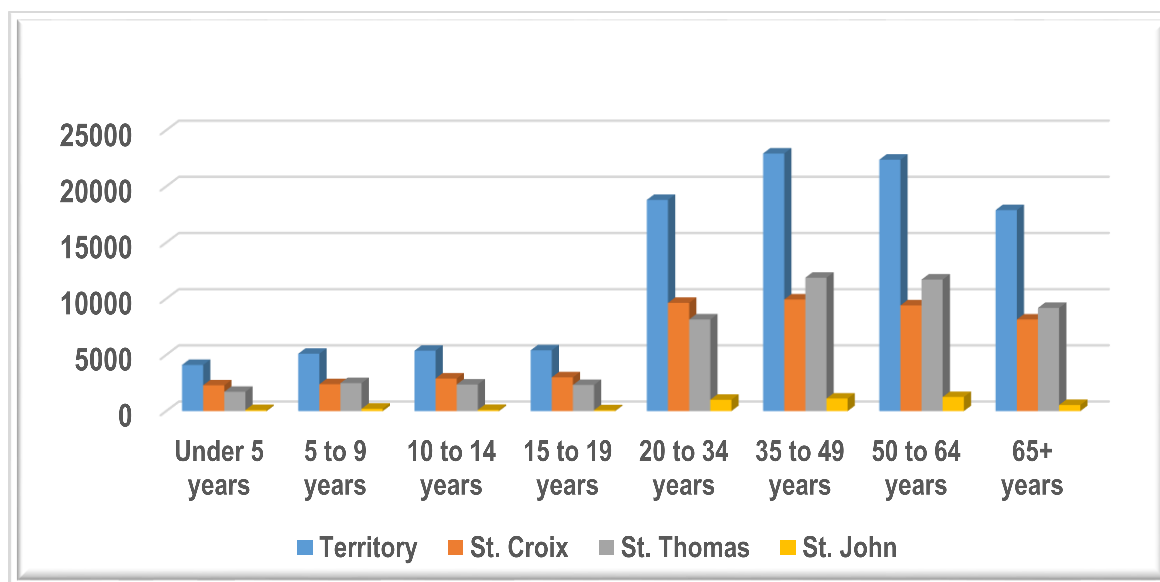
Non-census reports, including a 2016 report from the USVI Bureau of Economic Research, state the population to be 97,373 individuals, a 4.5% reduction in the population from 2008. The 2014 Virgin Islands Community Survey (VICS) characterizes the population as 77% *Black* (African American or African Caribbean), 10.5% *White*, and 12.4% *Other Races* with 17% of the population reporting Hispanic origins. St. Croix is home to almost 1 in 4 persons reporting Hispanic origins, the highest percentage in the Territory (See Table 1.1).

Table 1.1. USVI Population by District and Ethnicity: 2014

	Population	Hispanics	Non-Hispanics
St Croix	47,736	11,052	36,684
St Thomas	49,835	5,416	44,419
St John	4,437	626	3,811
Territory	**102,007**	**17,093** (17%)	**84,914** (83%)

Figure 1.6 also demonstrates that the USVI now has an aging population with the median age being 43.5 years and the majority of persons in the community being over 35 years old (62%). The report that 39% of the population is over 50 years old has enormous implications for healthcare, the workforce and how the Territory prepares for hurricanes and other extreme weather events.

Figure 1.6. USVI Population by District and Age Group 2014

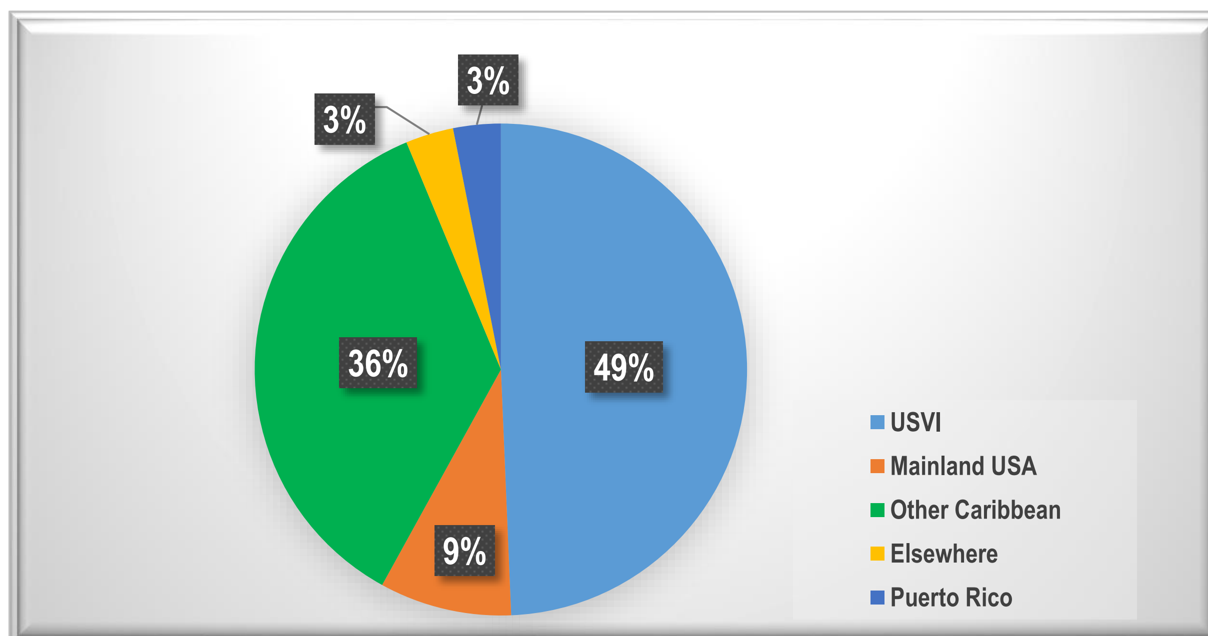


Source: U.S. Census 2010 and 2014 V.I. Community Survey (VICS)

Between 2000 and 2010, the number of children in the U.S. Virgin Islands decreased by 21%—from 34,289 to 27,026. The decrease in the child population in the U.S. Virgin Islands is linked to declining birth rates in the Territory, emigration of families from the Territory, coupled with the aging of the population. Between 2000 and 2010, the U.S. Virgin Islands experienced its first population decline in its recorded history, falling 2 percent during the decade (Mather & Jarosz, 2014).

The population of the U.S. Virgin Islands comprises various size groups of people from many places, especially the island states and territories of the Caribbean and states of the U.S. Persons from Canada, Europe, Central and South America, India, the Middle East, and African countries are classified in the *Elsewhere* category in the 2014 VICS (Figure 1.7). Currently, the largest number of Virgin Islanders born outside of the Territory were born in countries and non-independent territories of the Caribbean, especially the islands of the Eastern Caribbean. VICS 2014 reports 15% of the Caribbean-born USVI residents as being born in the Dominican Republic, increasing the percentage of persons in the population whose first language is not English and who may not be as conversant with the English language as the general population.

Figure 1.7. US Virgin Islands Population by Place of Birth: 2014



Further, the diversity in cultures, dialects and practices found in the USVI population means that this community, a US Territory, where English is the primary language spoken, will have foods, some practices, dialects and other languages reflecting the various groups in the population integrated into traditions and everyday activities. This has implications for service delivery both in terms of communication as well as sensitivity to cultural nuances and value systems.

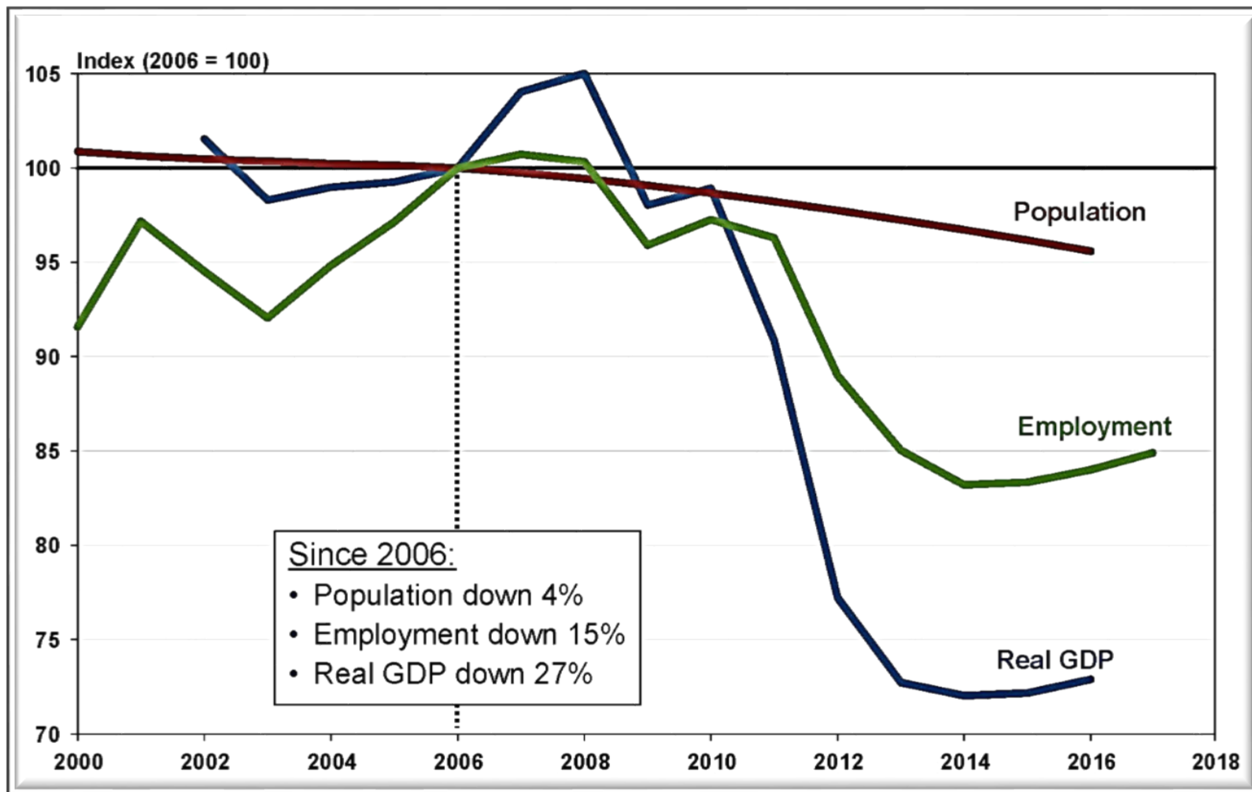
US Virgin Islands Economic Indicators

The employment and economic activities in the USVI, which influence health and quality of life for families and children, have been challenged and were in a weakened state before the storms of 2017. In 2016, the Bureau of Economic Research (BER) reported the USVI as having a $3.89 billion economy that depended heavily on hospitality and professional services industries. Economic activities also included retail, some manufacturing and notable inputs from government. Economic activity in 2016 was linked to a local workforce of 48,000 workers (USVI Bureau of Economic Research, June 2017).

The economy has contracted since 2008, as noted and reported by local (USVI BER) and national economic sector groups. Figure 1.8 is a graph found in a recent press report from a member of the Federal Reserve Bank of New York

(https://www.newyorkfed.org/medialibrary/media/press/PressBriefing-PuertoRico-USVI-February222018.pdf). The report noted that the USVI economy had been depressed, largely due to the 2008 Great Recession and the closure of the Hovensa oil refinery in 2012. Additionally, while there has been no default on debt payments, public debt in 2016 was roughly 72% of the Gross Domestic Product (GDP), with the Territory having limited market access. The same press report indicated that since 2006 the USVI has seen a decrease of 4% in its population, 15% downturn in employment, and 27% reduction in Real GDP.

Figure 1.8. USVI Indexes of Economic Activity, Employment, and Population



All the sectors monitored by the USVI Bureau of Economic Research exhibited a decrease in employment over the last 5 years and the unemployment rate for 2016 was reported at 11% for the Territory. According to the VICS 2014 report which indicated unemployment was at 10.2%, the island with the highest percentage of the unemployed was St. Croix where over half of the unemployed lived (Table 1.2). On all three islands, women constitute at least 50% of the workforce.

Table 1.2. USVI Economic Indicator: Unemployment by Island - 2014

	Unemployed Persons
Territory	**4,151(10.2%)**
St. Croix	2,345 (5.8%)
St. Thomas	1,712 (4.2%)
St. John	94 (0.23%)

Source: 2014 VICS; Note: Total Labor Force: 40,690

Table 1.3 shows that the major areas of employment continue to be the VI Government, services, leisure and hospitality, and the wholesale and retail trade areas. The areas of manufacturing and information represent the industries with the lowest employment levels in the Territory.

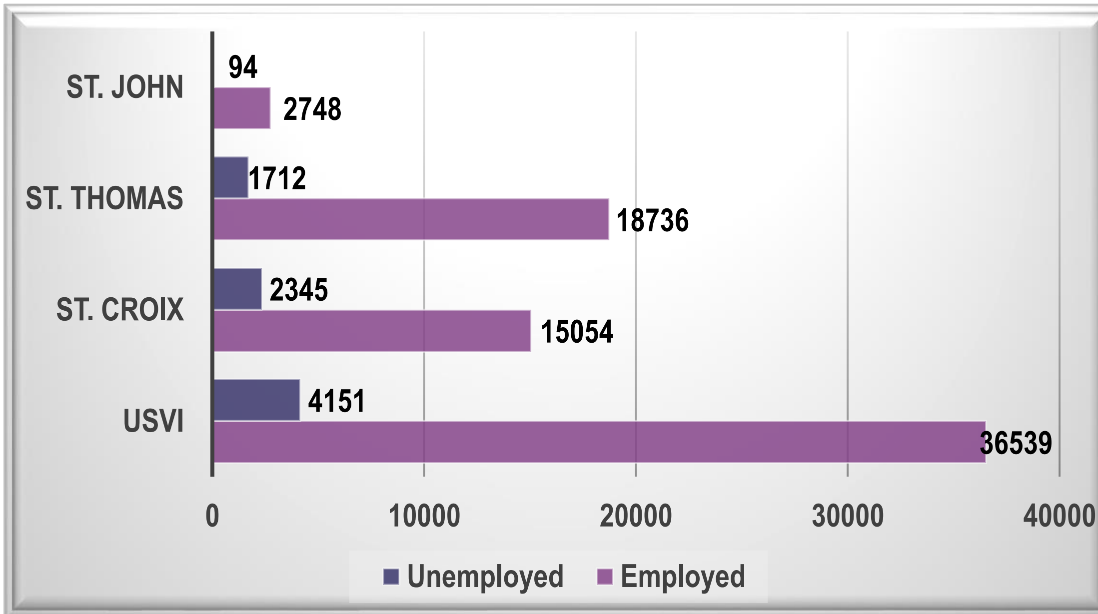
Table 1.3. USVI Economic Indicators: Types of Industry and Employment

Industry	No. Employed
Construction & mining	1,480
Manufacturing	622
Transportation, Warehouse & Utilities	1,411
Wholesale & retail trade	6,664
Financial Activities	2,132
Leisure and Hospitality	7,372
Information	625
Services (*professional & business, education, health & other*)	9,028
Federal Government	937
Territorial Government	9,895

Source: USVI Bureau of Economic Research, 2017

Figure 1.9 presents another view of the impacts of loss of manufacturing jobs and reduced economic growth in the Territory. Unemployment rates have been higher in the USVI than on the US mainland for many years.

Figure 1.9. USVI Civilian Workforce* Employment Status: 2014

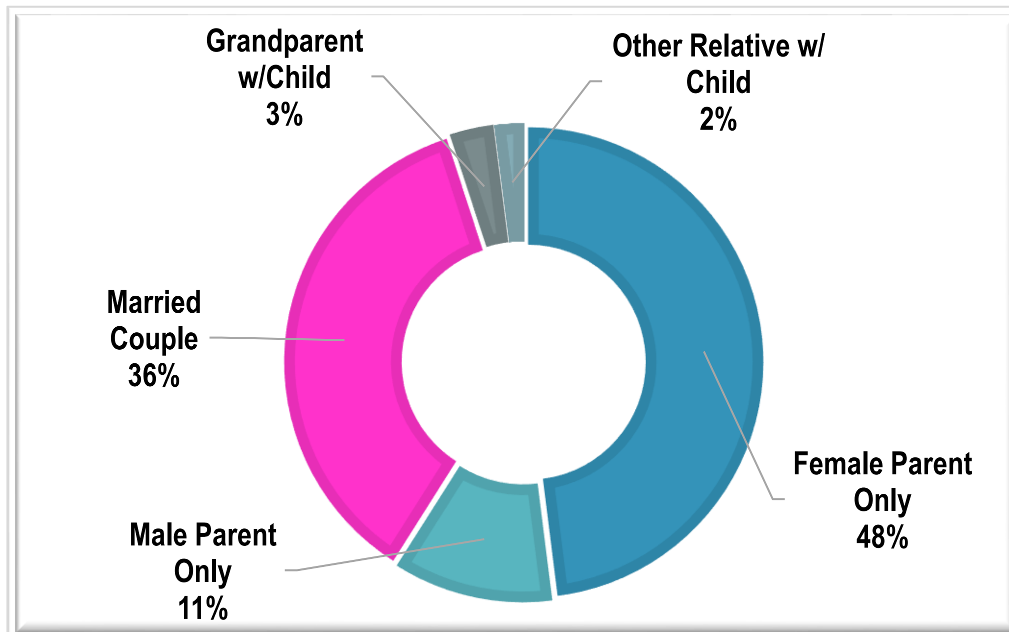


**Persons over 16 years old*

Families in the US Virgin Islands

The families of the USVI take many different forms, but all serve as relational units of support and places of decision-making that affect lives and the community. The dominant family structure in the USVI is the single female as head of household, with at least one child. Figure 1.10 shows that 48% of the families in the USVI have a female, single-head of household.

Figure 1.10. USVI Population by Family Composition: 2014



Housing in the US Virgin Islands

The islands of the Territory have limited land space for housing due to small size and steep slopes in many areas, which often adds to affordability challenges for many in the population. Adequate and affordable housing has been a challenge for the people and government of the U.S. Virgin Islands for many years. Housing stock in the USVI includes privately owned and rented housing, public housing (government-owned and operated), and publicly financed housing. The 2014 VICS reported 58,330 total housing units with 26,362 units on St. Croix, 28,363 on St. Thomas and 3,604 on St. John.

2014 VICS reports a little over half (52%) of the occupied housing units in the Territory as being owned by occupants, as compared to a 62% homeownership level on the US Mainland (US Census Bureau Report 2016). St. Croix reports the highest level of homeownership (65%) followed by 43% and 41% homeownership on St. Thomas and St. John respectively. Table 1.4 indicates that 44,762 units or 77% of the total units available in the Territory are occupied.

Table 1.4. USVI Housing Units and Occupied Units by Owners and Renters

	US Virgin Islands		St. Croix	St. Thomas	St. John
Housing (58330 units)	Owners	Renters	Owners Renters	Owners Renters	Owners Renters
# Persons with Housing	53,803	48,204	30,170 17,565	21,449 28,386	2,184 2,253
Number and Percent Occupied Units	23,293 (52%)	21,470 (48%)	12,404 6,714 (65%) (35%)	10,142 13,700 (43%) (57%)	747 1,055 (41%) (59%)
All Occupied Units	**44,762**		**19,118**	**23,842**	**1,802**

Source: 2014 VICS

Fifteen percent (15%) of the housing stock in the Territory is public housing, designed to address the housing needs of low and moderate-income families through the provision of housing or home ownership opportunities. The Virgin Islands Housing Authority (VIHA) is the Territory's public housing agency, responsible for management, planning, construction, operations and maintenance of the 26 public housing communities in the USVI. There are 17 public housing communities (52% of units) on St. Croix and 9 public housing communities (48% of units) on St.

Thomas. The 3,014 units in public housing and homeownership opportunities provided for low and moderate-income families are realized through the funds accessed from the Federal Government and other sources by the Virgin Islands Housing Finance Authority (VIHFA).

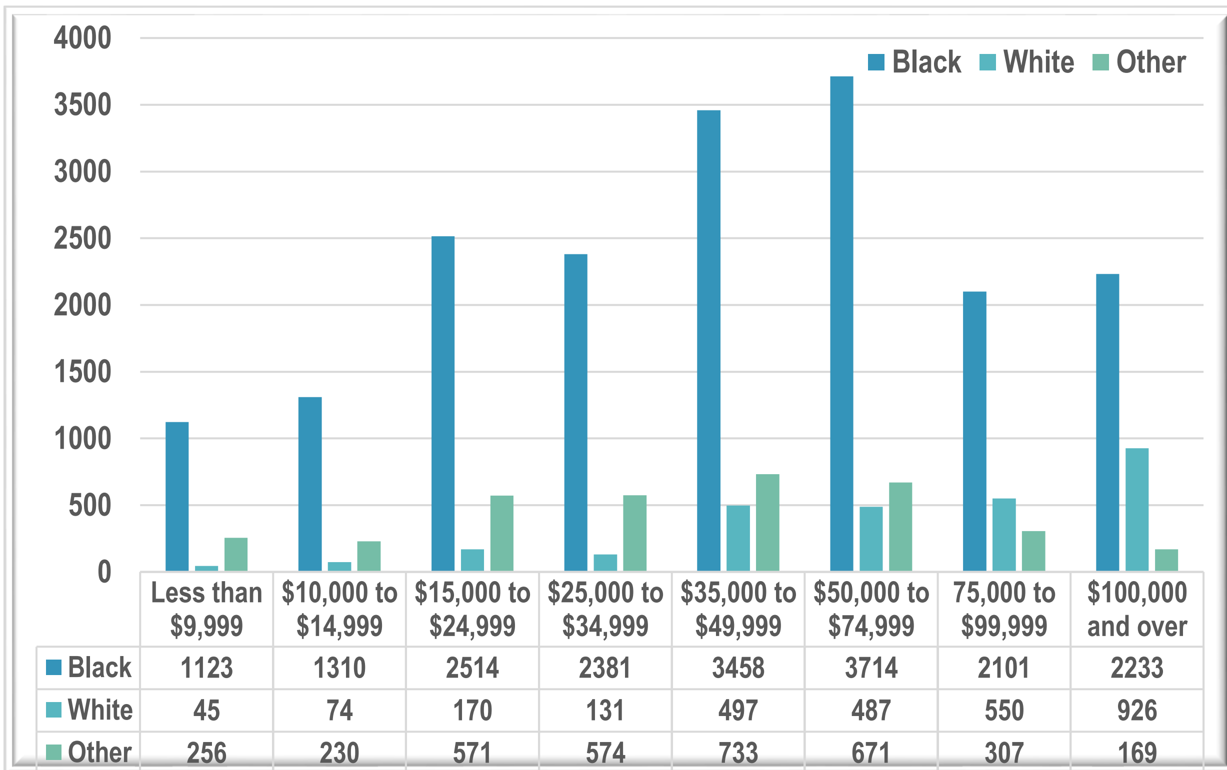
The mandated goals of the VIHFA and VIHA are to ensure all Virgin Islanders can obtain safe, sanitary, decent and affordable housing. VIHA and VIHFA continuously assess the progress being made and the results of the 2015 Housing Demand Study project that 4,857 homes are needed to meet the Territory's housing needs. (Community Development Block Grant Disaster Recovery (CDBG-DR) Action Plan, United States Virgin Islands Housing Finance Authority, May 25, 2018. https://www.vihfa.gov/sites/default/files/reports/USVI%20Action%20Plan.pdf)

Poverty in the US Virgin Islands

The 2014 VICS reported that 18.9% of USVI families were living below the poverty level. Of note is the increase in poverty in the community over time. The 2016 Community Foundation of the Virgin Islands Kids Count (herein after VI Kids Count 2016) Data Book (CFVI 2018) provides information on the status of children in the USVI in 2014, with some limited data for 2015. The VI Kids Count 2016 reported increased poverty levels for USVI families with children (32%, up from 27% in 2012) as well as increases in the number of children in the USVI living in poverty (37%, up from 35% in 2013). The highest number of children in families living below the poverty line are recorded on St. Croix (41%). The magnitude of the challenge poverty imposes on the Virgin Islands community is visible in data reporting 47% (up from 44% in 2013) of single female head of household families living in poverty (below the federal poverty level). These percentages are even higher for female-headed families with children under six years of age, with 58% of these families categorized as poor, compared to 44% of female-headed households with children ages 6 – 17 (p. 13).

Figure 1.11 shows that across the Territory more *Black* and *Other Race* families live below the poverty line than do *White* families. The US Census figures and 2014 VICS do not address the high cost of living in the Territory associated with limited land space and the additional costs attached to importing almost all goods and food due to size and geographic location. The official poverty level is important to the many families that have incomes close to, but above the poverty level, and then are unable to access assistance programs.

Figure 1.11. USVI Families by Race and Income Level: 2014

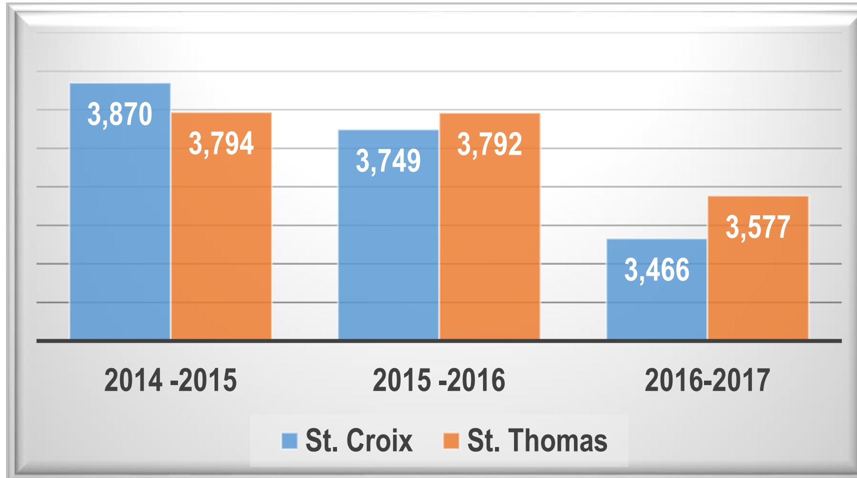


	Less than $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 to $74,999	75,000 to $99,999	$100,000 and over
Black	1123	1310	2514	2381	3458	3714	2101	2233
White	45	74	170	131	497	487	550	926
Other	256	230	571	574	733	671	307	169

Families and children can be found in the 65,000 individuals that are dependent on government services to address the basic needs of living in the Territory. The Virgin Islands Department of Human Services (VIDHS) acknowledges that 56,000 clients in the vulnerable population requiring financial, medical, and nutrition support are low income populations that include families and children. Under normal conditions the elderly, the mentally ill, young children preparing for kindergarten and juveniles requiring supervision and assistance also seek access to the programs of the VIDHS.

The combination of low educational attainment, a high percentage of households headed by a single female single, a weak economy, a high cost of living and high unemployment creates a strong demand for support to low-income families in the form of resources, information and safety nets to mitigate impacts from living in poverty.

Figure 1.12. Families Receiving Aid through SNAP by District: FY2014-2015 – FY2016-2017



With respect to children in families that receive public support, 86% (15,856) of all USVI children (0-18 years) received Supplemental Nutrition Assistance Program (SNAP) benefits in 2014, while 78% of children who received SNAP benefits lived with a single parent. Figure 1.12 points to a decrease in the number of families receiving aid through SNAP in both districts, with a 10% decline in participants on St. Croix and 5% fewer families on St. Thomas-St. John between 2015 and 2017.

Figure 1.13. Number of Children Receiving SNAP: FY2014-2015 – FY2016-2017

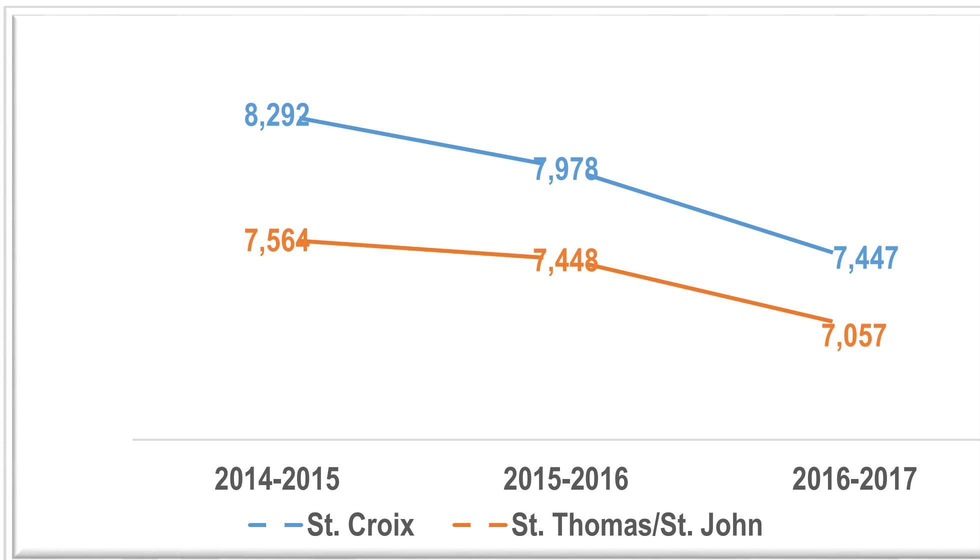
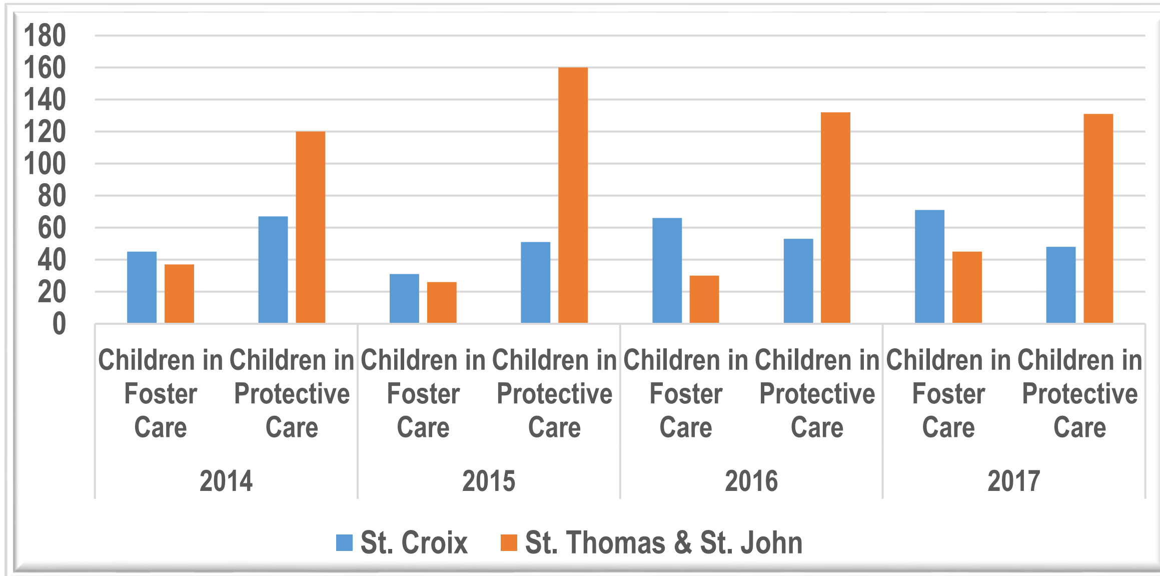


Figure 1.13 also shows a 10% decrease on St. Croix and a 6% decrease on St. Thomas-St. John in the number of children receiving aid through SNAP between 2015 and 2017. This decrease in the number of recipients of aid from support programs may be a reflection of the decline in the population of children under 18 years old. Yet, this phenomenon does not represent a parallel with the fairly constant numbers of families living below the poverty level in the Territory.

VIDHS programs, including protective services and foster care, provide a safety net for juveniles that have been neglected or abused. Figure 1.14 indicates the numbers of cases in the foster care program for the Territory have doubled between 2015 and 2017. St. Croix has consistently

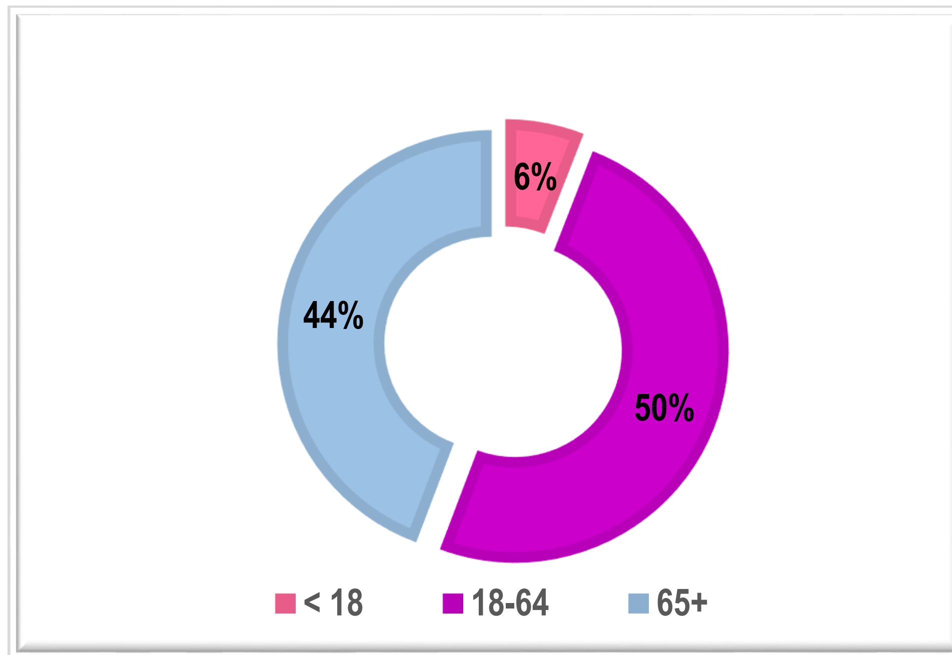
recorded more foster care cases than St. Thomas-St. John over the last 3 years, and in the same period, St. Thomas-St. John has recorded at least 2.5 times more protective care cases than St. Croix.

Figure 1.14. USVI Children in Foster and Protective Care by District: 2014-2017



VIDHS also provides the USVI with programs to enable persons with disabilities to function optimally in the community. According to the 2014 VICS, approximately 10% of the USVI population are reporting a disability, and within that group, half are between the ages of 18-64 and 44% are over 65 years old (See Figure 1.15). Six percent of Virgin Islands children were reported as having a disability, and the ones noted for children under five years only addressed vision and hearing disability (FEMA, ESRI, U.S. Census Bureau [2010], Cornell University Employment and Disability Institute). The prevalence of disability is used to compare the percentage of non-institutionalized, male or female, all ages, and all races, regardless of ethnicity, with all education levels in the United States reporting a disability. In 2016, the prevalence of disability, nationally, was 12.8% and 21.4% in Puerto Rico.

Figure 1.15. Percent USVI Population with a Disability by Age Group: 2014



Education in the US Virgin Islands

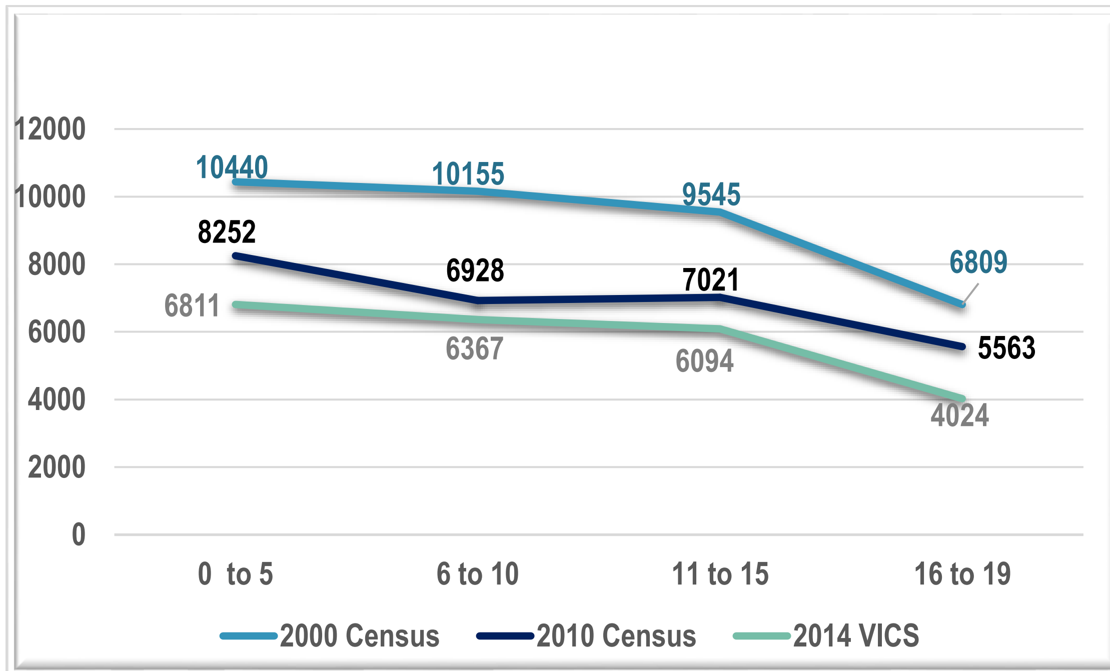
Educational attainment is one of the factors influencing the lives of individuals and families in the USVI, especially those living below the national poverty level. The USVI's educational system, spread across three islands, includes K-12 schools and the University of the Virgin Islands. The K-12 system includes 31 public schools run by the Virgin Islands Department of Education (VIDE) and 28 parochial and private schools, as well as a small number of homeschooled students, all reporting outcomes through the VIDE. Public, parochial, and private schools in the USVI receive supplemental funds from the U.S. Department of Education. The funding is awarded to the V.I. Department of Education and awards are disbursed to all schools on a formula basis anchored in enrollment levels.

The USVI continues to experience challenges with improving the outcomes of the formal education system and has been striving to manage and retain a constantly shrinking pool of students for several years. Challenges with aging infrastructure and addressing needs of students who have stressful situations outside of school have complicated the problem. The Department of Education tracks withdrawals of students, documenting a range of reasons for withdrawals from the public school system. The data indicate that in SY2015-2016, 1074 students left the school system for reasons of: home schooling (17), personal or academic (101), adult education, skill

Center or Job Corps (100) and 856 leaving the Territory to attend school elsewhere. The same trend was evident in SY2016-2017 when 858 students left the school system for the reasons identified above, and, of these, 680 left the Territory.

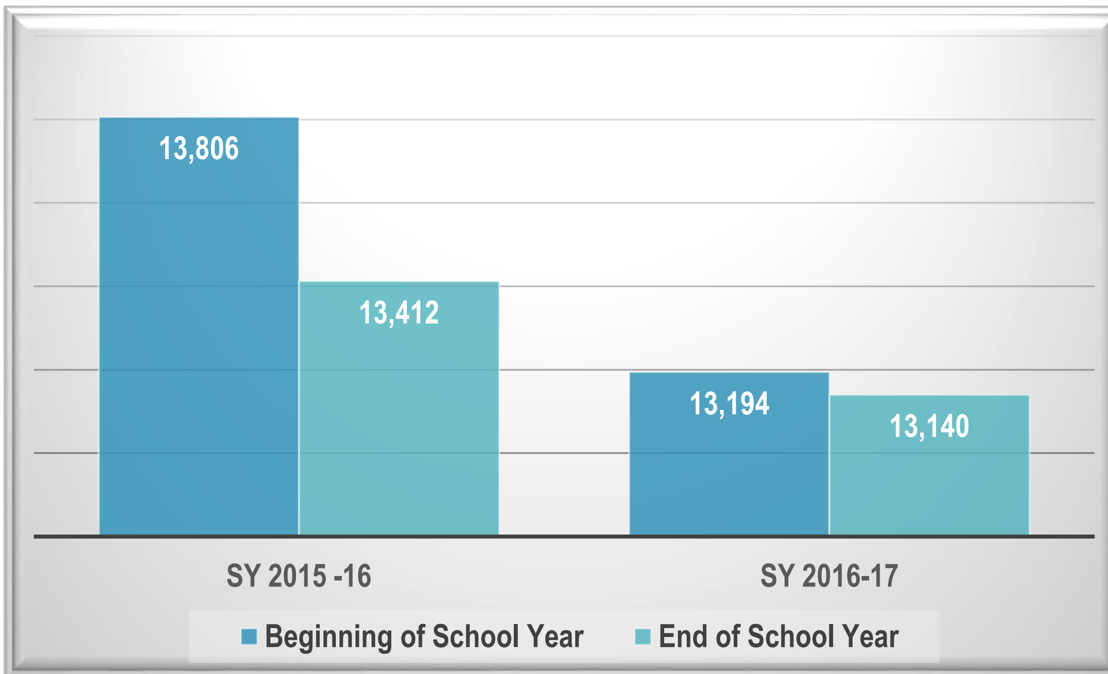
Figure 1.16 clearly demonstrates the decrease in numbers of youths in the USVI population has been consistent over the last 7 years (2014 VICS) which is reflected in school enrollment numbers. Factors influencing this loss are likely linked to the smaller average number of children per household, which was reported as 2.1 in 2014.

Figure 1.16. USVI Youth Population by Age Group: 2000 – 2014



Source: 2014 VICS

Figure 1.17. USVI Student Enrollment: School Years 2015-2016 & 2016-2017



Enrollments reported in the USVI K-12 school system reflect the decrease in the population of school-age individuals and give some indication of the loss of students between the beginning and end of the school years. The decline in initial school enrollment across the Territory from 13,806 to 13,194 between SY2015-2016 and SY2016-2017 as shown in Figure 1.17 is noticeable in terms of raw numbers, but represents only a 4% decrease in initial enrollment from one school year to the next. Figure 1.17 also reveals that by the end of the school year the enrollment difference narrowed to only 2% fewer students in SY2016-2017 than in the previous school year. Given that only two school years of data are presented, and given that these are small numbers, comparatively speaking, the enrollment changes should be interpreted cautiously. VIDE leaders and administrators, UVI leaders and administrators, and potential employers may want to pay close attention to the school enrollment figures over the next few years to determine whether the slight decline represented in Figure 1.17 will continue and whether consideration needs to be given to how low, but steady declines may impact the workforce or require adjustments to infrastructure and staffing with respect to the delivery of educational programs and services at the K-12 and higher education levels.

The flow of students out of the educational system before achieving a high school diploma may be a factor in the statistic that 26% of the persons in the USVI 25 years and older not having

high school diplomas or GED certificates. This level is more than twice as high as the 12% of persons 25 years or older recorded without high school diplomas for the mainland US (US Census 2015).

Though in the USVI only 18% (2014 VICS) of the population is reported having a bachelor or higher degree, while nearly 1 in 3 adults (33%) were higher education graduates at the national level (US Census Bureau, 2015), 17.5% of adults 25 years or older have at least attended college or earned an associate's degree (2014 VICS). The educational attainment level in the Territory is an important consideration as leaders, policy-makers, and service providers consider how best to serve residents and develop communication mechanisms that would be optimal as considerations are given to improving the health of residents, providing them with the skills needed to better prepare for future disruptions, and including them in community-engaged preparedness planning activities.

Community Health Status

The health of a community drives productivity and quality of life for children and adults, making access to quality healthcare and information essential to the children and families of the USVI. In the USVI, access to healthcare needs and services are addressed through Medicaid, Medicare, personal finances (uninsured) or third-party healthcare insurance. The 2014 VICS reported that 30% of the population did not have health insurance coverage. In 2016, approximately 55% of children younger than 9 years old were receiving medical services through Medicaid and 61% of children in the Territory between the ages of 10 and 19 years old were uninsured (Health Resources and Services Administration -UDS Data Center, 2016). The families of the USVI have benefited from the Affordable Care Act (ACA) through the increase in the Medicaid cap that made more funding available to the USVI in terms of insurance coverage for eligible persons.

Concerns about the health of the people of the Territory are not new. Before the disruption of the hurricanes in 2017, the USVI population was known to have high incidences of cardiovascular diseases, hypertension, diabetes, cancer and an underlying condition of obesity. More than 20% of the patients receiving services at the FQHCs in the Territory were treated for hypertension (Health Resources and Services Administration -UDS Data Center, 2016). The Kaiser Foundation noted in its health report on the USVI for 2017 that 13% of the population was reported as having to manage living with diabetes, a higher level of prevalence than the 12%

reported for national health statistics (Source: Kaiser Foundation U.S. Virgin Islands: Fast Facts, December 2017; *http://www.kff.org/other/state-indicator*). A recent concern of the community voiced on talk shows and in public meetings is the inadequacy of mental health facilities and treatment options in the Territory, despite concerns that the need is increasing. The health status of the community was also impacted by the continuing practice of using local "bush", herbal, or other traditional treatments in place of or along with western medicine and practices, creating challenges for local health providers, especially if the patient went into crisis (Callwood, Campbell, Gary, & Radelet, 2012).

Before September 2017, the US Health Resources and Services Administration (HRSA) designated the US Virgin Islands as a Geographic High Needs Health Professional Shortage Area (HPSA), indicating a shortage of health providers and services. The families and children of the USVI can address their healthcare needs through a number of different aspects of the USVI healthcare system. The choices made by families may be influenced by level of income, access to transportation, level of educational attainment or language barriers. The healthcare system of the USVI, which must address the challenge of geographic separation of islands and the costs of duplication of services, accomplished this in the first half of 2017 through two public hospitals, two Federally Qualified Health Centers (FQHCs), one public health department with offices and clinics across the Territory (St. Thomas, St. Croix and St. John), two specialized service centers, 23 pharmacies, many private providers, and 382 VI licensed medical professionals (excluding nurses).

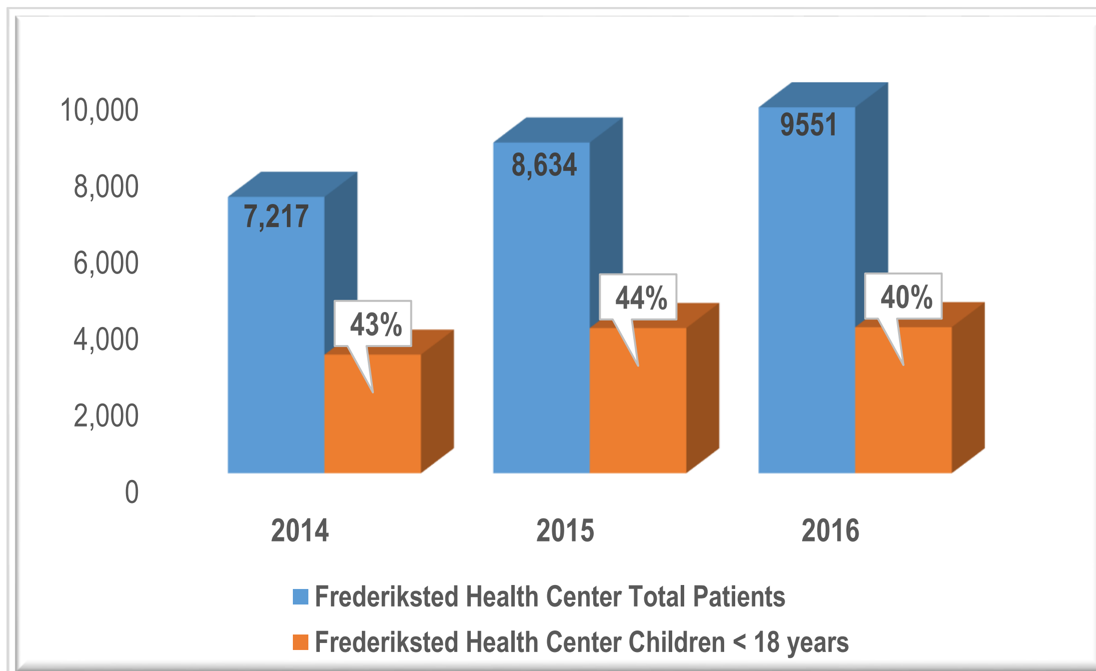
The high percentage of families living with annual incomes of less than $25,000 and managing the high cost of living in the US Virgin Islands make the existence of one Federally Qualified Health Center (FQHC) on St. Croix, Frederiksted Health Care, Inc. (FHC), and one on St. Thomas, the St. Thomas East End Medical Center Corporation (STEEMCC), critical components of the healthcare system in the Territory. It is important that the FQHC locations are accessible by public transportation and focus on providing primary care to low-income persons who fall below the federal poverty level and live in medically underserved communities. USVI families and children benefit from the wide range of payment options offered by FQHCs, including offering a sliding fee scale and accepting patients covered through private insurance, Medicaid, Medicare and self-payment. Table 1.5 shows the number of patients treated at the FQHCs has increased annually over the 3-year period noted.

Table 1.5. Patients Served by FQHCs in the USVI: 2014-2016

	Number of Patients		
Year	FQHCs	FHC	STEEMCC
All Years	**45,523**	**25,402**	**20,121**
2014	13,322	7,217	6,105
2015	15,047	8,634	6,413
2016	17,154	9,551	7,603

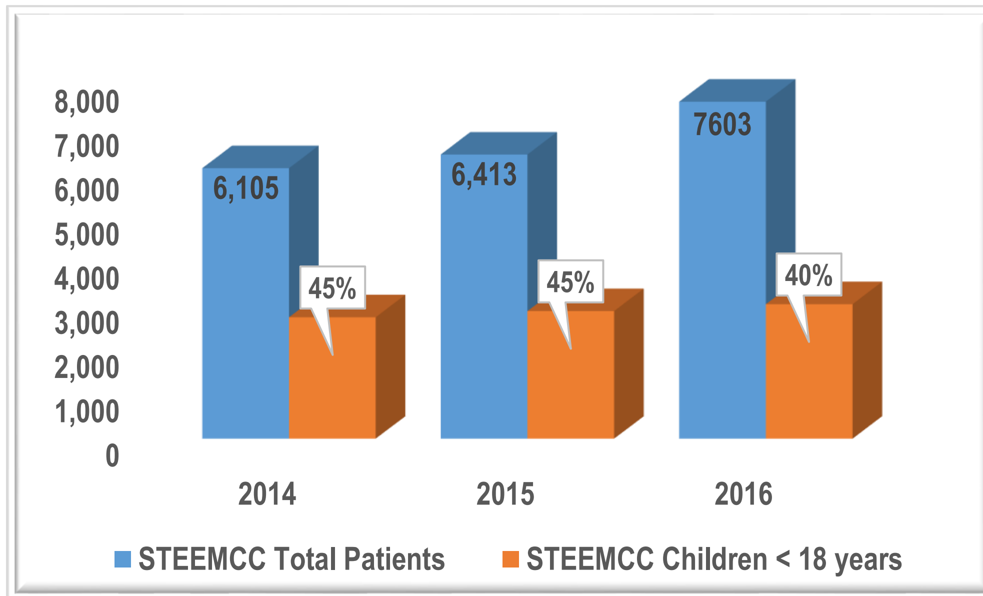
Source: https://bphc.hrsa.gov/uds/datacenter.aspx?q=d&bid=025320&state=VI&year=2016
Health Resources and Services Administration -UDS Data Center

Figure 1.18. Number of Patients and Percent of Children Under 18 Years of Age Treated at FHC: 2014-2016



Figures 1.18 and 1.19 show the increase in the number of patients treated at FQHCs on both St. Croix and St. Thomas over the three-year period, 2014-2016. Before the hurricanes, the FQHCs were providing much needed medical and dental services to a wide range of patients, but especially to members of vulnerable groups in the Territory. The percentage of children treated ranged from a high of 44% in 2015 to a low of 40% in .2016 (Figure 1.18) on St. Croix and 45% (2014 and 2015) to 40% (2016) on St. Thomas (Figure 1.19).

Figure 1.19. Number of Patients and Percent of Children Under 18 Years of Age Treated at STEEMCC: 2014-2016



Families and children in the USVI also use the many services provided by the VIDOH through their public clinics on St. Croix, St. Thomas and St. John. Clinic services offered to the USVI community include Mental Health, Family Planning, Communicable Disease, Maternal and Child Health, HIV/STD, Community Health, the Women Infant and Children Program (WIC), and the Immunization Clinic. The inability to pay for healthcare services and inadequate support for good nutrition have been put forth as obstacles to a healthier USVI community for years and the outcome has been a population struggling to live with maintaining a healthy status (Kaiser Foundation, 2017).

In the years prior to 2017, the US Virgin Islands faced increasing economic stress and reduction in population. The community acknowledged in various ways, including health fairs and public exercise and nutrition programs, that the health challenges from non-communicable diseases were serious and needed attention, especially for an aging population. Plans to improve healthcare services and facilities were in progress. Segments of the population needed additional assistance to manage the high cost of food, medicine and housing.

Organizations, government departments and agencies, private businesses and educational institutions put disaster preparedness plans in place and acknowledged the inevitability of an annual hurricane season. The challenge of September 2017 was the historic passage and devastation across these small islands caused by two Category 5 hurricanes, two weeks apart. Despite assistance from the Federal Government, private organizations and citizens, it would take months to completely understand and begin to address the impacts of the hurricanes on

infrastructure, community systems, and lives of the people of the USVI. Understanding the impacts of these extraordinary experiences on the children and families in the USVI is a critical part of ensuring a more resilient future for the community. As stated earlier, this section of the community needs assessment, Objective 1, addresses many of the defining conditions associated with the USVI community prior to the 2017 hurricanes. The next four sections - Objectives 2 through 5 - provide findings related to the effects of the hurricane experience on the health, education, housing status and selected human services for children and families in the USVI.

Section II: Current Status of Health of Children and Families

This section of the report focuses on five major areas in an effort to capture findings related to the current status of the health of children and families in the Territory in the aftermath of Hurricanes Irma and Maria. First, a summary is provided of existing programs and services across the Territory. Following this, findings related to the psychological health of children and adults in the Territory are presented, based on primary data collected in both districts. The findings from the primary data collected are followed by summary findings of secondary data obtained from the two Federally Qualified Health Centers (FQHCs) in the Territory, Frederiksted Health Care, Inc. (FHC) on St. Croix and the St. Thomas East End Medical Center, Corporation, Inc., (STEEMCC) on the island of St. Thomas; the two hospitals, the Juan F. Luis Hospital and Medical Center (JFL) and the Schneider Regional Medical Center (SRMC); and the Virgin Islands Department of Health (VIDOH).

Following the presentation of the health status of children and families across the Territory is a section on resources available to provide health services. The section addressing the current status of the health of children and families across the Territory in the aftermath of Hurricanes Irma and Maria ends with a discussion on existing gaps relative to health services and priority programmatic and service delivery issues related to health and health care services.

Programs and Services Available

The programs and services available to meet the health care needs of children and families one year after the passing of Hurricanes Irma and Maria continue to reflect the negative impact of the hurricanes, particularly on the local department of health and the two hospitals.

Virgin Islands Department of Health

The VIDOH operates health clinics on St. Croix, St. Thomas and St. John. Clients are seen by appointment and walk-ins. One year after the hurricanes, capacity to deliver services to children and families remains limited and below pre-hurricane levels.

Infrastructure

On the island of St. Croix, the VIDOH administrative offices and clinics are located at the Charles Harwood Memorial Complex (CHMC) in Estate Richmond, near the town of Christiansted. The main building that housed the community health clinics, as well as all VIDOH programs and services, besides behavioral health and substance abuse, sustained major wind and

water damage because of the hurricanes and remains unfit for occupancy. As a result, staff of programs and clinics previously housed in the main building of the complex had to re-locate to a smaller space that previously housed the Division of Behavioral Health, Alcoholism and Drug Dependency Services (DBHADDS) and programs, resulting in cramped conditions that may hold some implications for client privacy. Employees on St. Croix had to be evacuated from the building due to continuing deterioration of the facility; yet, they continue to provide limited services from a mobile van as well as an emergency tent, both in the facility's parking lot. Additional programs had to relocate to various sites around the island (Personal communication). Emergency Medical Services (EMS) previously based at JFL are now based at CHMC.

On the island of St. Thomas, VIDOH provides services out of three main sites with some offices located at two additional locations: the administrative offices, Community Health Clinic and Behavioral Health and Alcoholism services, as well as emergency medical services, were based at the Schneider Regional Medical Center in Charlotte Amalie; the Maternal and Child Health (MCH) and Children with Special Health Care Needs (CSHCN)operated out of the ElainCo building in Nisky; and additional programs were based at the Knud Hansen Memorial Complex, Hospital Ground; administrative offices were also located at Barbel Plaza and Kongens Gade. While the clinics at the SRMC and the ElainCo building suffered minimal disruption, there was some damage to the other sites. Some service delivery sites damaged during the storms remained off-line, resulting in relocation to cramped spaces, similar to the situation on St. Croix. Modular units planned as temporary solutions to the damaged DOH facilities will be brought on line in 2019 (VIDOH 32nd Legislature Budget Testimony, FY2019; June 20, 2018).

The Morris F. deCastro Clinic in Cruz Bay, St. John sustained minimal damage, unlike the Myrah Keating Smith Community Health Center (MKS), which was rendered unfit for use due to severe wind and water damage (VIDOH 32nd Legislature Budget Testimony, FY2019; June 20, 2018). As a result, staff from the MKS had to function out of the limited space in the Cruz Bay clinic, a situation which persisted one year after the hurricanes.

Key Programs and Services

While all services and programs provided by the VIDOH are important components of a public health care system serving the entire population, from pre-natal to the elderly, several key

programs and services highlighted below play a major role in the health of children and families following natural disasters such as those experienced in September 2107.

Community Health Clinics

The community health clinics on St. Croix, St. Thomas and St. John are located at the CHMC, SRMC and Morris F. deCastro Clinic, respectively. On St. Croix, services are generally available on week days between the hours of 8:00 am - 5:00 pm. In St. Thomas, the Community Health Clinic at SRMC generally operates on week days from 7:30 am - 5:00 pm. The Morris F. DeCastro Clinic located in Cruz Bay, St. John operates M-F, 8:00 am - 5:00 pm.

However, on St. Croix, since the hurricanes, programs remain displaced. Service hours have been impacted by the damage to the facility, such that there have been several days when services have had to be suspended. Community Health and MCH operate out of the tents and medical van at CHMC. Hours of operation vary for Community Health but are typically 9:00 a.m. to 3:00 p.m. Food Handler's is temporarily located out of the Mental Health Annex and is usually open from 9:00 a.m-3:00 p.m. but has had to work on a modified schedule of 9:00 a.m. to 12:00 noon due to difficulties with the building.

Services available through the community health clinics include: cardiac clinic, women’s health, Women’s Infants and Children (WIC), medical clinic, wound care, non-high risk prenatal care, and Food Handlers. Services at Morris F. DeCastro include cardiac clinic, mental health and substance abuse, immunization, women’s health, WIC and Emergency Medical Services (EMS).

Maternal and Child Health & Children with Special Health Care Needs

The VIDOH is designated as the agency in the Virgin Islands for administering the MCH & CSHCN pursuant to Title 19, Chapter 7, §151 of the Virgin Islands Code (VIC). The MCH & CSHCN Program offers preventive and primary health care services for mothers, infants, children and adolescents, to include: prenatal and high-risk prenatal care clinics, postpartum care, well child clinic, immunization, high risk infant and pediatric clinics, care coordination and access to pediatric sub-specialty care for children and adolescents with special health care needs. Other services provided by skilled public health nurses include assessments, anticipatory guidance, parental counseling, education regarding growth and developmental milestones, proper nutrition practices, service/care coordination, and home visiting services to high risk children and their families.

Residents of the Territory are not eligible for the Supplemental Security Income (SSI) Program which provides assistive devices, therapeutic or rehabilitative services beyond acute care to children under the age of 16 with disabilities. The Medical Assistance Program (MAP) does not provide these services, due to the Medicaid Cap imposed by Congress. These services are provided on a limited, case by case basis by the Title V Program, when required.

Public health nurses assess the developmental needs of infants and toddlers who are considered *at-risk* due to psychosocial or biological risk factors. The entry point is a referral to the early intervention services program Infants and Toddlers' (Part C of IDEA) service coordinator in order to identify newborns as part of the Infants and Toddlers (Part C) Child-Find system. Nursery referrals are received on all high-risk newborns to the MCH & CSHCN clinics in both districts. Infants without any high-risk factors are referred to well child clinics. High-risk referral patients are screened to receive a home visit, and family assessment.

Prenatal services in MCH include: prenatal intake for new patients in which the history, physical, risk assessment, PAP smear, and laboratory referrals are completed, routine follow-up and counseling, teen prenatal, and perinatal/high risk clinic for the management of obstetrically or medically complex cases. Patients with emergencies are referred to the Obstetrical Unit at the hospital for evaluation and treatment. In-patient deliveries are performed by the hospital's Obstetricians and Midwives. Diagnostic services, such as ultrasounds and laboratory services, are provided for MCH clients by the hospitals or private facilities. Patients are referred to the WIC Special Nutrition Program for dietary assessments, counseling, and follow-up.

Through a series of outreach activities, the MCH & CSHCN Program identifies children who have health problems requiring intervention, are diagnosed with disabling, or chronic medical conditions, or are at risk. Sources of *child find* include referrals from the Queen Louise Home for Children, Early Childhood Education, Head Start, and private providers. Pediatricians, nurses, social workers, a Physical Therapist Assistant, an audiologist, and speech pathologist are the major providers of direct services. The Infants and Toddlers Program employs service coordinators on each island.

Hospital newborns with biological, established, or environmental risks are referred to the Infant or Pediatric High-Risk clinics based on established criteria. At one year of age, infants are reassessed and transition to the Well Child Clinic or the Pediatric High-Risk Clinic. The Infant and Pediatric High-Risk Clinics offer comprehensive, coordinated, family-centered services. Screening

is done for developmental delays using the Ages and Stages (ASQ) Screening Tool. Social Workers complete an assessment of the family and home environment, existing support structures, and financial status. A diagnostic assessment and therapeutic plan is developed by the clinical staff. Through an appointment system, children with special health care needs are referred to the sub-specialty clinics by the primary care physician.

Additional services and activities under the MCH umbrella include: The Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program; Early Hearing Detection and Intervention (EHDI); HRSA-funded Zika MCH Services; and Project LAUNCH (Linking Actions for Unmet Needs in Children's Health), a system that addresses the needs of children ages 0–8 and allows them to thrive in safe, supportive environments and enter school with the social, emotional, cognitive, and physical skills they need to succeed. The MCH & CSHCN Program works collaboratively with several key program within the VIDOH.

Infant and Toddlers Program

The Early Intervention Program for Infants and Toddlers with Disabilities (also known as Part C of the Individuals with Disabilities Education Act (IDEA)) was established under PL 99-457, and most recently reauthorized under IDEA 2004, PL 108-446. The Infants and Toddlers Program supplements the MCH & CSHCN Program, when public or private resources are otherwise unavailable, providing early intervention services such as: service coordination, physical and occupational therapy, speech and language pathology, vision therapy, special instruction, and family training.

Early intervention services are rendered in Part C of IDEA in the eligible child's natural environment and are provided during the early weekday evenings and on Saturdays, in addition to the work week times. Representatives from the program periodically visit with private pediatricians in their offices thanking them for referrals and presenting a clear and concise message of the benefits.

Women, Infants and Children (WIC) Program

The VI WIC Program is administered by the United States Department of Agriculture, Food and Nutrition Service, through Section 17 of Child Nutrition Act of 1966, as amended and is 100% federally funded. Persons eligible for the program include pregnant, breastfeeding and postpartum women, infants and children up to age five who are determined by a health

professional to be at nutritional risk and meet income criteria. WIC promotes breastfeeding as the optimal infant feeding choice unless contraindicated. The program provides nutrition education, supplemental foods, food demonstrations on ways to use WIC foods, and referrals to other health and social services agencies. Nutritionists provide high-risk nutrition education contacts to WIC participants. WIC nutrition services are provided at no cost to the participant as defined in federal regulations [246.11(a) (1)]. VIDOH launched *eWIC* in May 2018, which allows recipients to receive benefits electronically.

Immunization

Immunization services for children and adults are currently integrated into the various public health clinics, such as the MCH Clinic (children/adolescents, 0-18) and the Community Health Clinics (adolescents/adults, 19+).

Mental Health

The Division of Behavioral Health, Alcoholism and Drug Dependency Services (DBHADDS) Program continues to offer services at the CHMC on St. Croix, though the space is shared with other programs. On St. Thomas, services are co-located with the Community Health Clinic at SRMC. The Division manages several grants funding prevention programs and services, primarily through the Substance Abuse and Mental Health Services Administration (SAMHSA).

Laboratory Services

A state-of-the art modular lab at the Charles Harwood Complex currently has the capability of rapid testing and diagnosis for infectious disease such as TB, the flu, gastrointestinal illness due to food poisoning, bacteria and viruses, and testing for HIV/STD's. The VIDOH has shared that the BSL2/BSL3 facility that was commissioned in October 2018 is focused on public health infectious diseases and will become a Clinical Laboratory Improvement Amendments (CLIA) laboratory in 2019. The lab operates 5 days a week, 9:00 am-5:00 pm.

Emergency Medical Services/Community Para-medicine Program

The Emergency Medical Services (EMS) unit within the VIDOH operates ambulance service on all three islands. The department operates 21 ambulances Territory-wide (10 on St. Croix, 8 on St. Thomas and 3 on St. John) though staffing remains a challenge. Training and certification of Emergency Medical Technicians is an ongoing service provided by the VIDOH EMS unit. The Community Para-medicine or Integrated Mobile Health Care program launched in January 2018 on the island of St. Croix, staffed by EMT's (emergency medical technicians) and nurses, provides mobile clinic services primarily to those unable to get to the clinic for care. Services provided to the community through this program include: primary care; post-discharge follow-up care; integration within local public health activities; and providing education and health promotion programs. By mid-June 2018, the program had served over 1000 clients (VIDOH 32nd Legislature Budget Testimony, FY2019; June 20, 2018).

Frederiksted Health Care, Inc.

Frederiksted Health Care (FHC) Inc., a Federally Qualified Health Center (FQHC) operates five sites on the island of St. Croix. Three sites offer comprehensive primary care services: Ingeborg Nesbitt Clinic, the first service site, on Strand Street, Frederiksted; North Shore site in La Grande Princesse, Christiansted; and one mid-island at Sion Farm Shopping Center. One satellite clinic is based at the St. Croix Educational Complex, a public high school; the fifth site offers dental care only and is located in Golden Rock, close to the town of Christiansted. FHC offers extended hours to 7:00 pm on Monday (Northshore), Wednesday (Northshore, Frederiksted), Thursday (Northshore) and Friday (Sion Farm, Frederiksted) and operates from 8:00 am - 5:00 pm on the non-extended days. The Frederiksted site operates from 8:00 am - 2:00 pm on Saturdays. To respond to the health care needs of the population following Hurricane Maria, FHC established extended hours on Friday as well as Saturday hours. Those extended hours have continued due to client demand for services (FHC CEO, FY2019 Budget Hearing Testimony; June 2018).

Services provided at the primary care clinics include medical, behavioral health and dental care, and serves all ages, from prenatal to the elderly. The clinic staff include pediatricians, family practitioners, physician assistants, nurses and support personnel. The dental clinic, of extreme importance to the Medicaid population in St. Croix, who have limited access to providers who accept Medicaid, has a waiting list of 4000 (KI, FHC CEO, 11/2018). FHC also serves as a referral provider for needed services that are outside of the scope of primary care (KI, FHC Medical

Director, 11/2018). Services are provided on a sliding-fee scale, for patients who are under-insured or un-insured. The center also administers the 340B program which subsidizes purchase of prescription medication for patients of limited financial means.

St. Thomas East End Medical Center, Inc.

St. Thomas East End Medical Center Corporation, Inc. (STEEMCC), a Federally Qualified Health Center (FQHC), provides comprehensive primary health services on the Eastern end of the island of St. Thomas, located in the Tutu Park Mall. Prior to Hurricanes Irma and Maria, STEEMCC operated Monday through Friday from 7:30 am – 7:00 pm four days a week, and 7:30 am to 5:30 pm on Fridays, with Saturday hours offered, by appointment only. Shortly after the hurricanes, because of impact of the hurricanes on the staff and on the public infrastructure, the operating hours were truncated to accommodate curfews. After the lifting of the curfews, STEEMCC adopted shorter operating hours, specifically 8:30 am to 4:00 pm for service delivery. It is anticipated that regular, extended hours will resume in January 2019 (KI, STEEMCC CEO, 12/2018).

STEEMCC provides primary health services in the areas of behavioral health, family planning, women's health, men's health, obstetrics, pediatrics, senior care, adult and pediatric dental care, and nutrition services. Screenings are also provided for blood pressure, cholesterol, glucose, TB, and cancer, specifically, breast, cervical, and prostate. Additionally, STEEMCC offers free HIV testing and a sliding scale discount for qualified clients who are under or uninsured. The health center operates with a staff of 15 providers, including four dentists, one psychiatrist and one psychologist. A dental wing was added to STEEMCC in April 2017, based on findings of the comprehensive community health needs assessment completed by UVICERC in 2016 (Smith, M., FY2019 Budget Hearing, August 2018).

Gov. Juan F. Luis Hospital and Medical Center

The Gov. Juan F. Luis Hospital and Medical Center (JFL) is composed of the Gov. Juan F. Luis Hospital, the only hospital on the island of St. Croix, and the Virgin Islands Cardiac Center. One year after the hurricanes, JFL continues to function at limited capacity due to hurricane-related damage to the third floor of the hospital and other critical units, to include the dialysis unit. As a result, JFL had to relocate some inpatient services to the adjacent Cardiac Center. Plans to install and use modular units are in place, with a target date of January 2019 for full implementation.

JFL offers general inpatient and emergency care, behavioral assessment and outpatient diagnostic services (laboratory, radiology). The hospital pharmacy is fully operational. Specialty interventions for which resources are not currently available are transferred off-island for care. Dialysis care, off-line due to damage since the storms, resumed as of December 1, 2018. The Interventional Cardiology services are no longer available and inpatient capacity has been reduced by approximately 50%.

Schneider Regional Medical Center

The Schneider Regional Medical Center (SRMC) is composed of three entities – the Roy Lester Schneider Hospital (RLS) on St. Thomas, the Myrah Keating Smith Community Health Center (MKS) on St. John, and the Charlotte Kimelman Cancer Institute (CKCI) on St. Thomas. In his FY2019 budget hearing testimony before the 32nd Legislature of the Virgin Islands, SMRC CEO Dr. Bernard Wheatley indicated that SRMC has stabilized its facilities since the disruptions of Hurricanes Irma and Maria and the STT-STJ communities have been receiving safe, quality patient care (Wheatley, B., August 9, 2018). More specifically, in the aftermath of Hurricanes Irma and Maria, notwithstanding structural damage and the departure of some of the clinical and non-clinical staff, Roy Lester Schneider Hospital (RLS) currently provides the following medical care services to the community: intensive care (through the Intensive Care Unit – ICU); neonatal intensive care (through the Neonatal Intensive Care Unit – NICU); MCH, behavioral health services (through the Behavioral Health Unit); EMS, cardiology, hemodialysis, medical/surgical services, nutrition services, respiratory services, radiology services, pharmacy, laboratory services, OR/Endocrinology, Physical Therapy (PT)/Speech Therapy, patient prosthetics, and other ancillary services (Wheatley, B., SRMC FY2019 Budget Hearing Testimony, August 9, 2018).

Due to extensive damage to MKS, services had to be relocated to the DeCastro Clinic in Cruz Bay. As reported by the SRMC CEO in his FY2019 budget hearing testimony, staff of MKS relocated temporarily to the DeCastro clinic (VIDOH) in Cruz Bay St. John, where they continue to provide Urgent Care Services, , Radiology, Pharmacy, laboratory, and other general outpatient medical service (Wheatley, B, August 9, 2018). As of the date of this testimony, the MKS facility remained closed, but was projected to reopen in early 2019.

Wheatley further testified that the CKCI remains closed, which has significantly diminished the radiation and medical oncology services that are available and that can be provided by SRMC in the aftermath of Hurricanes Irma and Maria. Specifically, the leadership of SRMC continues to

explore options relative to the resumption of radiation oncology services, specifically radiation therapy. Yet, to address the ongoing medical oncology needs of the community, SRMC has been providing limited medical oncology services at RLS.

Community-Based Organizations

The health care system in the USVI includes a network of community-based organizations serving men, women and children. One of these organizations from which the team requested secondary data was the Women's Coalition of St. Croix (WCSC). WCSC has provided services in the St. Croix District for over three decades and offers shelter and counseling for battered women who experience domestic violence. These women often have young children who also need sheltering and care while displaced.

Health Status of Children and Families

Primary data collection among children and adults, as well as secondary and administrative data requested from key agencies within the health care system were analyzed to better understand the health status of children and families one year after Hurricanes Irma and Maria. Primary data collection in both the youth and adult populations focused on behavioral health issues, given the extent to which this has been a focus in the literature addressing health issues in the aftermath of disruptions such as Hurricanes Irma and Maria (Prinstein et al., 1996; Morris, 2007; Madrid & Grant 2008; SAMHSA, 2018).

Health Status of Children and Youth

For data collection from students, surveys, along with an assent and administration protocol to be used by teachers were packaged by school, class, and teacher for distribution to participating schools. Quantitative data collection in the schools commenced in late September and ended in mid-November. Based on enrollment figures for public elementary school 4th through 6th graders – 2, 606, the response rate for public elementary students was 75%. For parochial and private schools, the response rate was 80% for CTSQ and 79 % for CPSS.

Elementary School Students: Demographics and CTSQ Results

As previously shared, a total of 34 schools with students enrolled in intermediate elementary grades (4th through 6th) participated in the study. Of these, 18 (9 in each district) were private and parochial schools and 16 (8 in each district) were public elementary schools (including one middle school on St. Thomas and one K-8 school on St. John) in the St. Croix and St. Thomas-St. John

Districts. Of the schools that participated, a total of 1,344 students attended private and parochial schools and 2,606 attended public schools. Tables 2.1A and 2.1B capture demographic information for the 4th – 6th graders who completed the CTSQ. As can be observed from Table 2.1A, more girls (52.7%) participated in the survey than boys and 5th grade had the largest number of participants (34.6%).

Table 2.1A. Demographic Data – Grade by Gender: CTSQ Survey Participants

Grade	Sex		All Students
	Female	Male	
4th	417	329	746
5th	407	409	816
6th	420	376	798
All Grades	**1244**	**1116**	**2360**

Note: Of the 2,411 student participants, sex and grade information was available for 2,360 (98%) respondents.

Table 2.1B shows that the majority of students who completed the CTSQ were between the ages of 9 and 11, inclusive. The 9, 10, and 11 year olds account for just over 2,000 participants or approximately 89% of the participants. An examination of Tables 2.1A and 2.1B reveals that some female students – 29 (2.3%) as well as some male students – 57 (5%) did not respond to the question regarding age.

Table 2.1B. Demographic Data – Age by Gender: CTSQ Survey Participants

Age	Sex		All Students
	Female	Male	
8	58	50	108
9	343	244	587
10	429	382	811
11	328	296	624
12	47	81	128
13	10	8	18
All Ages	**1215**	**1059**	**2276**

Note: Of the 2,411 student participants, sex and age information was available for 2,276 (94%) respondents.

Students' CTSQ scores ranged from 0 to 10, with "Yes" responses scored "1" and "No" responses scored "0". Responses were summed and for the sample, the mean score was 4.28 (SD=2.25), and the median score was 4.0. The reliability of the CTSQ for the study sample was calculated based on the number of cases for which valid data were available, specifically 2,202 of 2,411, or 91% of students who participated in the study. For the study sample, the reliability was $\alpha = 0.63$. Though somewhat lower that what is reported in the literature (*See p. 9*), the reliability is acceptable.

Descriptive statistics on students' responses to the 10 questions on the CTSQ are presented below. Table 2.2 captures students' responses to the 10 questions on the Child Trauma Screening Questionnaire. As previously shared, this instrument is designed to assess traumatic stress reactions in children following a potentially traumatic event and serves as a risk assessment tool to predict the likely onset of PTSD. Table 2.2 provides information on the number and percentage of affirmative responses to each of the statements on the 10-item instrument. Additionally, responses for males and females are also provided. The last column provides information on whether the differences in male and female responses were statistically significant.

Table 2.2. Student Affirmative Responses to CTSQ Questions by Gender

Questions	Affirmative Responses			Statistical Significance
	All Students	Female	Male	
1. Do you have lots of thoughts or memories about the hurricanes that you don't want to have?	1248 (53)	702 (57)	546 (50)	**
2. Do you have bad dreams about the hurricanes?	501 (21)	301 (24)	200 (18)	***
3. Do you feel or act as if the hurricanes are about to happen again?	1227 (53)	697 (56)	530 (48)	***
4. Do you have bodily reactions (*such as a fast-beating heart, stomach churning, sweating and feeling dizzy*) when reminded of the hurricanes?	636 (27)	393 (32)	243 (22)	***
5. Do you have trouble falling asleep or staying asleep?	892 (38)	498 (40)	394 (36)	*
6. Do you feel grumpy or lose your temper?	782 (34)	420 (34)	362 (33)	ns
7. Do you feel upset by reminders of the hurricanes?	869 (37)	490 (40)	379 (36)	**
8. Do you have a hard time paying attention?	624 (27)	305 (25)	319 (29)	**
9. Are you on the "look-out" for possible dangerous things that might happen to yourself and others?	1718 (74)	940 (77)	778 (72)	**
10. When things happened by surprise or all of a sudden, does it make you "jump"?	1449 (63)	854 (70)	595 (54)	***

****p<.001; **p<.01; *p<.05*

As can be noted in Table 2.2, there was only one item for which there was not a statistically significant difference in the responses of the female and male students. For eight of the 10 items, significantly more female students than male students provided affirmative responses to the items. Given the purpose of the CTSQ and the responses captured in Table 2.2, ***there is evidence that elementary aged students across the Territory may have future issues with PTSD as a result of***

experiencing Hurricane Irma and/or Hurricane Maria and that girls may have more challenges with future PTSD than boys (Emphasis added).

Secondary School Students: Demographics and CPSS Results

The Child PTSD Screening Scale (CPSS) is a 24-item survey designed for use with children to screen for the presence of post-traumatic stress symptoms (*See p. 9.*). The first 17 items are based on the DSM-IV-TR criteria for PTSD. The tool is organized into two parts: Part 1 is made up of 17 items asking youth to respond to a list of the type of psychosocial problems that children sometimes have after experiencing an upsetting event (in this case, the hurricanes). Youth are asked to read each item carefully and fill in the circle (0-3) that best describes how often that problem has bothered them during the past two weeks (Foa et al., 2001). The response is on a 4-point Likert-type scale, from '0' (not at all) to '3' (≥5 times a week or almost always). There are three sub-scales within Part 1: re-experiencing (1-5); avoidance (6-12) and hyperarousal (13-17). Part 2 consists of 7 questions and is considered a measure of functional impairment; the youth response choices are 'yes' or 'no' (*Appendix V*). The reliability coefficients for all scales ranged from α =0.71 to α =0.89, showing good to excellent reliability with this study population.

The CPSS survey was administered to all students enrolled in grades 7-12 in the Territory's private and parochial schools that agreed to participate in the study. The final sample based on completed surveys collected from the schools, and excluding any without parental consent and youth assent, was six hundred and thirty-three (633). Participants ranged in age from 11-19, with a mean age of 13.6 (SD=1.9) years (Figure 2.1A). Overall, there were more girls (52%) than boys and more 7th- 8th graders (339) than 9th - 12th grade students (271); 23 did not respond to the question on grade (Figure 2.1B).

Figure 2.1A. Secondary Student Participants by Age and Gender

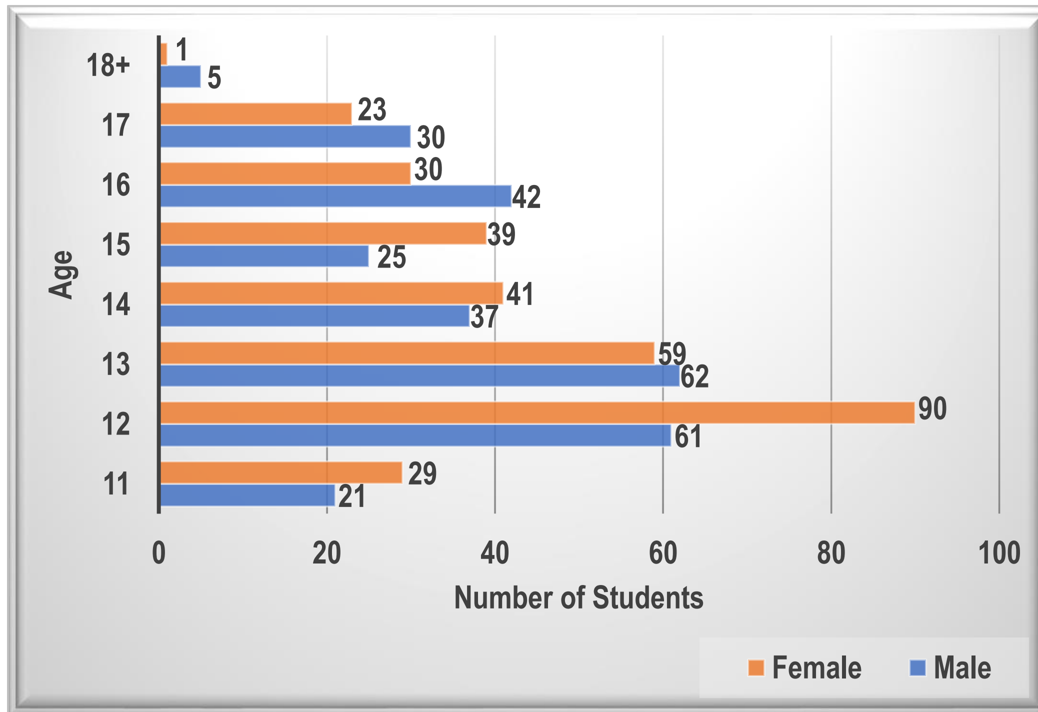
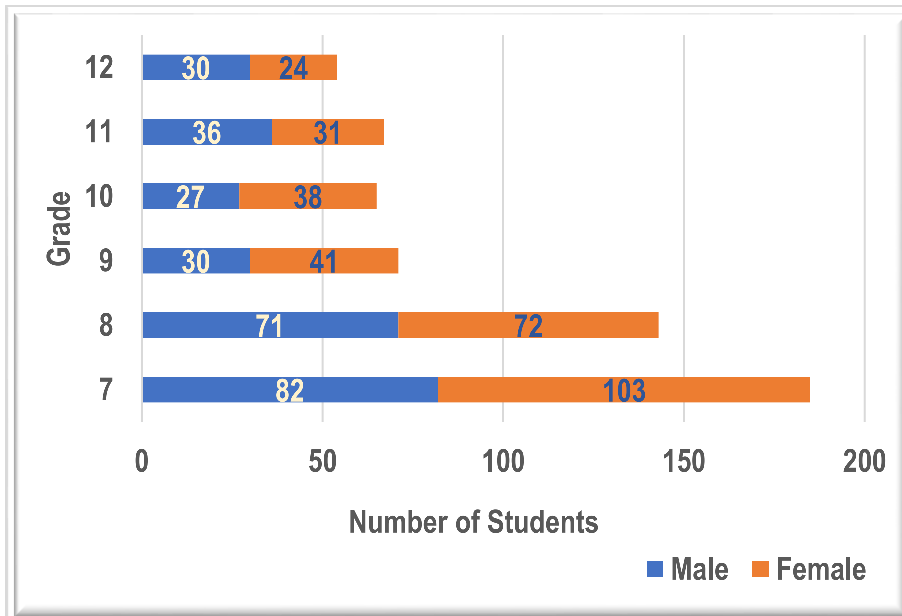


Figure 2.1B. Secondary Student Participants by Grade and Gender



Note: A total of 585 students responded to this question

The responses to the 17 questions of part 1 were summed to obtain a total score for each participant. A student achieving a score of ≥12 would be considered as being symptomatic for PTSD. ***According to findings of this study, approximately 42.5% of the secondary students with enough***

data to compute a total score (n=501) may be at risk for PTSD (Emphasis added). While the findings cannot be attributed solely to the hurricanes, the survey was grounded in the experiences related to the storms. A chi-square test for independence indicated a moderate but significant association between grade and possible PTSD risk, Chi-square (*df*=5, n=488) = 12.3; *p*=.03; phi=.158). The students in grades 7 and 8 were more likely than those in grades 9-12 to be at risk for PTSD. These findings align with findings of an earlier study looking at experiences associated with negative psychological outcomes for USVI children following Hurricanes Irma and Maria (Pittman, 2018).

Further analysis to explore any differences between boys and girls reveals that there was a statistically significant difference between boys and girls for the following:

- *Feeling upset when you think about it or hear about the hurricanes (for example, feeling scared, angry, sad, guilty, etc*); ($p<0.01$)
- *Not feeling close to people around you*; ($p<.05$)
- *Being jumpy or easily startled (for example, when someone walks up behind you)*. ($p<.01$)

For all these questions, girls were more likely to respond at least '2-4 times per week/half the time' to '≥5 times per week or almost always' than boys and the difference was statistically significant. Interestingly, there was no statistically significant difference between girls and boys for all 7 of the items in the functional impairment sub-scale (*See Appendix V for CPSS subscales responses by gender.*).

Health Status of Adults

Demographics and Survey Findings

Four hundred and seventy-three (473) adults were recruited at the Frederiksted Health Care Inc. (FHC) and St. Thomas East End Medical Center Corporation (STEEMCC) community clinic sites on the islands of St. Croix and St. Thomas, respectively. As stated in the methods section of this report, these surveys attempted to assess the psychological health of the adult population one year after Hurricanes Irma and Maria.

Of the 472 surveys analyzed (one survey was excluded due to insufficient responses), the majority of respondents were in the 40-64 age group (45%), while 32% were aged 25-39. As expected, the vast majority self-identified as Black (88.6%) while 21% were Hispanic. Yet, only 21 (4.4%) of respondents completed the Spanish surveys. Just over half (approximately 52%) indicated that they had never been married, while 30% identified as being married, which includes those who were widowed. Educational status revealed that 17% of respondents had less than a high school

diploma, 41% identified as high school graduates and 22% reported being a college graduate (both undergraduate and graduate/professional).

Fifty-four percent (54%) of respondents reported being in a household with no children, while 26% reported having 2 or more children in the household. Of the households with children, 21% reported having children relocate out of the Territory following the hurricanes.

With respect to employment, 48% of respondents (225) were employed for wages prior to Hurricanes Irma and Maria. There was a slight decline in the number of respondents who reported being employed for wages after the hurricanes, at 45% (213 persons). The change in those reporting being self-employed was larger, from and 9.1% (43) prior to the hurricanes to 6.1 % or 29 persons post-Hurricanes Irma and Maria.

When asked about living arrangements pre and post Hurricanes Irma and Maria, those surveyed revealed a shift in the number of persons living with relatives and friends (Table 2.3) as well as those living in public housing. The percentage living with relatives and friends increased post-Hurricanes Irma and Maria, while those living in public housing decreased. The number reporting as homeless remained at less than 5, both before and after the hurricanes.

Table 2.3. Living arrangement pre and post Hurricanes Irma and Maria

Living Arrangements	Pre-Hurricanes Irma and Maria		Post-Hurricanes Irma and Maria	
	(%)	(n)	(%)	(n)
Own Home	28.4	(134)	26.9	(127)
Public Housing	15.0	(71)	12.7	(60)
Renting	34.7	(164)	33.9	(160)
Living with relatives	17.4	(82)	19.5	(92)
Living with friends	1.7	(8)	4.0	(19)
Other	2.8	(13)	3.0	(14)

Survey Findings

CESD-10: The CESD-10 assesses symptoms of depression. In studies conducted using the CESD-10, the cut-off score to identify individuals as having major depressive symptoms is a score greater than or equal to 10. For the sample of adults who participated in this study, valid scores for the CESD-10 were available for 468 participants. An overall score was calculated by adding participants' responses to each of the ten items, with items 5 and 8 reverse-coded prior to the calculation of the overall scores. Scores ranged from a low of 0 to 29, with a mean of 10.88 (sd = 5.85) and a median of 11.

Participants' responses suggest that depressive symptoms exist in the community in the aftermath of the hurricanes. ***Of the study participants, 282 or 60.2% had an overall CESD-10 score of 10 or higher, which suggests that for the study participants, 6 in 10 could have depressive symptoms*** (Emphasis added)**.** If a cut-off score greater than or equal to 11 were used, a total of 235 or 50% of respondents would be identified as having major depressive symptoms. For this study, the reliability of the CESD-10 for the 468 participants whose responses were analyzed was α=0.79, which is acceptable and within the range of reported reliability for the CESD-10 in other studies (Eaton, et al., 2004; Baron, Davis, & Lund, 2017).

Perceived Stress Scale (PSS): This instrument is used to assess stress and helps researchers understand how different situations, in this case, the hurricanes, affect an individual's feelings and perceived stress. ***Findings reveal that 71.4% experience moderate stress and 5.5% experience high stress*** (Emphasis added). The reliability of the PSS for the 472 participants whose responses were analyzed was α=0.75, which is acceptable though slightly below the range of reported reliability for the PSS in other studies (Foa, Johnson, Feeny, & Treadwell, 2001; Wevodau, 2016).

Post-traumatic Stress Disorder Checklist (PCL): This checklist attempts to estimate symptoms of post-traumatic stress disorder following a significant traumatic experience such as Hurricanes Irma and Maria and was used following the impact of Hurricane Andrew in the state of Florida. ***Analysis of survey responses reveal possible levels of PTSD symptoms at approximately 57.5% in the adult population surveyed, based on a suggested cut-point of a score of 30 points, with possible scores in the range of 17-85*** (Emphasis added). The PCL had excellent reliability of α=0.94.

Brief COPE: The battery of 28 items on this measure assesses several different dimensions of coping: self-distraction (1 and 19); active coping (2 and 7); denial (3 and 8), substance use (4 and 11); use of emotional support (5 and 15); use of instrumental support (10 and 23); behavioral disengagement (6 and 16); venting (9 and 21); positive reframing (12 and 17); planning (14 and 25); humor (18 and 28); acceptance (20 and 24); religion (22 and 27); and self-blame (13 and 26). ***For this study, 42.9% reported 'praying or meditating a lot' and 35.2% reported 'trying to find comfort in their religion or spiritual beliefs a lot of the time'*** (Emphasis added). Additionally, participants' responses suggest that self-distraction, active coping, use of emotional support, use of instrumental support, positive reframing, humor, and acceptance were all characteristic coping mechanisms. At least one in three, and sometimes as many as two out of three, selected 'I've been doing this a medium amount' and 'I've been doing this a lot' when responding to the above-mentioned scale

items (Table 2.4). Overall, the reliability for the sub-scales of the Brief COPE was comparable to other studies and ranged from α=0.43 (self-distraction) to α=0.79 (substance use). It is interesting to note that the percentage responding 'I've been doing this a medium amount' and 'I've been doing this a lot' to the items on substance use was very low (1.9 to 3.6%).

Table 2.4. Percent responding 'I've been doing this a medium amount' and 'I've been doing this a lot' and Cronbach's α-select Brief COPE scales and items

Scale/Items: 'I've been.......'	'I have been doing this a medium amount' (%)	'I have been doing this a lot' (%)	Cronbach's alpha (α)
Self-distraction:			.43
(1). '... turning to work or other activities to take my mind off things.	17.4	24.6	
(19). '... doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	21.0	23.4	
Active Coping:			.68
(2). '... concentrating my efforts on doing something about the situation I'm in.	22.3	27.6	
(7). '... taking action to try to make the situation better.	18.7	34.6	
Use of emotional support:			.76
(5). '... getting emotional support from others.	15.1	14.2	
(15). '... getting comfort and understanding from someone.	15.5	19.3	
Use of instrumental support:			.67
(10). '... getting help and advice from other people.	16.5	14.9	
(23). '... trying to get advice or help from other people about what to do.	14.9	15.3	
Positive reframing:			.73
(12). '... trying to see it in a different light, to make it seem more positive.	16.8	23.8	
(17). '... looking for something good in what is happening.	18.5	29.7	
Planning:			.70
(14). '... trying to come up with a strategy about what to do.	20.0	23.8	
(25). '... thinking hard about what steps to take.	21.7	31.2	
Humor:			.68
(18). '... making jokes about it.	13.3	9.8	
(28). '... making fun of the situation	17.2	42.9	
Acceptance:			.76
(20). '... accepting the reality of the fact that it has happened.	19.5	42.5	
(24). '... learning to live with it.	19.7	43.7	
Religion:			.73
(22). '... trying to find comfort in my religion or spiritual beliefs.	13.0	35.2	
(27). '... praying or meditating.	17.2	42.9	

General Self-Efficacy Scale: This scale, as noted in the Methods section of this report, assess personal competence in dealing with a variety of stressful situations. For the 471 surveys with

complete information for the General Self-Efficacy Scale (GSES), scores ranged from 10 to 40, with a mean of 30.94 (sd = 6.71) and a median of 32. For the GSES, higher scores represent greater self-efficacy. Only 33% of respondents had scores below 30, suggesting that two of three participants felt that they were able to deal with the stressful situations that they have been facing in the aftermath of Hurricanes Irma and Maria. For the study sample, the instrument had excellent reliability, with a reliability coefficient of α=.91.

Brief Resilience Scale: As the name implies, this scale assesses resilience based on six items. Complete data for the Brief Resilience Scale (BRS) were available for 471 of 473 respondents. Scores on this six-item instrument ranged from 10 to 30, with a mean of 20.81 (sd = 4.16) and a median of 21. For the study participants, the instrument had fair reliability, with α=.63. Participants' responses and scores on the BRS suggest that the majority of study participants are resilient, with 58.4% having a score of 20 or higher on the BRS. Essentially, the BRS assesses individuals' ability to bounce back from stressful situations (Smith, et al., 2008). Given the reality of climate change and the likelihood of future disruptions based on hurricanes, having information on residents' ability to bounce back from the stresses associated with these events is critical in order to provide the public health support needed in the community. Notwithstanding the percentage with scores suggesting that the majority of persons completing the survey battery have the capacity to bounce back from the stressors of Hurricanes Irma and Maria, there is still a large proportion of the population who are in need of assistance with getting to the place of being able to "bounce back" from the effects of Hurricane Irma and/or Hurricane Maria.

Emotion Regulation Questionnaire: This questionnaire was the last one that survey participants completed. The questionnaire focuses on an individual's emotional life and poses questions about how respondents control and manage their emotions. The Emotion Regulation Questionnaire (ERQ) has two scales – the Reappraisal Scale and the Expressive Suppression Scale. The ERQ Reappraisal Scale (ERQ-RS) comprises six of the 10 questions. Complete data were available for 471 of the 473 study participants. Scores ranged from 6 to 42, with a mean of 31.84 (sd = 7.32) and a median of 33. The ERQ-RS has good reliability of α=.83. For the ERQ Suppression Scale (ERQ-SS), scores ranged from 4 to 28, with a mean of 17.06 (sd = 5.56) and a median of 17. The reliability for this shorter scale for the study sample was acceptable at α=.63. Based on the literature (Gross& John, 2003), regular use of cognitive reappraisal to decrease or reduce negative emotions is linked to higher levels of well-being to factors such as life satisfaction and lower levels of

depression. On the other hand, frequent use of expressive suppression – suppression of emotions could lead to distress and have negative effects on well-being. Though there are no cut-off scores for the two scales, the higher the score the greater the use of the emotion regulation strategy.

Secondary Data

Summary findings of secondary data obtained from VIDOH, the two FQHCs in the Territory, FHC on St. Croix and STEEMCC on the island of St. Thomas; and the two hospitals, JFL and SRMC are presented in this section of the report. These findings reveal a health care system still in recovery mode one year after the historic hurricanes devastated the health system infrastructure of the USVI.

Virgin Islands Department of Health

Though the research team requested morbidity and mortality data from the V.I. Department of Health, minimal data were received, so much of the secondary data presented in this section is either dated information retrieved from online sources or estimates from the Central Intelligence Agency World Fact Book (2018).

Infant Mortality Rate: The Infant Mortality Rate has declined from a high of 9.64/1,000 live births in 2000 to an estimated 7.7/1,000 live births in 2018, following a low of 6.5/1,000 live births in 2016 and an upward shift to 7.9/1,000 live births in 2017 (Central Intelligence Agency, 2018). Some fluctuation is expected due to the relatively small numbers.

Mortality (2017, 2018): The Life Expectancy at birth is 79.5 years, with females expected to live almost three years longer than males born in the same year (83 vs 79.5 years) and the death rate is estimated at 8.1 deaths/1000 (Central Intelligence Agency, 2018). Limited mortality information was provided by the Bureau of Health Statistics for 2018. Figures 2.2A, 2.2B, and 2.2C present mortality data for January – September 2018 for the St. Thomas-St. John District only. Figure 2.2A captures data for all deaths, including one infant death. Figure 2.2A represents the distribution of deaths for all ages and both sexes and shows that there were only two deaths to persons under 25 in 2018. For the general population, 47% of deaths were persons 65 or older and 29% of deaths were persons 80 older. A perusal of Figure 2.2B reveals that of the 259 deaths in the St. Thomas-St. John District in 2018, only 98 or 38% were female. Of these, 49% were 80 or older. For men, 43% of deaths were men between 65 and 79 years of age, and only 17% 80 or older at the

time of death. This points to males dying younger than females and females living longer (Figure 2.2C).

Figure 2.2.A. Deaths in the St. Thomas-St. John District by Age: January – September 2018

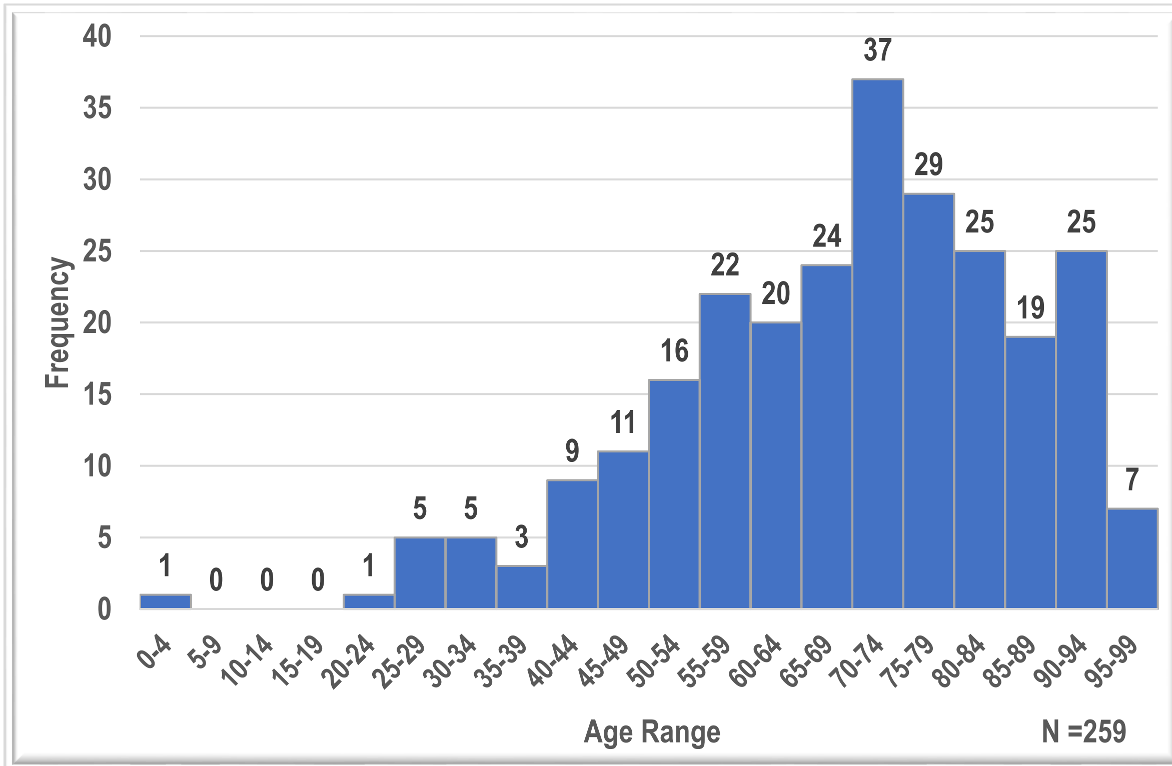


Figure 2.2.B. Female Deaths in the St. Thomas-St. John District by Age: January – September 2018

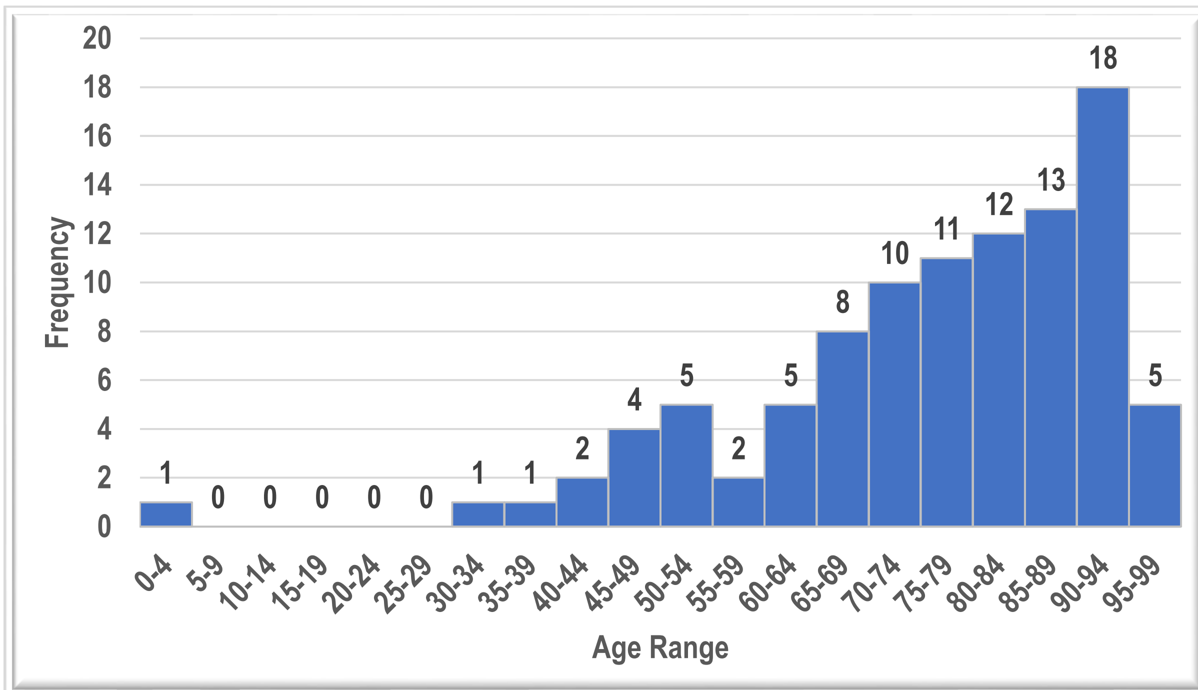
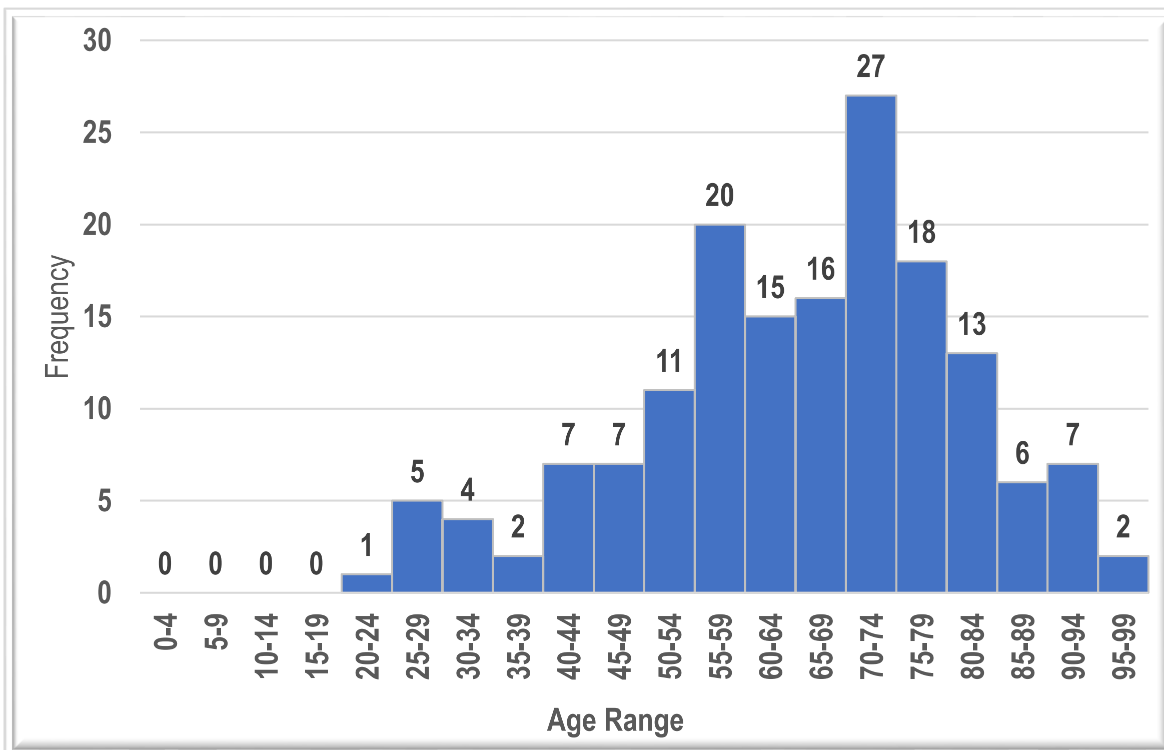


Figure 2.2.C. Male Deaths in the St. Thomas-St. John District by Age: January – September 2018



Birth/Fertility rates: According to the World Fact Book (2016-2017), the birth rate for the USVI was estimated at 12.5 births/1,000 and fertility rate at 2.06 children/woman. The research team received limited natality data from the VIDOH, with data for the St. Thomas-St. John District only, and with no demographic information such as sex, race or ethnicity associated with the births. Table 2.5 captures the trend of a decrease in the births in the Territory, using the STTJ District numbers as a proxy. The lower numbers of births in the last quarter of 2017 is likely indicative of the reality that many pregnant women left the Territory after the hurricanes because the health care facilities in the Territory had been compromised. This reality was shared by leadership at the FQHC on St. Croix, who shared that many prenatal clients did leave the Territory after the storms (KI, CEO, FHC, 11/2018; KI, MD, FHC, 11/2018).

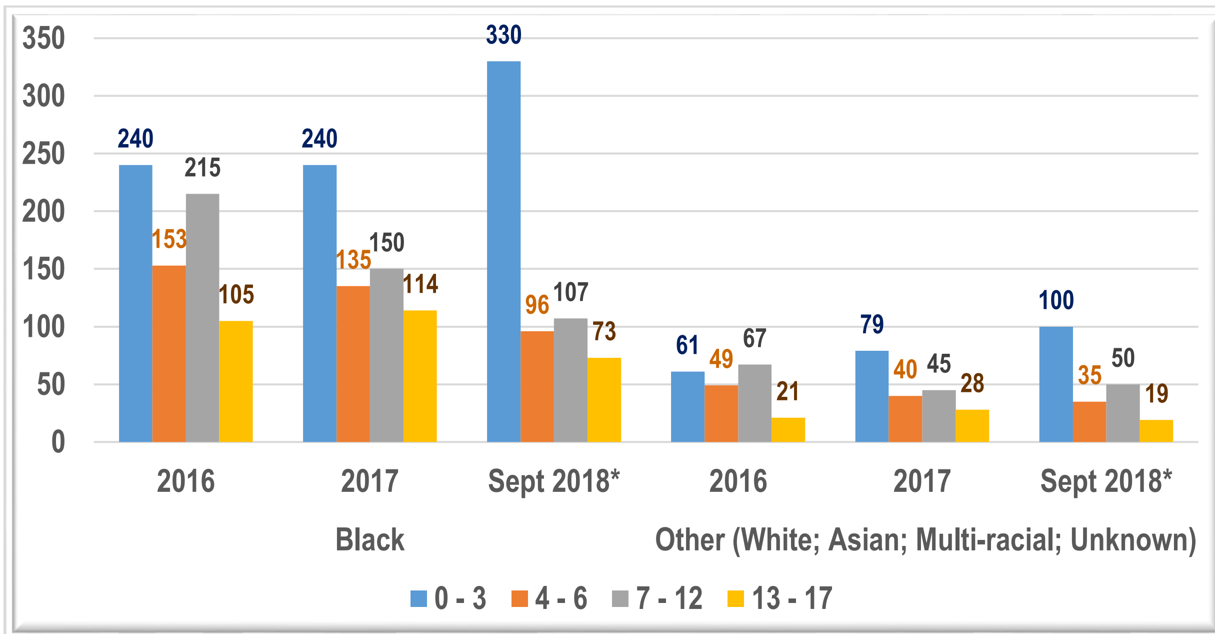
Table 2.5. St. Thomas-St. John Births by Month: 2015 - 2018

	2015	2016	2017	2018
January	68	64	53	40
February	40	45	49	33
March	55	69	48	37
April	57	43	47	38
May	54	47	45	44
June	50	48	40	53
July	60	47	58	47
August	63	59	59	56
September	75	70	43	46
October	60	60	30	64
November	64	64	38	50
December	79	62	43	62
TOTALS	**725**	**678**	**553**	**570**

Source: VIDOH, Office of Vital Statistics

Patient Visits

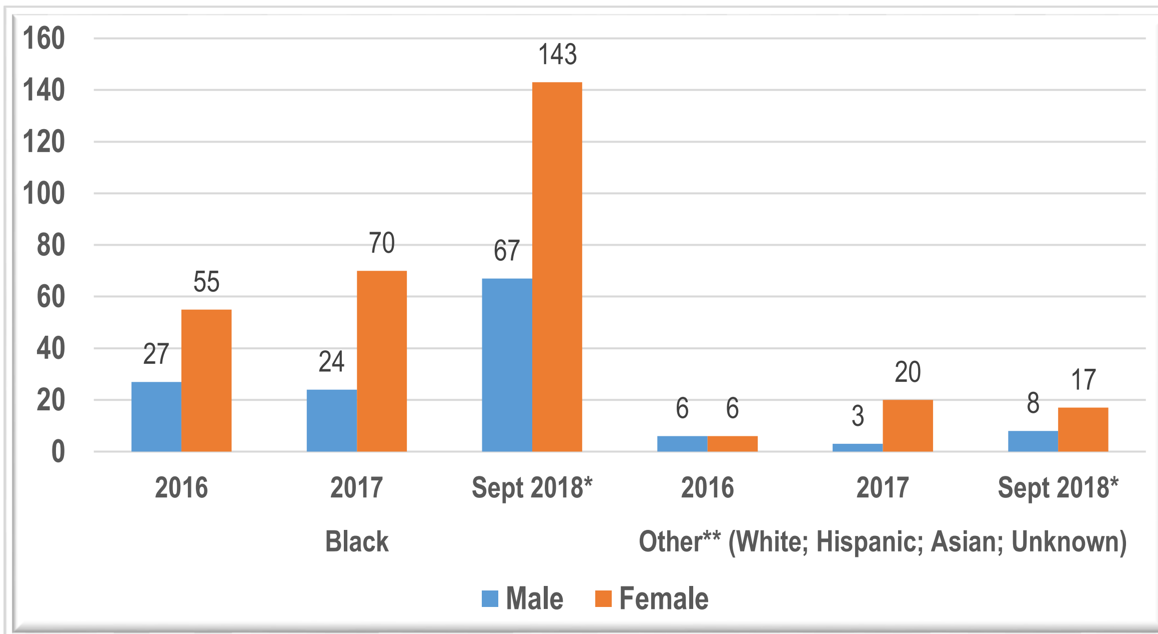
Figure 2.3. Total Children Treated by Race: VIDOH, January 2016 to September 2018*



**Data are for VIDOH January – December 2017 and January – September 2018*

Figure 2.3 provides comparative data for the number of children that were treated by the VIDOH for FY2016, FY2017, and the first three quarters of FY2018. Though information was not provided on whether these data are Territorial or what medical treatment(s) were provided to the children, a review of the information reveals a 38% increase in the number of Black children, birth to three years of age who were treated in the first three quarters of FY2018, compared to those treated for the entire year for the previous two fiscal years. For children in the same age category who were of other races, the trend was the same, though the increase was 27%.

Figure 2.4. VIDOH Patients Presenting with Diabetes by Race: January 2016 to September 2018*

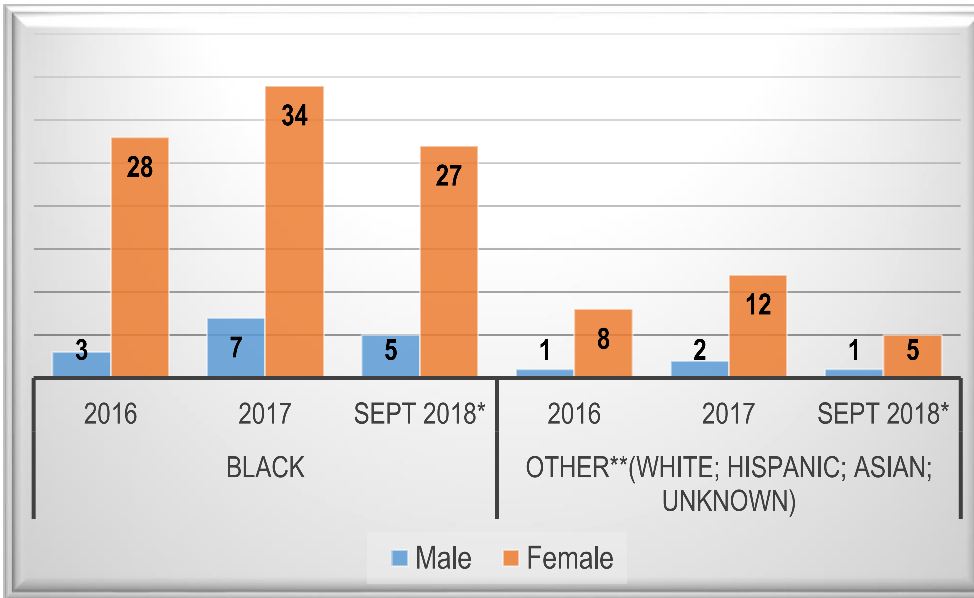


**Data are for VIDOH January – December 2017 and January – September 2018*

For adults presenting at VIDOH clinics with diabetes, Figure 2.4 shows that there were significant increases in the number of Black males who presented with diabetes in FY2018 (through September) – a 179% increase over Black males who presented with diabetes at VIDOH clinics in FY2017. For Black females, there was a 104% increase in the number who presented at VIDOH clinics for diabetes in FY2018 (through the third quarter) compared to those who presented for diabetes in FY2017. This may be pointing to an increase in disease burden for diabetes in the Territory or the result of increased outreach by the chronic disease program within the VIDOH. However, these statistics would need to be followed for a period of time to ascertain whether this spike may be an anomaly.

Asthma continues to be a chronic disease that affects both children and adults, with increases in asthma diagnoses being reported, particularly for children. Overall, the number of patients presenting with asthma at VIDOH clinics is relatively low (Figure 2.5), compared to the number of patients presented for diabetes (Figure 2.4). Also, the numbers are relatively stable, with no notable increase evident in the first three quarters of FY2018, compared to the overall total patients that presented with asthma for the two previous fiscal years.

Figure 2.5. VIDOH Patients Presenting with Asthma 2016 – September 2018*

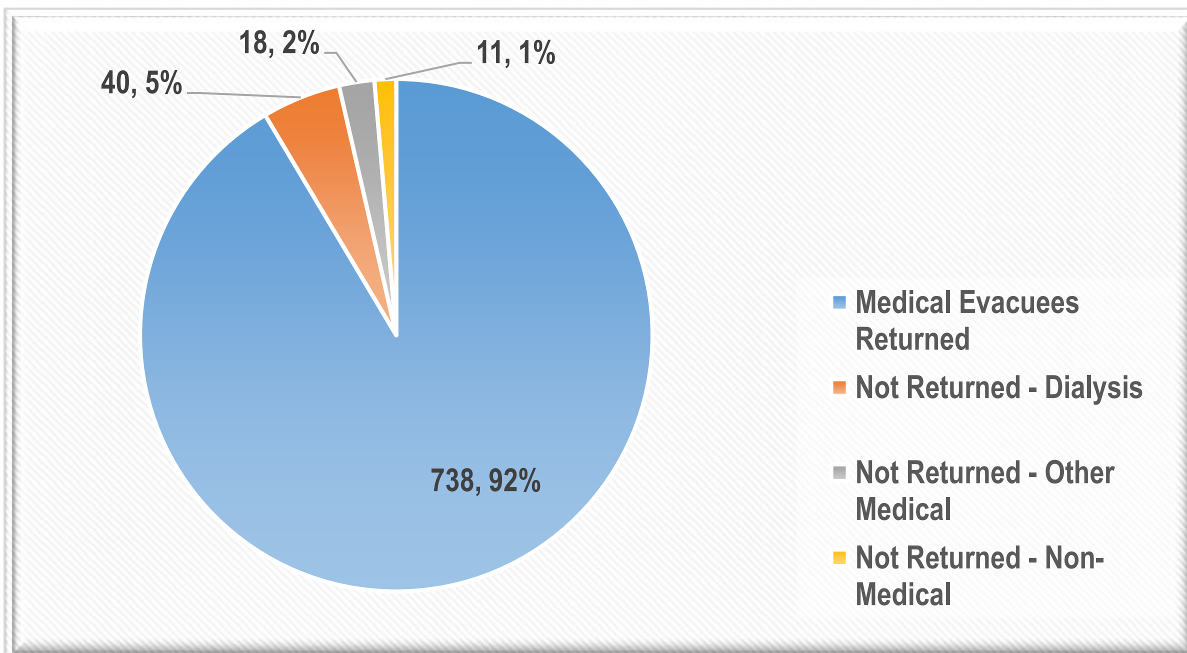


**Data are for VIDOH January – December 2017 and January – September 2018*

Evacuations

Figure 2.6 provides a snapshot of the status of medical evacuees since Hurricanes Irma and Maria. Ninety-two percent (92%) of all evacuees have returned, with 5% of those still away needing dialysis, as reported by VIDOH.

Figure 2.6. USVI Medical Evacuees since Hurricanes Irma and Maria: September 2017 – September 2018



Source: V.I. Department of Health

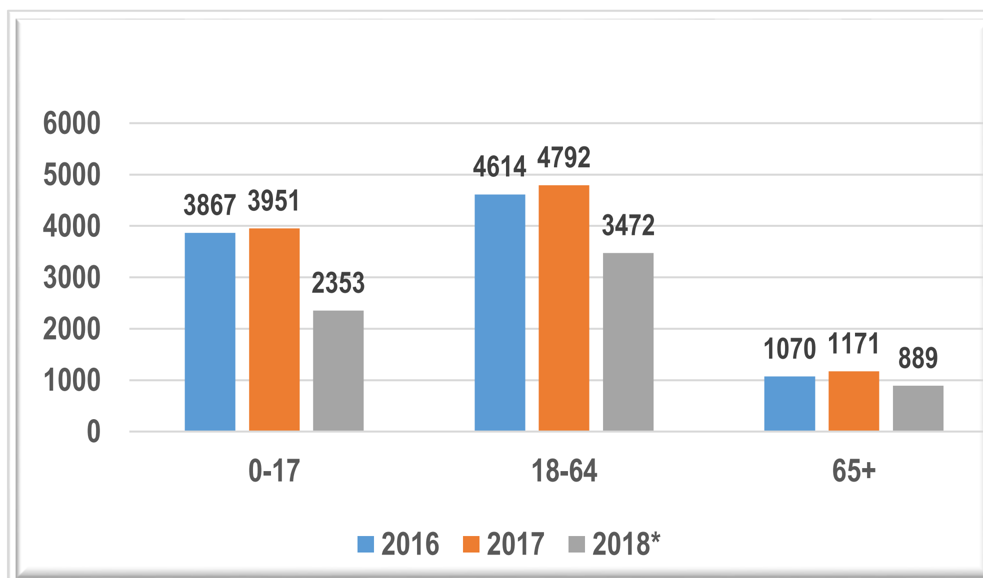
HIV/STD rates (2016-2017):

- Persons living with diagnosed HIV infection at the end of 2016: 625/100,000 (Number: 551) (CDC, HIV Surveillance Report, 2017); this is slightly higher than the rate for 2014 (617.3/100,000) (VIDOH Epidemiologic Profile, 2014)
- Diagnosis of HIV infection among adults and adolescents: 2016: 12.1/100,000 (Number: 13) 2017: 7.9/100,000 (Number: 7)
- Rate of young adults aged 20-24 living with diagnosed HIV infection at the end of 2016: 145.3/100,000 population
- Rate of young adults aged 20-24 living with diagnosed HIV infection ever classified as Stage 3 (AIDS) at the end of 2016: 32.3/100,000.
- Adolescents aged 20-24 years living with diagnosed HIV infection classified as Stage 3 (AIDS) at the end of Year 2016-USVI-32.3/100,000 population
- Number living with perinatally acquired HIV infection at the end of 2016: 9; number living with perinatally acquired HIV infection ever classified as Stage 3 (AIDS)-6

Frederiksted Health Care, Inc.

Frederiksted Health Care, Inc. provided comprehensive primary care and prevention services to 9551 clients in 2016 and 9914 clients in 2017, an increase of over 360. In 2018, as of July 14, the count was at 6,714. Approximately 40% of those served in 2016 and 2017 were children aged 0-17 years old, while 35% were in the same age group for 2018 (through July 14) (Figure 2.7). The most frequent diagnoses reported by the health center are hypertension, diabetes mellitus, overweight and obesity, and asthma/COPD (Figure 2.8).

Figure 2.7. Number of Clients Served by FHC by Age Group: 2016 – 2018*



**Note: 2018 figures are through July 14th.*

The number of clients with hypertension increased from 2016 (1,011) to 2017 (1,461) and may be on track to continue to increase for 2018 (1,315 as of July 14, 2018) (Figure 2.9A). Of patients aged 18-75 diagnosed with hypertension during the years 2016-2018, the percentage that had their blood pressure controlled decreased from a high of 48% among Hispanic/Latino in 2016, to 42% in 2017 and 38% in 2018 (Figure 2.9B). Among Black/African American clients with hypertension, the percentage with controlled high blood pressure remained consistent at 40% for 2016 and 2017 but shows a drop to 32% for 2018 thus far (Figure 2.9B).

Figure 2.8. Select Diagnoses and Conditions – FHC: 2016 - 2018.

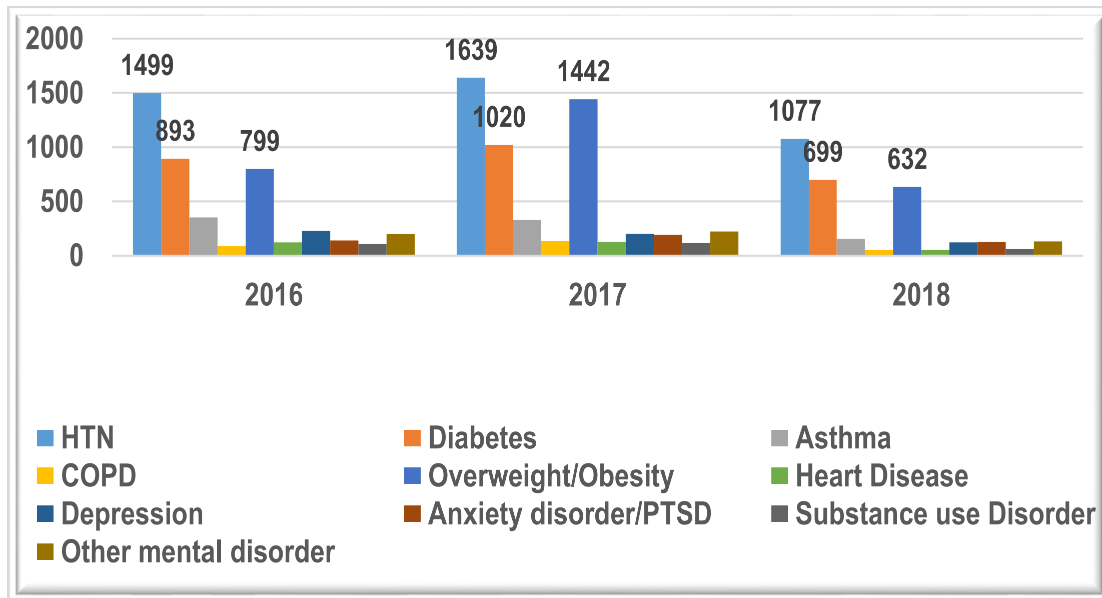
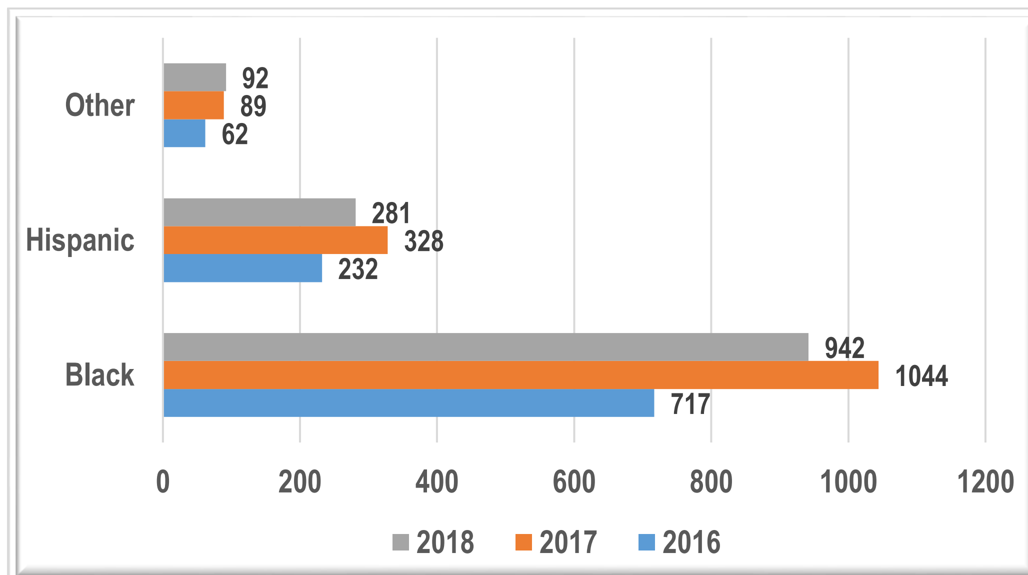
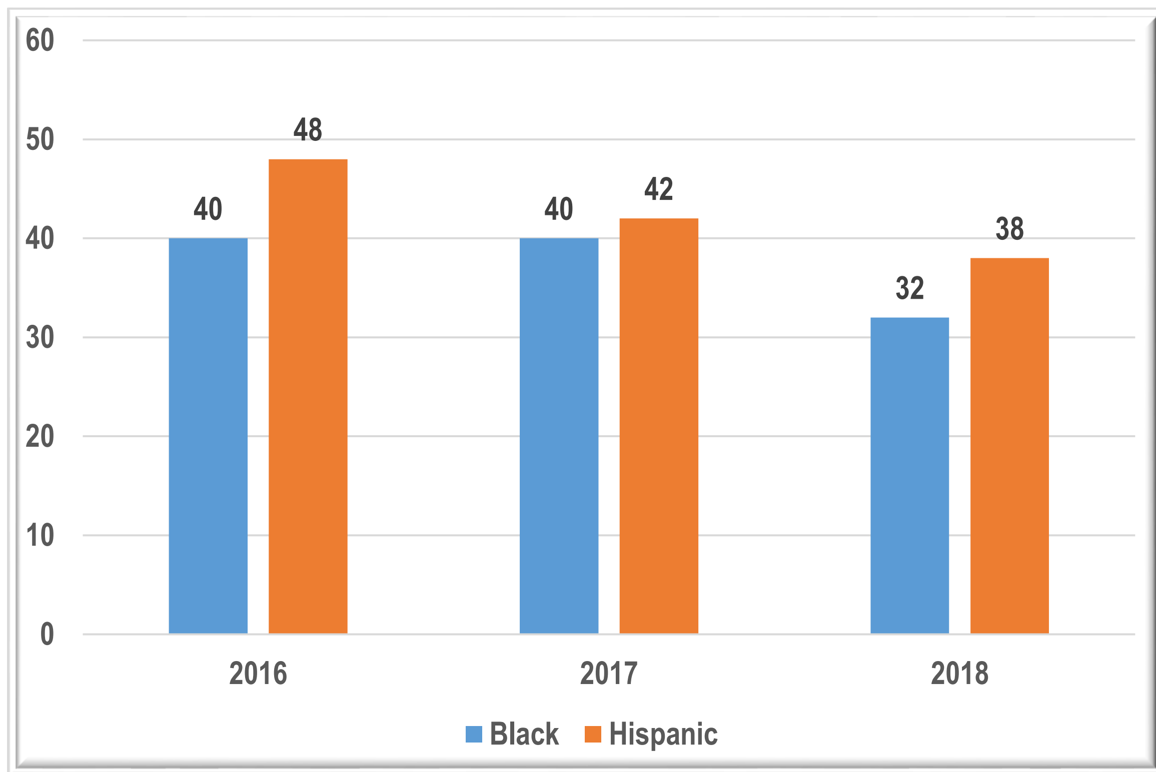


Figure 2.9A. Number of FHC clients with hypertension by race/ethnicity: 2016 – 2018*



**Note: 2018 figures are through June 2018.*

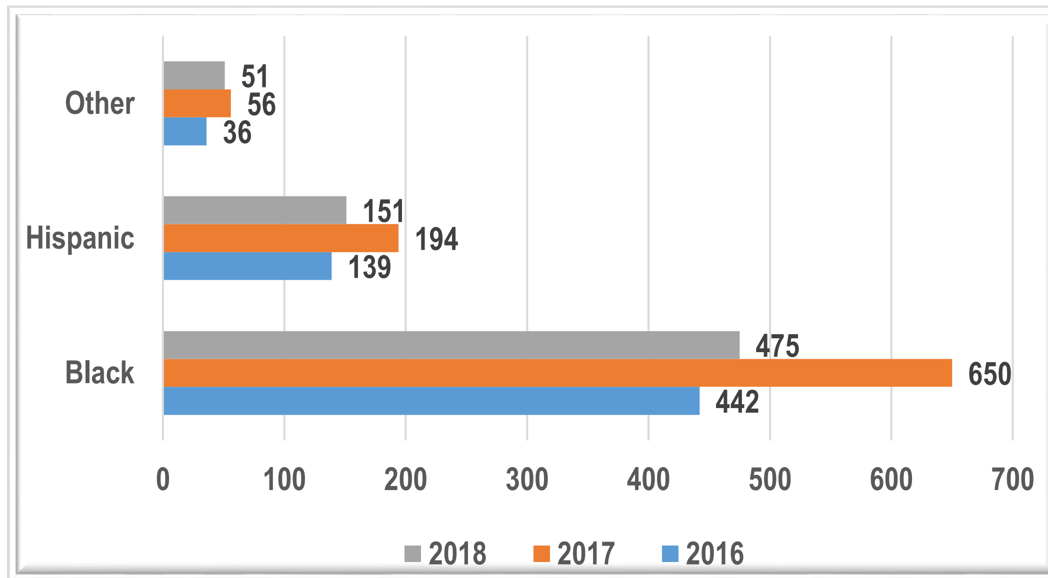
Figure 2.9B. Percent of FHC Patients with hypertension that have it controlled: 2016 – 2018*



Note: 2018 figures are through June 2018.

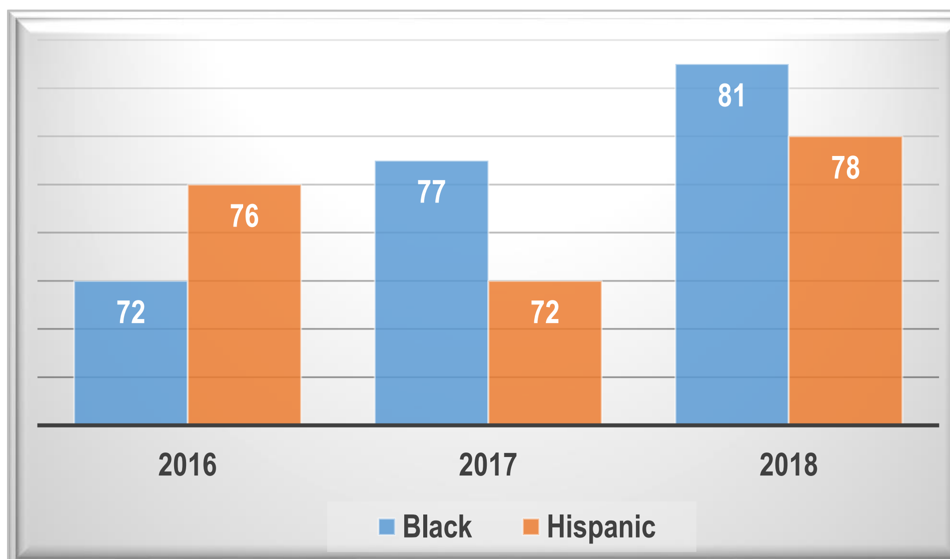
Among clients aged 18-75 with diabetes (Figure 2.10A), a high proportion either have HbA1c levels >9% or did not test during the year, both practices which are indications of non-compliance with the disease management guidelines. Among Black/African Americans with diabetes, during the years 2016-2018, 72%, 77% and 81% had HbA1c >9%, respectively. Among Hispanic/Latinos with the condition, 76%, 72% and 78% had HbA1c levels above the recommended levels for the years 2016-2018, respectively (Figure 2.10B).

Figure 2.10A. Number of FHC patients with diabetes, ages 18 – 75: 2016 – 2018*



**Note: 2018 figures are through June 2018.*

Figure 2.10B. Percent FHC Patients with HbA1c >9% not tested for the Year: 2016 – 2018*



**Note: 2018 figures are through June 2018.*

In examining the data on the health indicators and health status of children reported by FHC, the following emerges:

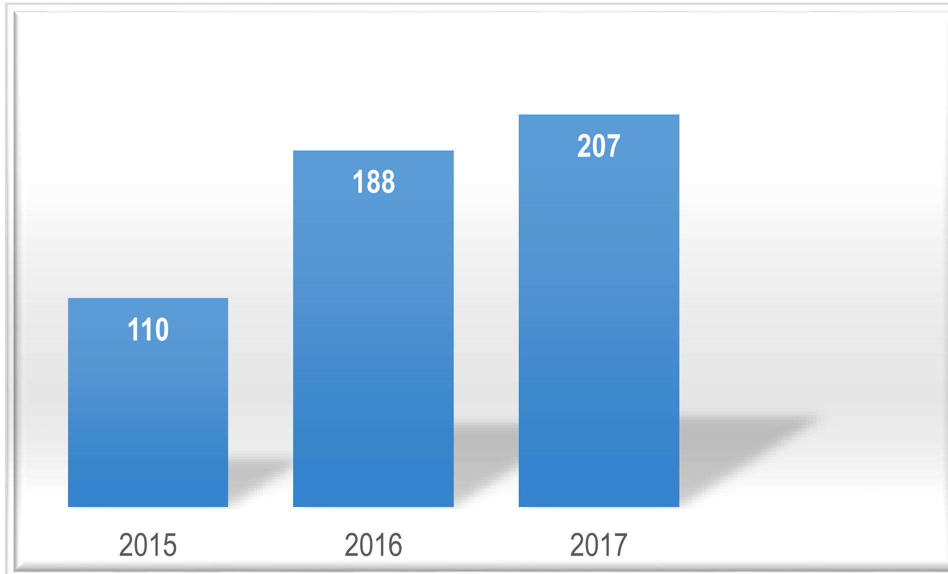
Teen pregnancies make up approximately 10-13% of total pregnancies;

The health center staff screen for lead poisoning in children annually;

Otitis media (middle ear infection) is the condition most frequently treated among children at FHC.

In addition to serving adults and children, FHC has increased services to the homeless, one of the most underserved and vulnerable segments of the population that seek and need health care from the community health center. The number of homeless persons served increased from 110 in 2015 to 207 in 2017 (Figure 2.11).

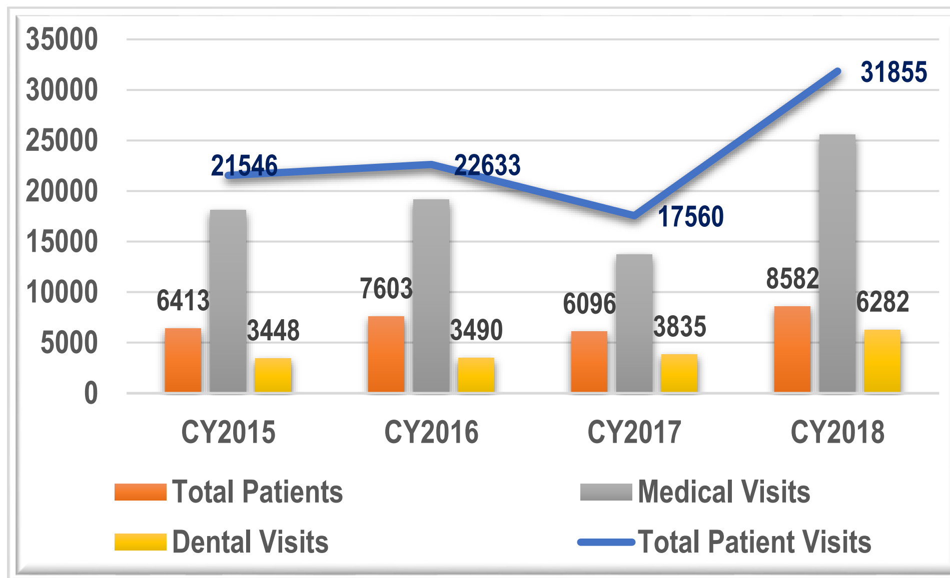
Figure 2.11. Homeless clients served by FHC, 2015 – 2017



St. Thomas East End Medical Center Corporation, Inc.

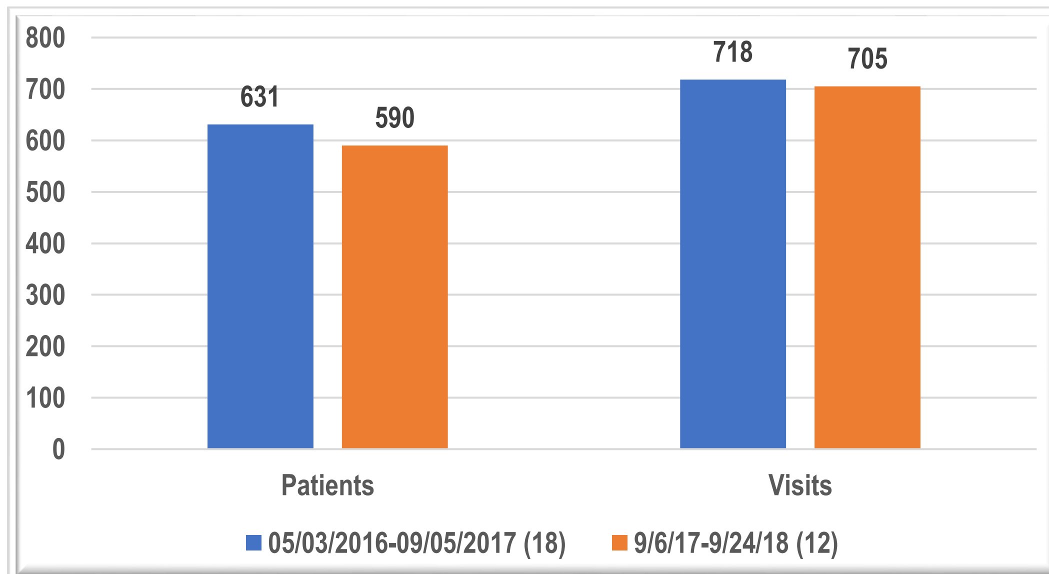
STEEMCC reported serving over 6,000 patients in calendar year (CY) 2015 and over 7,500 patients in CY2016, but a drop to just over 6,000 in CY2017, and a projected 2,500 increase in number of patients in CY2018 over CY2017 (Figure 2.12). Further, the number of patient visits show similar patterns as the number of patients, with the projected number of visits for CY2018 of over 31,000 visits. Figure 2.8 also provides a breakdown of patient visits into two categories – medical patient visits and dental patient visits. Of note is that, though there was a decrease in both the number of patients and the number of patient visits in CY2017, the number of dental patient visits increased slightly from CY2016 to CY2017. Based on the projected numbers for CY2018, STEEMCC expects an increase in dental patient visits of approximately 63% more than the CY2017 dental patient visits.

Figure 2.12. STEEMCC Patients and Patient Visits: CY2015 – CY2018



In response to the request for the submission of secondary data, STEEMCC provided morbidity data in three areas: diabetes, asthma and breathing issues, and mental health issues. These data allow for comparison of patient visits and health status in these three areas before and after Hurricanes Irma and Maria.

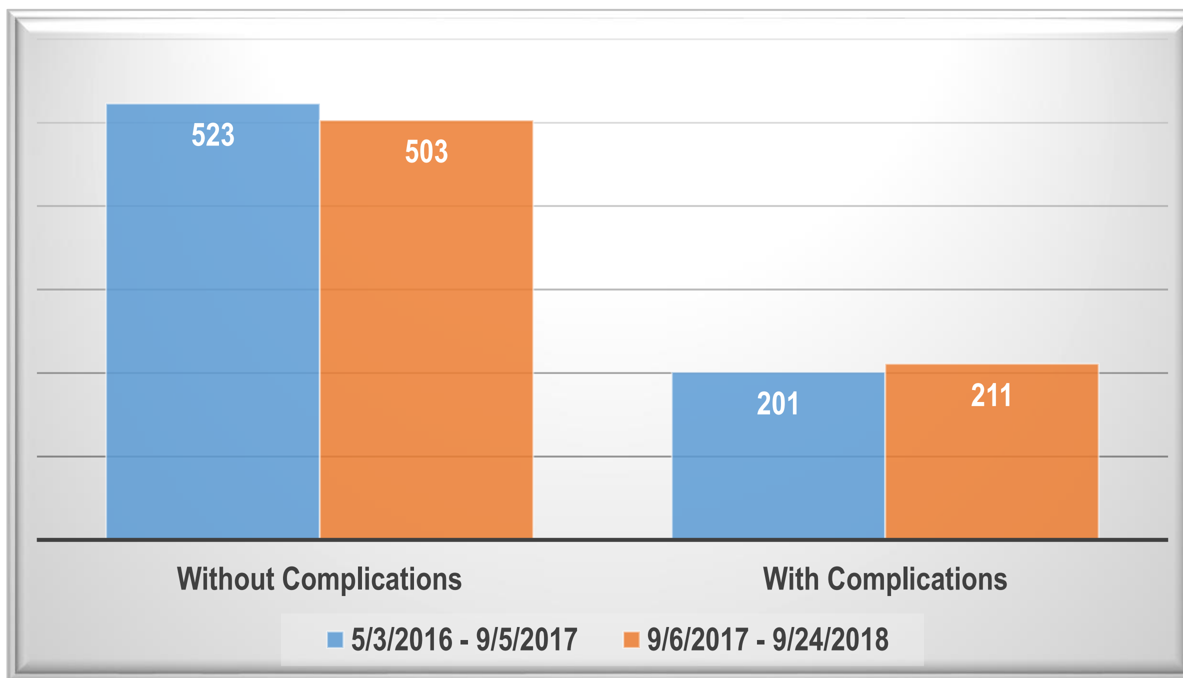
Figure 2.13A. Identified Diabetes Patients and Number of Visits – STEEMCC: 2016-2017 and 2017-2018



Given that diabetes is one of the top five leading causes of death in the Territory, it is interesting to note, given that average number of persons that receive primary healthcare from STEEMCC, that for both periods, about 600 patients, or less than 10% have been diagnosed as

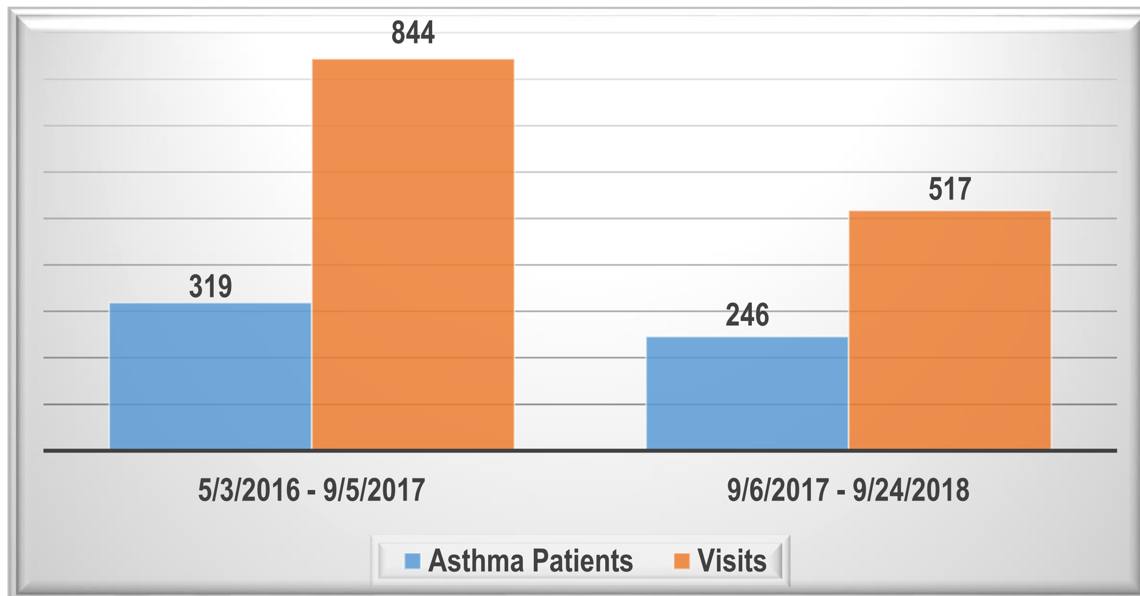
having diabetes. Additionally, for the two periods under review, the number of patient visits were very similar (Figure 2.13A). As with the number of patients with a diabetes diagnosis, for the pre- and post-hurricane periods under review, the number of visits from diabetics with and without complications were approximately the same. There was a slight decrease in the number of visits from diabetics without complications (from 523 to 503 visits or a decrease of 4% in the number visits pre-and post-hurricanes) and a slight increase in the number of visits from diabetics with complications (211 visits after the storm vs 201 before – a 5% increase).

Figure 2.13B. Number of Visits for Diabetics with and without Complications – STEEMCC: 2016-2017 and 2017-2018



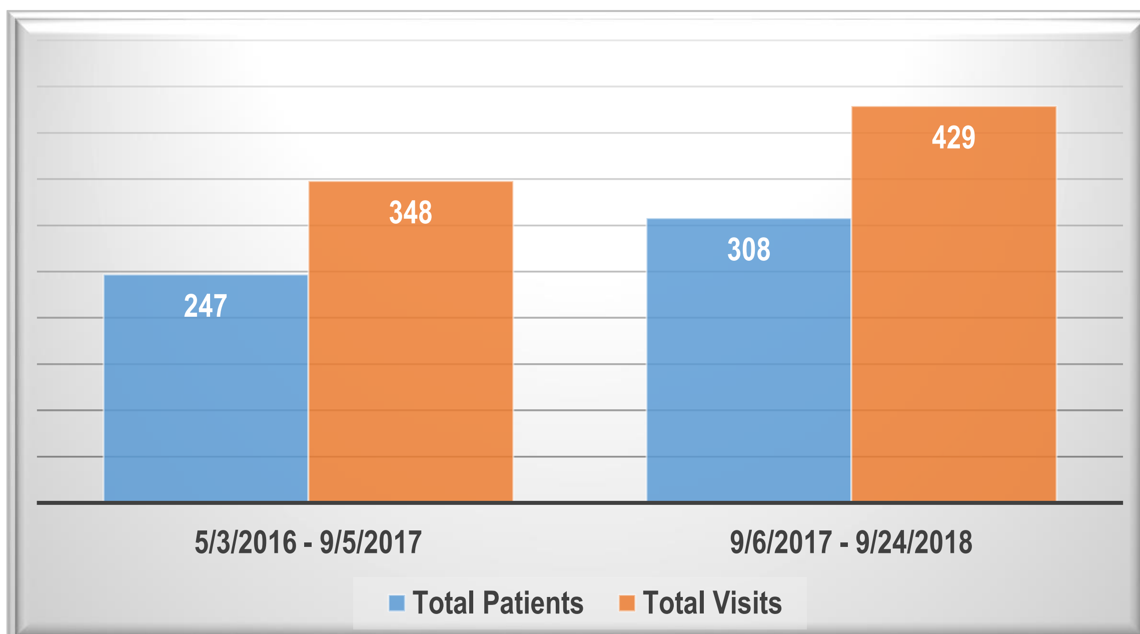
Asthma continues to be a chronic disease of concern for children and adults in the Territory. Figure 2.14 shows that for the 18-month period before Hurricane Irma, there were over 800 visits to STEEMCC by clients with an asthma or allergy diagnosis. For the 12-month period following Hurricanes Irma and Maria, there were over 500 visits to the health center from clients with an asthma or allergy diagnosis. There were fewer STEEMCC clients with an asthma diagnosis in the 12-month period following Hurricanes Irma and Maria than the 16-month period preceding the hurricanes. Yet, the number of clients with an asthma diagnosis in the 12-month period following the two category 5 hurricanes signals that asthma continues to be a health issue for clients receiving primary health services from STEEMCC.

Figure 2.14. Number of STEEMCC Asthma Patients and Total Patient Visits for Asthma and Allergies: 2016-2017 and 2017-2018



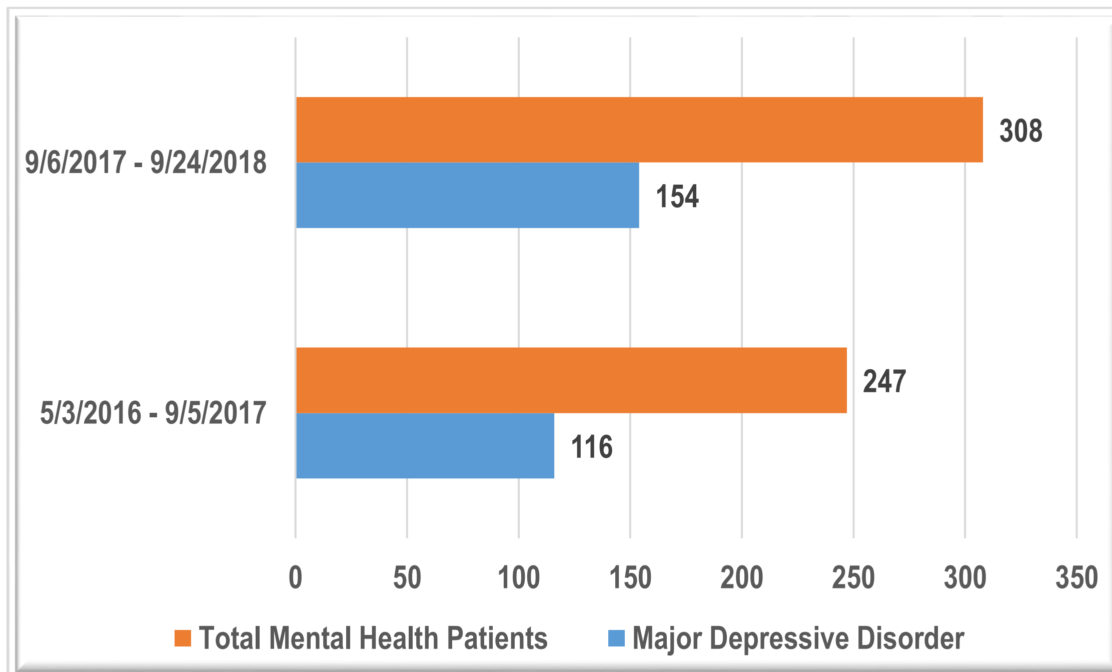
For behavioral health, the data shared reveal that a higher number of clients (25% increase) had a mental health disorder diagnosis in the 12-month period immediately following the two category 5 hurricanes, than during the 16-month period preceding Hurricane Irma (Figure 2.15A). There was also an increase (23%) in visits to STEEMCC for clients with a mental health diagnosis over the 12-month period after the hurricanes compared to the 16-month period before the storms.

Figure 2.15A. STEEMCC Patients Diagnosed with Mental Disorders and Number of Visits to the Health Center: 2016-2017 and 2017-2018



Further, more clients had a mental health or a major depressive disorder diagnosis during the 12-month period following Hurricanes Irma and Maria, when compared to the number of clients with a mental health or a major depressive disorder diagnosis during the 16-month period preceding Hurricanes Irma and Maria (Figure 2.15B). These data on mental health diagnoses and major depressive disorder diagnoses triangulate with some of the quantitative data collected as well as some of the themes that emerged from the qualitative data that the team collected. These data also have implications for service provision in the area of behavioral health, not only for residents in the STEEMCC catchment area, but for residents across both the St. Croix and the St. Thomas-St. John Districts. With the already existing shortage of behavioral health providers in the Territory, an upsurge in health issues in this area will have serious implications relative to accessible and available behavioral health care.

Figure 2.15B. STEEMCC Mental Health Clients and Mental Health Clients Diagnosed with a Major Depressive Disorder: 2016-2017 and 2017-2018



Consolidated Statistical Data for the USVI FQHCs: Calendar Year (CY) 2017

To provide a snapshot of the services provided by the two federally qualified health centers in the Territory during calendar year 2017 (CY2017), select data reported by both FQHCs are consolidated and presented in this section of the report. Because of the timing for the completion of the report, statistical data for calendar year 2018 are not yet available. Limited information for each FQHC for 2018 was shared previously. For CY2017, FHC served 9,914 clients and STEEMCC

served 6,096 clients, as reported in the Uniform Data System (UDS) managed by the Health Resources & Services Administration (HRSA), which funds Health Center Grantees (*https://bphc.hrsa.gov/uds/datacenter.aspx?q=d*). The most recent data available provides information on the 2017 Health Center Profile. Profiles are available for all Federally Qualified Health Centers (FQHCs) across the country. For all graphs presented in this section, percentages are based on the overall number of clients served by each USVI FQHC in 2017.

Figure 2.16 captures information on the clients that received services from the two Federally Qualified Health Centers in the Territory – FHC on St. Croix and STEEMCC on St. Thomas – in CY2017 by age group. Broadly categorized, Figure 2.16 also shows that the largest percentage of clients who accessed services at FHC and STEEMCC in 2017 were adults between the ages of 18 and 64, with children accounting for between 37% and 40% at STEEMCC and FHC, respectively. At FHC about 12 of every 100 clients was 65 years or older, while at STEEMCC, about 14 of every 100 clients were seniors. This age distribution reflects a disproportionately high percentage of children receive services from the two FQHCs, given that based on the 2014 VICS 19.6% of the population is age 19 and under. For seniors, there is a disproportionately low percentage of seniors accessing services at the FQHCs, given that for the 2014 VICS 17.5% of the population is age 65 years or older.

Figure 2.16. USVI FQHC Clients by Age Group: CY2017

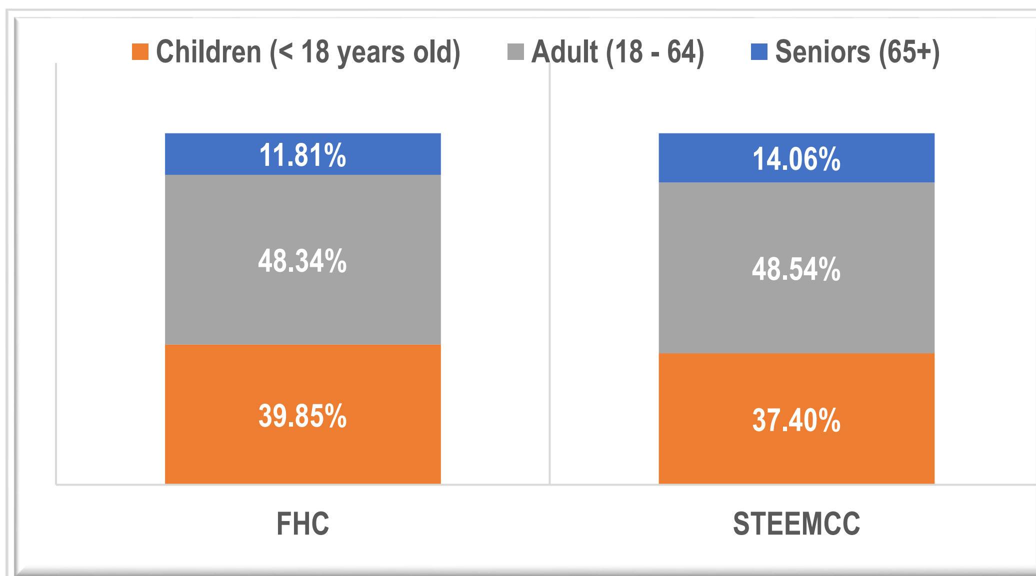
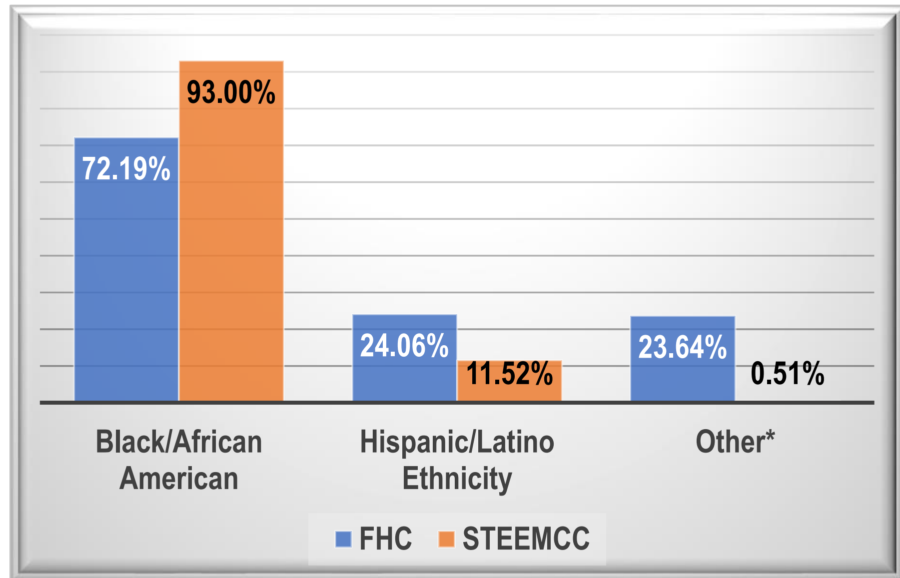


Figure 2.17 captures additional demographic information on FHC and STEEMCC clients, revealing that there is greater diversity in the racial and ethnic composition of clients at FHC than at STEEMCC. While about one in four clients at FHC is Hispanic or Latino, fewer than half that many so identify at STEEMCC.

Figure 2.17. USVI FQHC Client Population by Race/Ethnicity, 2017



** Other —Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islanders, & multiracial*

Figure 2.18. USVI FQHC Patients at or below 100% and 200% of the Federal Poverty Level

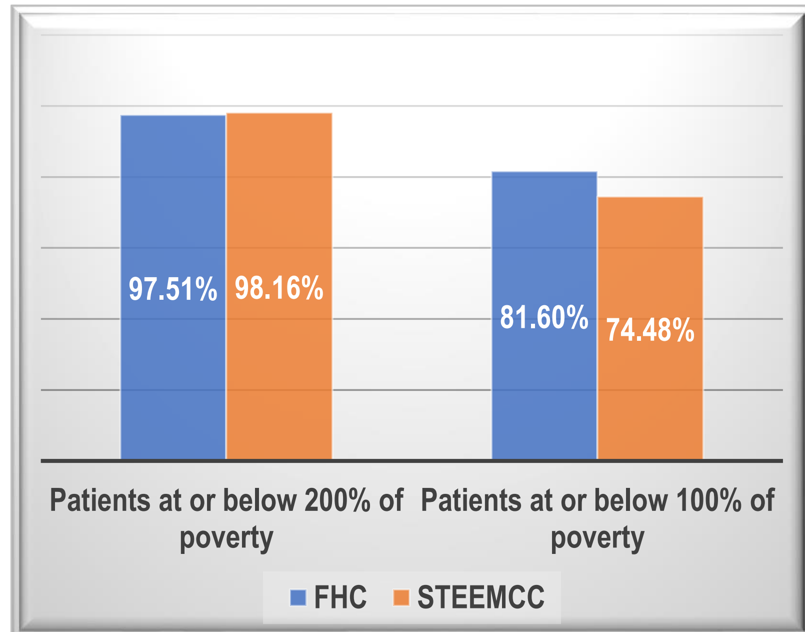
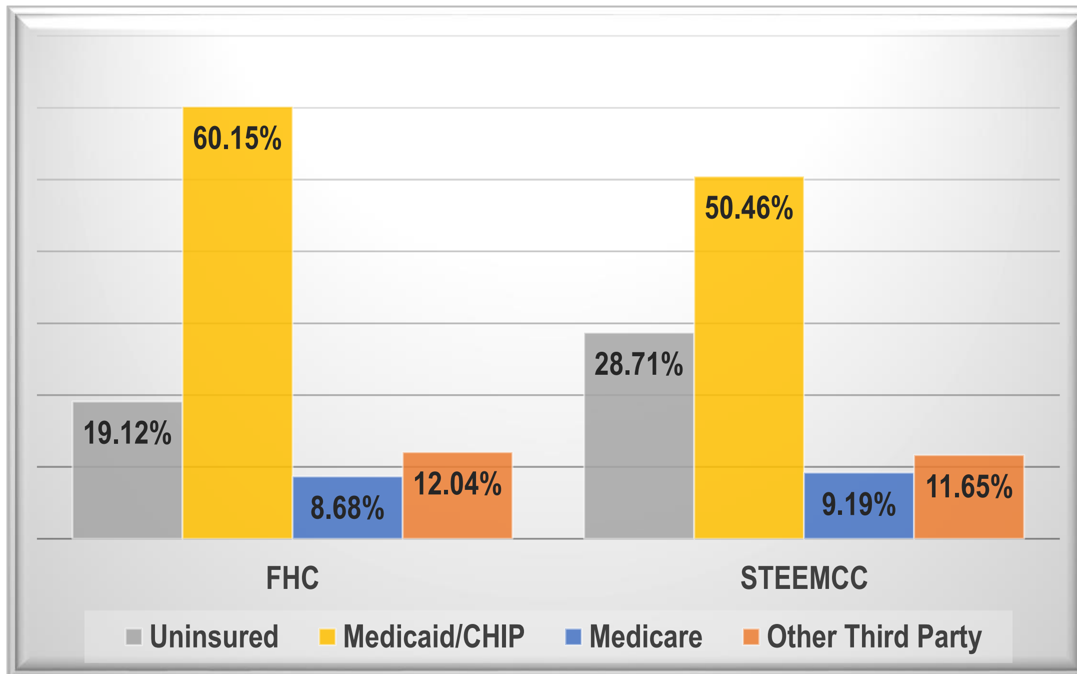


Figure 2.18 provides a snapshot of the financial status of clients who get primary health care services from FHC and STEEMCC, using the federal poverty level (FPL) as the frame of reference. From the information captured in Figure 2.18, there are more impoverished patients at 100% below FPL receiving services from FHC than those receiving services from STEEMCC – 82% compared to 75%. Further, Figure 2.19 captures insurance coverage information that aligns with the poverty information shown in Figure 2.18. In 2017, 79% of FHC clients either had no insurance (19%) or were covered by Medicaid (60%). With respect to insurance, approximately 80% of STEEMCC clients were covered by Medicaid (50.5%) or had no

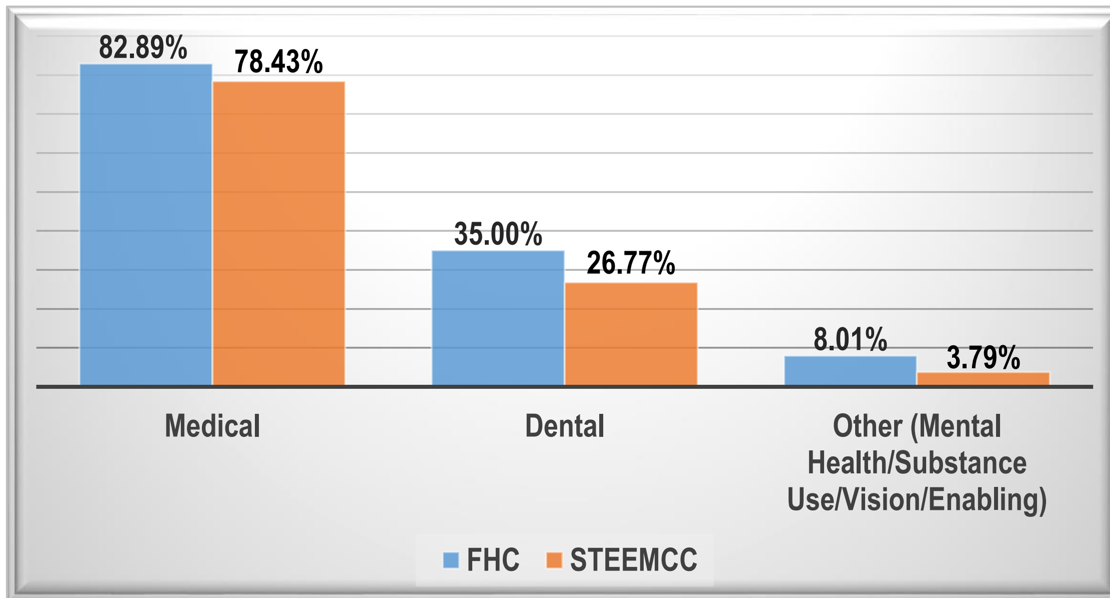
insurance coverage (29%). For both FQHCs, about the same proportion of clients are covered by Medicare (approximately 9%) and "Other Third Party" insurance (approximately 12%).

Figure 2.19. USVI FQHC Patients' Sources of Insurance Coverage in 2017



While the majority of clients who visited the FQHCs in the Territory in 2017 received medical services (Figure 2.20), for FHC, just over one-third clients received dental services. For STEEMCC, just over one-fourth of clients received dental services. Both FQHCs have expanded their offerings of dental services in the past few years, and FHC is set to add another 12 chairs in the near future (KI, FHC CEO, November 2018) because the current capacity cannot meet the existing demand for dental services. STEEMCC added a separate dental facility due to the high demand for these services from clients and the recognition that the needed dental services were not being provided (Michael, N. & Valmond, J.M., 2016).

Figure 2.20. Medical, Dental, and Other Health Services Accessed by Clients: FHC and STEEMCC, 2017



The medical services that clients access at the FQHCs include prenatal care (Figure 2.21). Of the FHC and STEEMCC clients receiving prenatal services, 67% or 267 of 398 and 77% or 167 of 218, respectively of them delivered. The association between low birth weight and early prenatal care is captured in Figure 2.22, which reveals that at both FQHCs, just over three-fifths of pregnant clients began prenatal visits in the first trimester of their pregnancy. Of these, approximately one in 10 had a baby with low birth weight. This is noteworthy, since, generally, minority and lower income women are more likely to have low birth weight babies.

Figure 2.21. Prenatal and perinatal clients who delivered: FHC & STEEMC, 2017

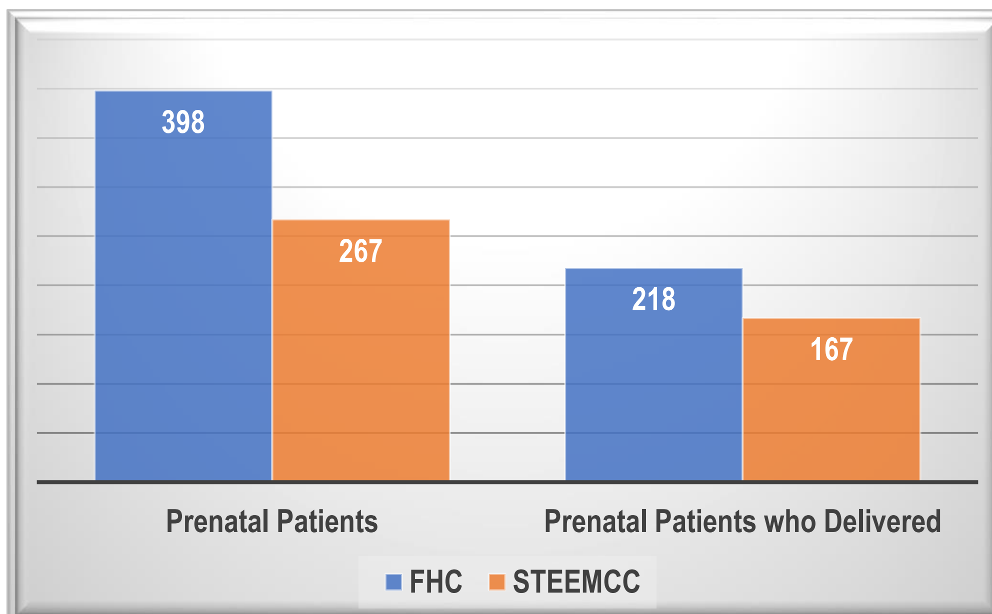
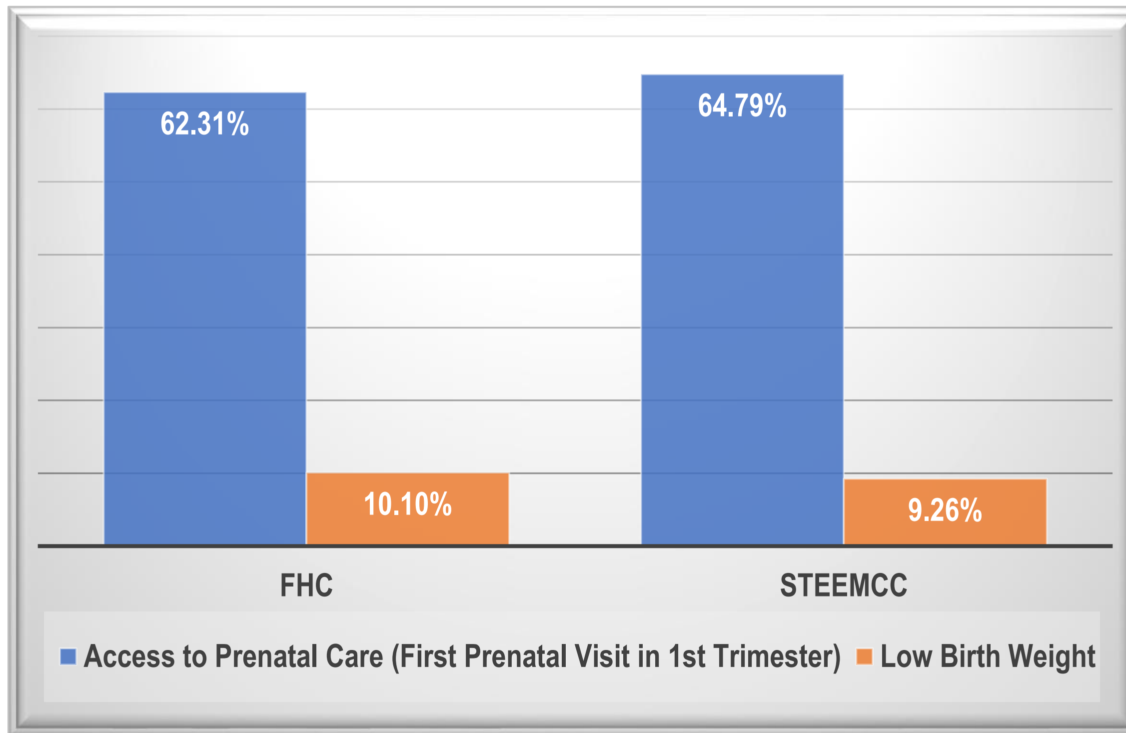
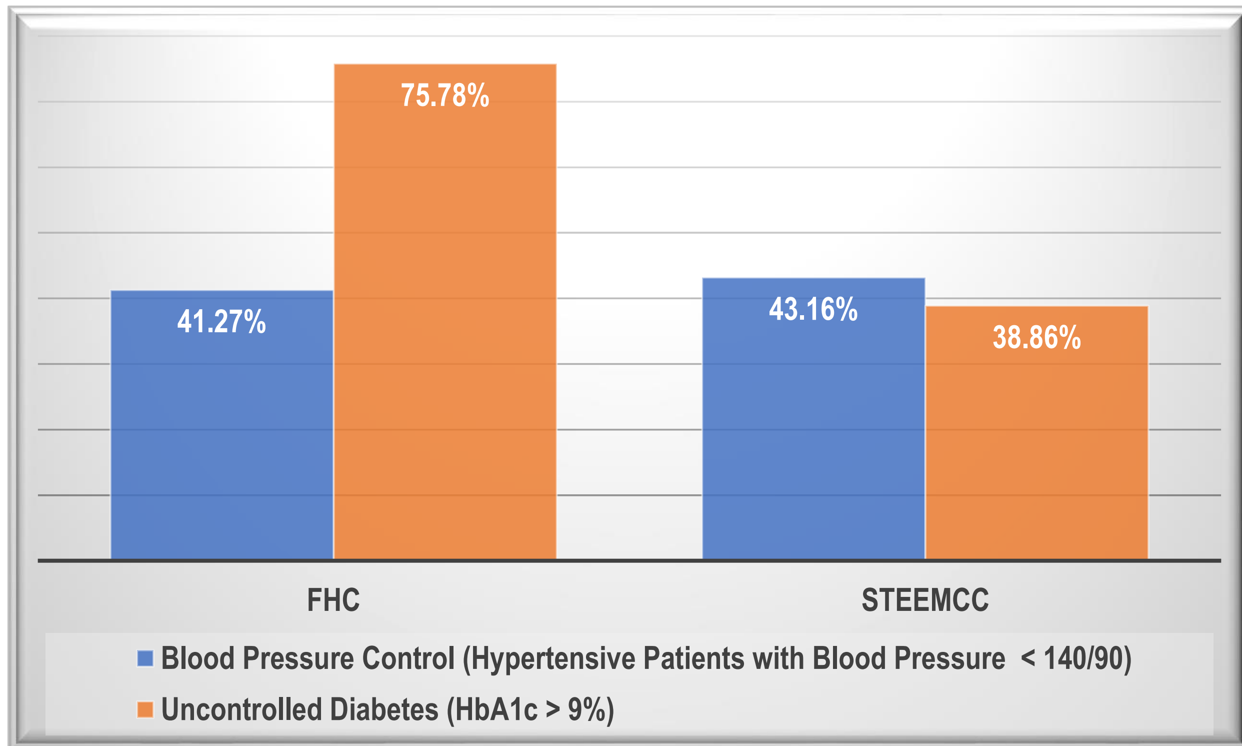


Figure 2.22. Clients' Access to Prenatal Care and Low Birth Weight: FHC and STEEMCC



Diabetes and hypertension are two chronic diseases that are implicated in many deaths in the Territory. Therefore, documenting the burden of these illnesses in the community is important. Figure 2.23 captures information on the percentage of clients from the FQHCs in the USVI who are being treated for blood pressure control (hypertension) and uncontrolled diabetes (as defined in the chart). With respect to blood pressure control, both FQHCs are treating the same proportion of clients for this chronic illness. However, there is a substantial difference in the percentage of clients at FHC who were treated for uncontrolled diabetes – 76% in 2017, compared to 39% of clients at STEEMCC who were treated for this chronic illness. This has implications for potential interventions targeted to the clients at the two FQHCs.

Figure 2.23. USVI FQHC Patients treated for Blood Pressure Control and Uncontrolled Diabetes, 2017



The availability of preventive health services is important within the context of reducing health disparities. Figure 2.24 provides information on the percent of children who received childhood immunizations at each of the FQHCs in 2017 – approximately 2% at FHC and 8% at STEEMCC. Further, approximately 6% of children received dental sealants at FHC during 2017, while 13% received these services at STEEMCC in 2017. These percentages are small, and may be due, in part, to the limited number of dental providers and dental chairs available in 2017. Figure 2.25 captures preventive services provided to adult clients, specifically cancer screening – cervical and colorectal, depression screening, and screening for tobacco use. Noteworthy is that smoking cessation intervention services were provided to clients who were screened positive for tobacco use.

Figure 2.24. Childhood Immunization and Dental Sealants: USVI FQHCs, 2017

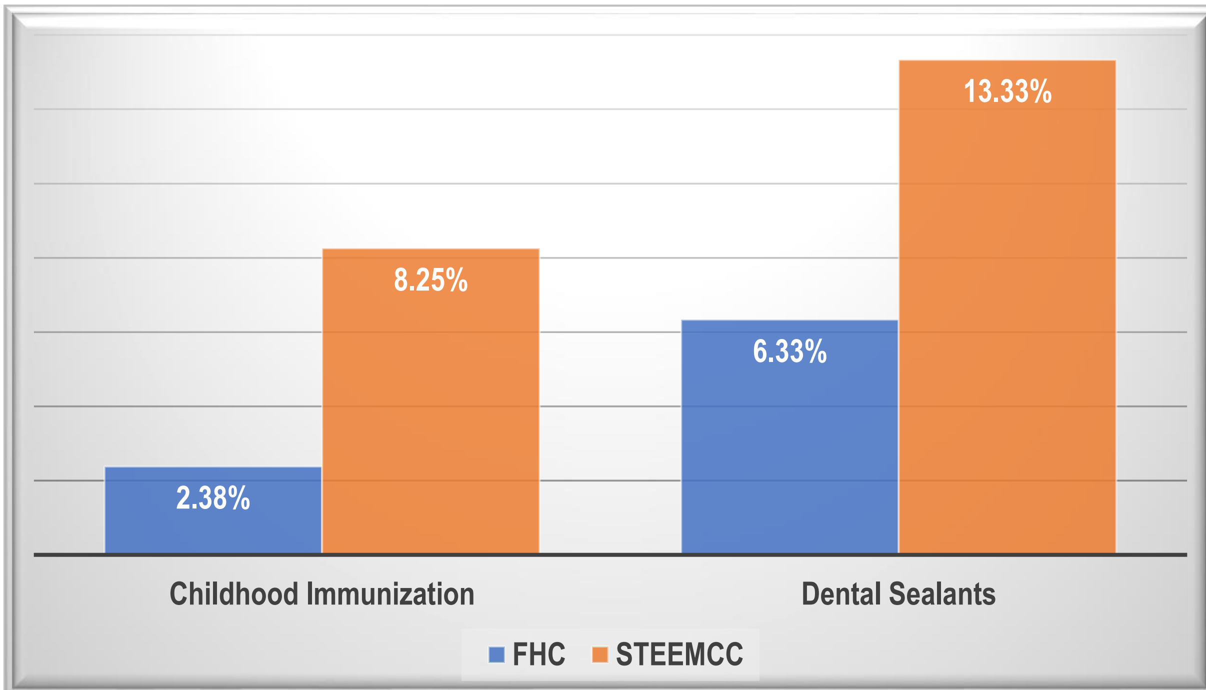
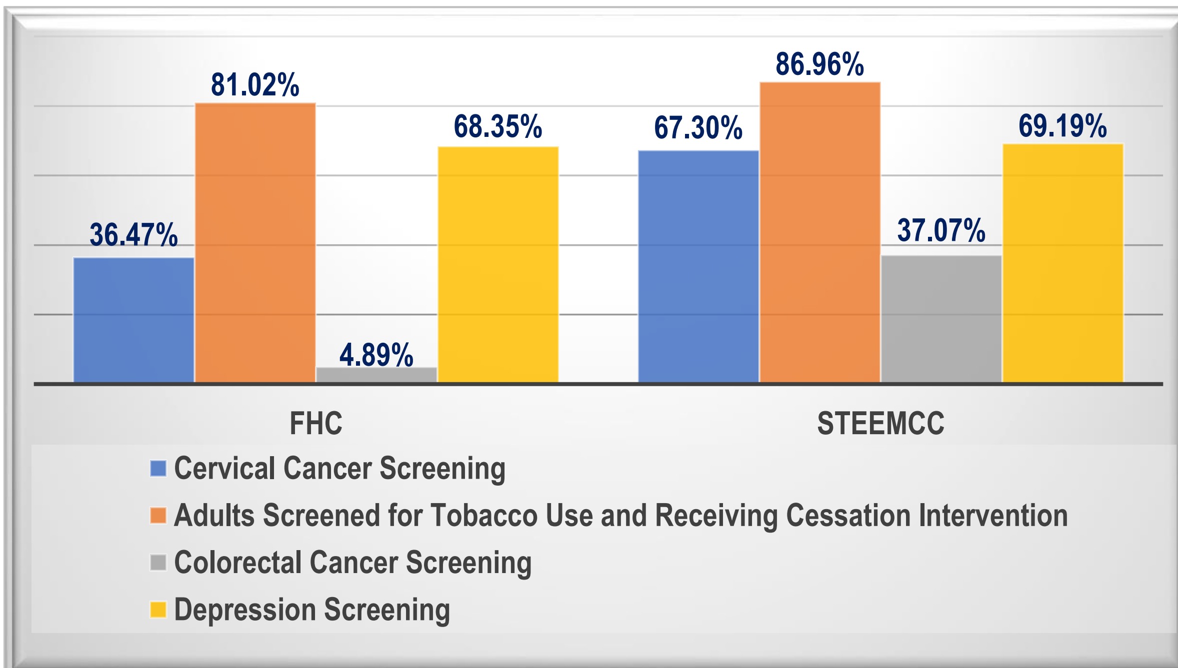


Figure 2.25. USVI FQHC Clients Participating in Screening Activities: 2017



Juan F. Luis Hospital and Medical Center

The Juan F Luis Hospital and Medical Center continues to operate below pre-hurricane Irma and Maria capacity. As a result, patients in need of certain types of care continue to be

transferred to facilities on the mainland. During the FY2019 Budget Hearing cycle, JFL provided information on the change in the level of services that the facility has provided between October 2016 – May 2017 and October 2017 and May 2018. This information is captured in Table 2.6, below.

Table 2.6. Change in level of services provided by JFL: October 1, 2016 - May 31, 2017 and October 1, 2017-May 31, 2018

Patient Statistics	October 1, 2016 - May 31, 2017	October 1, 2017 - May 31, 2018	% Change
Admissions	1914	1290	-32.6
Newborn Admissions	314	248	-21.0
Discharges	1926	1281	-33.5
Newborn Discharges	320	245	-23.4
Patient Days	12,733	7293	-42.7
Newborn Patient Days	916	805	-12.1
Inpatient Surgery	637	395	-38.0
Outpatient Surgery	787	370	-53.0
Outpatient Visits	18,887	8131	-56.9
Emergency Room Visits	11,540	10,184	-11.8

Additionally, during the time period from October 31, 2017 and August 29, 2018, over 200 patients were transferred to facilities outside the USVI. Of those, 49 were for cardiac/cardiology interventions, 14 for pediatric care, 29 for orthopedic surgery, 7 for dialysis, and 38 for neurology and related care (JFL, 2018). The facility was able to resume some dialysis services effective December 1, 2018, filling a major gap in services that warranted the mass evacuation of dialysis patients for several months following Hurricanes Irma and Maria.

Schneider Regional Medical Center (SRMC)

As previously mentioned, SRMC is composed of three distinct facilities – RLS and CKCC on St. Thomas and MKS Community Health Center on St. John. SRMC also provided testimony on the facility prior to and since Hurricanes Irma and Maria. Table 2.7 captures some of the key patient statistics that reflect some comparison between pre-hurricane service delivery and post-hurricane service delivery. Table 2.7 shows that there was only one area with respect to medical services provided at SRMC in which post-hurricane numbers exceeded pre-hurricane numbers and that was in the area of admissions for behavioral health diagnoses. The areas with the largest decreases in services were outpatient elective surgery and inpatient days, which dropped by almost

50%. Again, this is due in part to the damage sustained by the facility and the unavailability of beds. However, in a key informant interview with SRMC's CEO and Chief Nursing Officer, the CEO confirmed that the majority of the beds at RLS that had become unavailable following Hurricanes Irma and Maria were back on line (KI, SRMC's CEO and CNO, October 2018).

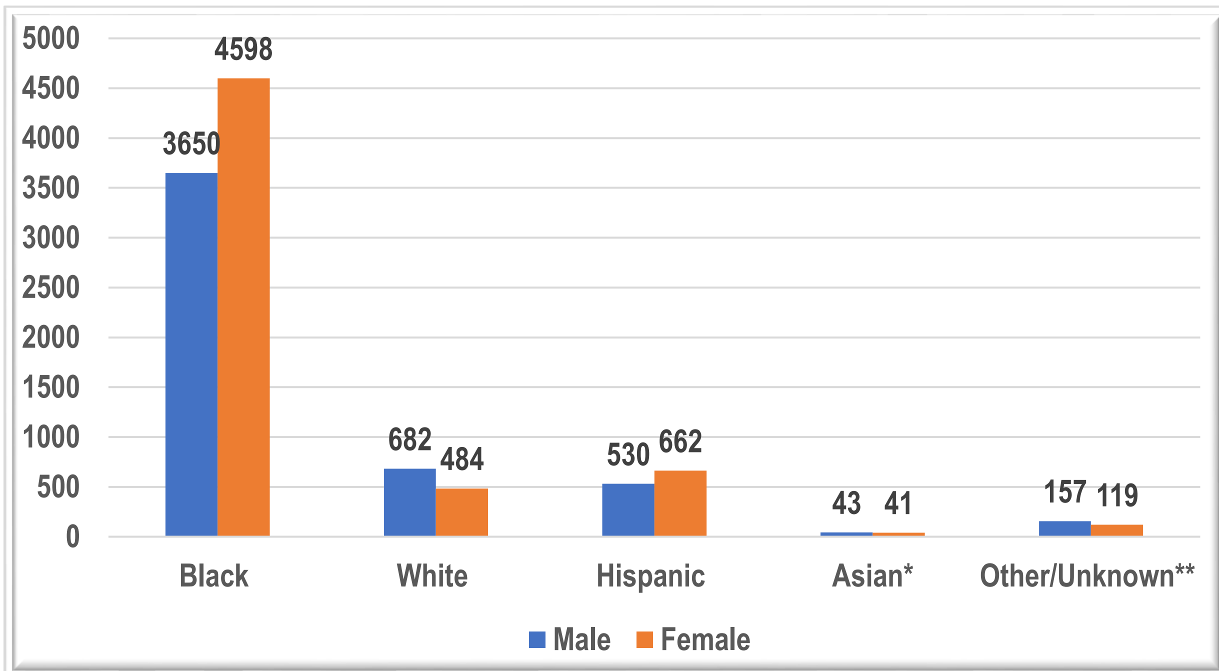
Table 2.7. Change in level of service provided at SRMC: YTD to June 2017 and YTD to June 2018

Patient Statistics	YTD-June 2017	YTD-June 2018	% Change
Admissions -Adult + Peds	2270	1560	-31.3
Patient Days-Adult + Peds	14,673	745	-49.3
Admissions-Nursery	462	352	-23.8
Patient Days-Nursery	1645	352	-31.7
Admissions-Behavioral Health	92	120	+30.0
Patient Days-Behavioral Health	1358	881	-35.1
Inpatient Surgery	726	515	-29
Outpatient Surgery	1485	789	-46.9
Emergency Room Visits	14,244	11,500	-19.3

In addition to SRMC's FY2019 Budget Hearing testimony, key personnel shared de-identified secondary data with the research team for inclusion in this report. Data made available were for RLS only. Statistics provided for 2018 (January - September) provide a snapshot of the number of ER visits for that period. For this period, Black females had the largest number of visits to the ER (approximately 4600), followed by Black males with 3,650 visits (Figure 2.26).

Other data provided to the research team were for the period August 2017 through December 2017 and related to emergency room visits and some of the ailments with which patients were diagnosed. Figure 2.27 captures information on the number of visits to the ER for general medical complaints, with the largest number of such visits occurring in November 2017 and the fewest in September 2017, the month in which the Territory was struck by both Hurricanes Irma and Maria.

Figure 2.26. Patient Emergency Room visits by Race and Gender: SRMC, 2018



** = Asian, Filipino, Pacific Islander and Indian*
*** = Other/Unknown, Arab/Middle Eastern, Native American Indian*

Figure 2.27. General Emergency Room Complaints: SRMC, August – December, 2017

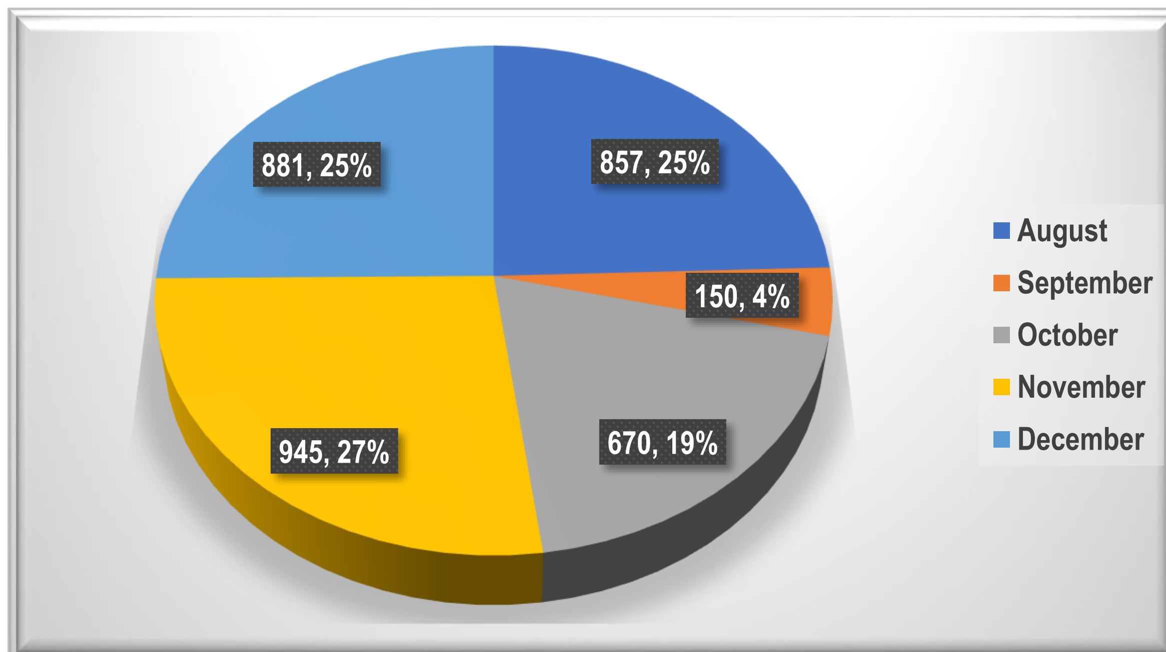
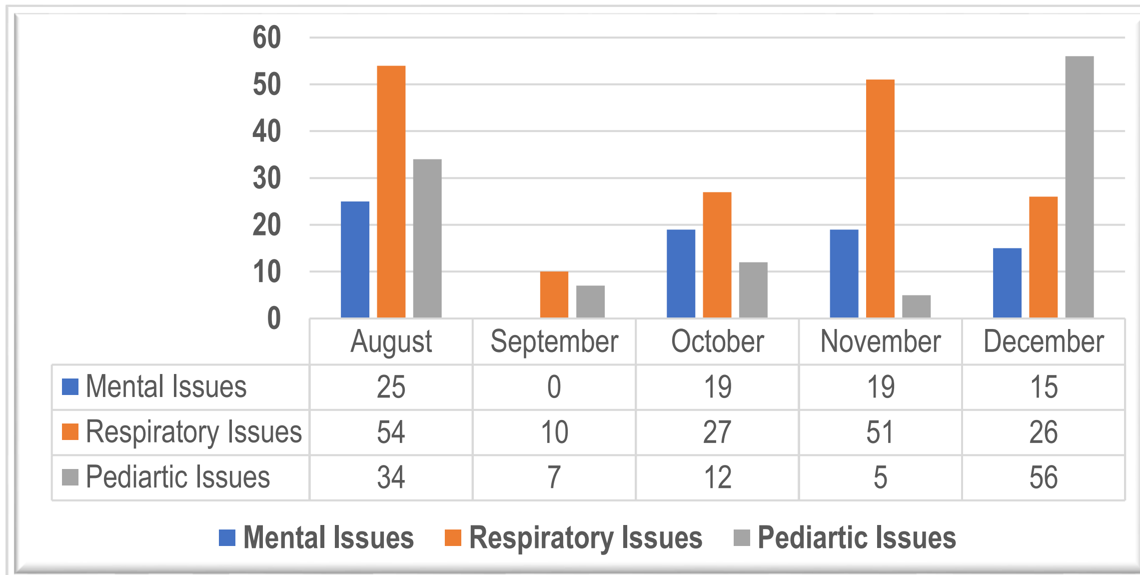


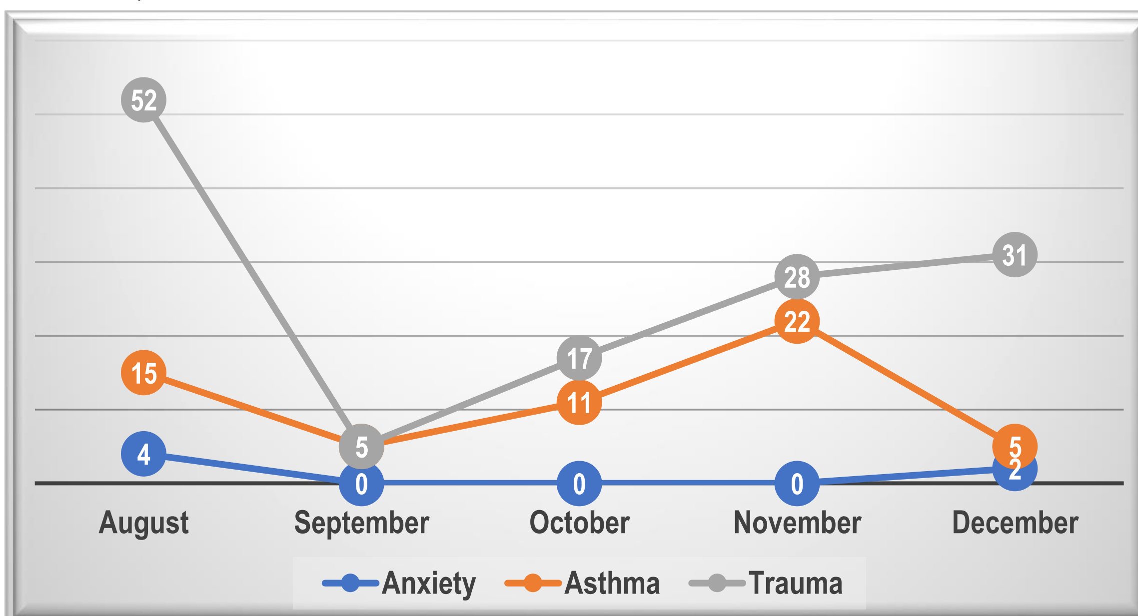
Figure 2.28. Emergency Room Visits associated with Mental, Respiratory, and Pediatric Issues: SRMC, August – December 2017



	August	September	October	November	December
Mental Issues	25	0	19	19	15
Respiratory Issues	54	10	27	51	26
Pediartic Issues	34	7	12	5	56

While the largest category of ER complaints were general in nature, during that same period, August to December 2017, there were complaints associated with respiratory and asthma issues (Figure 2.28 and Figure 2.29); pediatric issues, with the largest post-hurricane number being in December 2017. Interestingly, trauma-related ER visits spiked the month prior to the hurricanes, dropped approximately 90% in September, but gradually increased over the period October through December, yet not returning to the pre-hurricane level (Figure 2.29).

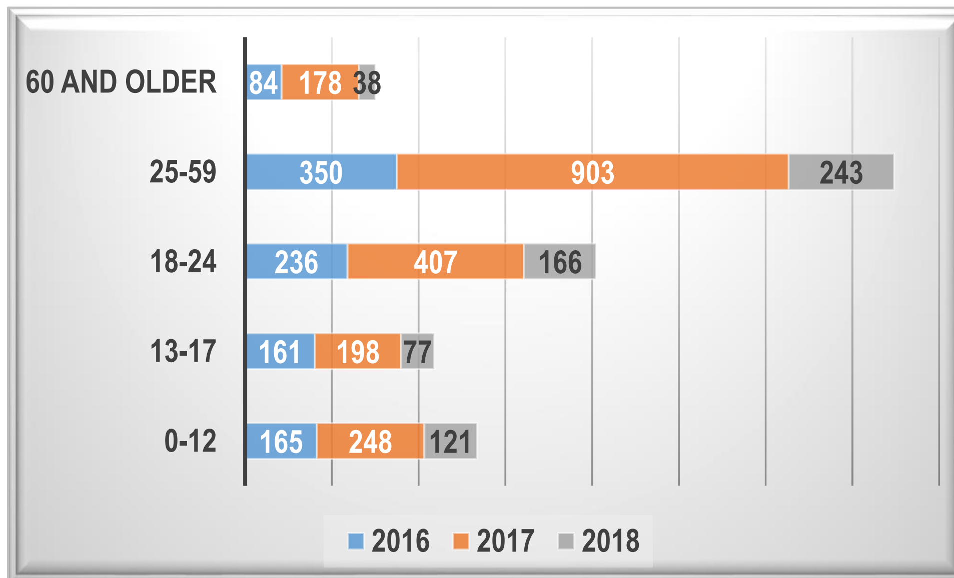
Figure 2.29. Number of ER Complaints related to Anxiety, Asthma, and Trauma: SRMC, August – December, 2017



Women's Coalition of St. Croix

The Women's Coalition of St. Croix has served a vital role as a provider of services to abused women and children for many years. Data provided by the agency reveal an increase in clients of all ages during 2017, compared to 2016 (Figure 2.30).

Figure 2.30. Age distribution of Women's Coalition of St. Croix clients by year: 2016 - 2018



This persists when looking at the figures for both Black/African American and Hispanic/Latino clients (Fig. 2.31) and children (Fig. 2.32).

Figure 2.31. Number of Clients Served by the Women's Coalition of St. Croix: 2016 - 2018

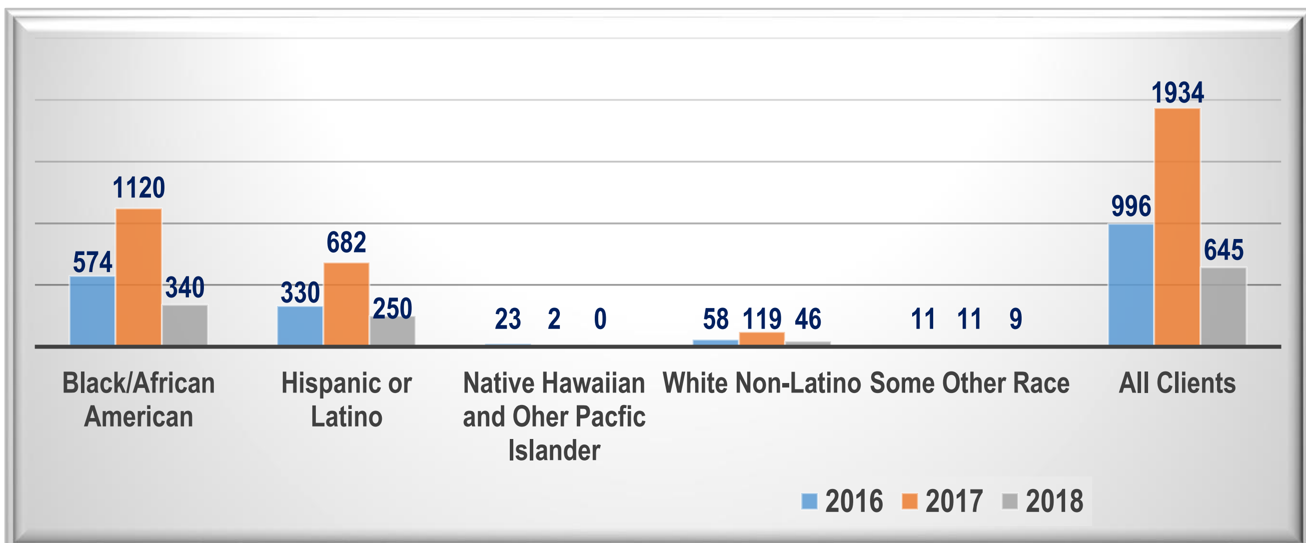
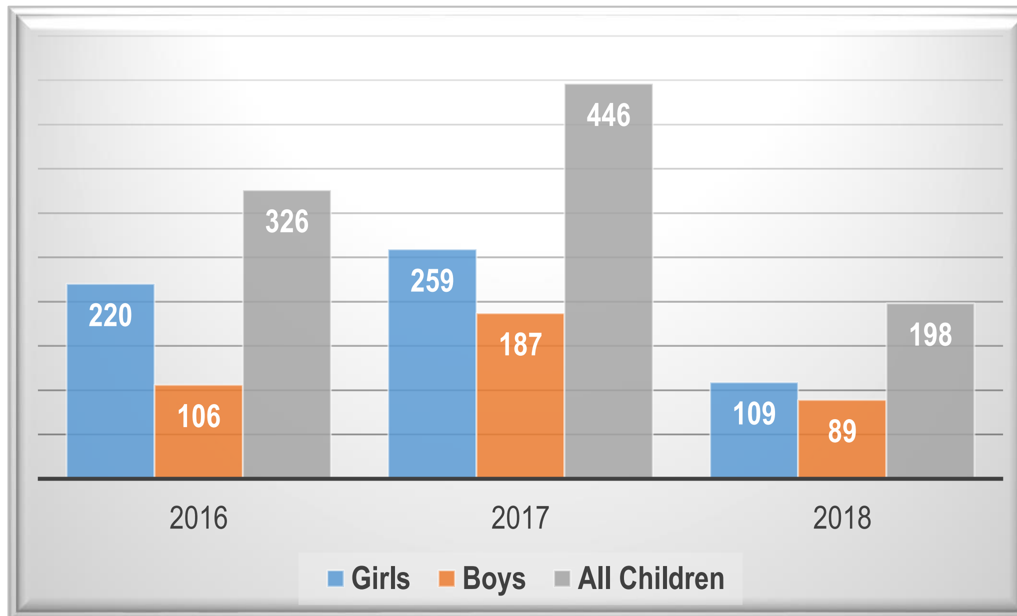


Figure 2.32. Number of Children Served by the Women's Coalition of St. Croix: 2016 – 2018



Resources Available to provide Health Services

The influx of funding and human resources during the recovery phase have expanded the network of care in the Territory. For example, Pafford Medical Services of Hope deployed a team of 8 [five paramedics, one nurse and two EMTs] to augment the local ambulance service on the island of St. Croix, providing services from October 2017 through January 2018 (*Personal Communication, Director, EMS, 1/2018*; http://www.magnoliareporter.com/news.) Pafford's team and supplies helped the St. Croix Ambulance respond to its EMS system calls.

Other volunteer organizations, including the Red Cross, provided much needed support and resources during the immediate response and recovery period. Crisis counseling services were also provided as part of the response efforts and remain available through a private entity on the island of St. Croix, funded in part by grants from the federal government. One year following the major hurricanes, the local health system continues efforts to regain capacity lost due to the damage to facilities, and exodus of many health care providers who left for a wide range of reasons, often attributable to the direct and indirect impact of the hurricanes. This section describes the current resources available to provide health services to children and families in the Territory.

Primary Care: In the FY2019 Budget hearings, the Commissioner of the Department Health outlined financial resources requested, in addition to the Federal Grant funds, to provide essential public health services to the population. Of a total budget of $57,686,960, 36% or $20,974,707.00 is

projected for 28 Federal grants. The majority of these grants are to provide primary health care services to the vulnerable in the population. In addition, local funds requested in the amounts of $31,987,584 or 56% from the General Fund; $2,554,707 or 4% from the Health Revolving Fund; and $2,170,339 or 4% from Non-Appropriated Funds will support personnel and operating funds for all other department services and programs not funded by Federal Grants.

The VIDOH clinics on all three islands are operational and generally open to the public M-F, from 8:00-5:00 pm. Intermittent closings due to problems related to the physical structures at Charles Harwood Complex continue to occur, so clients are urged to call ahead for appointments, though walk-ins are also possible.

One of two FQHCs in the Territory, Frederiksted Health Care (FHC) provides primary care services to the residents of St. Croix, operating from five sites across the island. The five sites are as follows: Frederiksted Health Center-Ingeborg Nesbitt, Strand Street, Frederiksted; St. Croix Educational Complex-School Based Health Center, Kingshill; Frederiksted Health Care Dental East, Easterly Building, Orange Grove, Christiansted; Frederiksted Northshore Health Center, #6C La Grande Princesse, Christiansted; and Frederiksted Health Care Mid Island Health Center, 4100 Sion Farm Suite 5 & 6 (FHC CEO, FY 2019 Budget Testimony, June 2018). FHC has increased capacity since the storms in order to meet the demand for services, a direct impact of the loss of capacity by the local department of health and the departure of health care providers following the hurricanes (Webster, 2018). During the FY2019 Budget Hearing cycle, FHC requested $2,640,000 from the local government, to augment federal grants that allow the entity to continue to serve the vulnerable segments of the population that rely on the health center for primary care services. FHC employs 110 full time staff and contracts with an additional 15 providers (Webster, 2018).

As a provider of primary care services, STEEMCC also presented its FY2019 budget request, noting that it provides health services from three sources of funding, namely Program Income, $3,998, 939 (52%); V.I. Government Grant, $1,815, 615 (24%); federal grants, $1,809. 380 (24%), for $7, 623, 934. The amount of $1,815,615 was the amount requested so contribute to STEEMCC's operations at its budget hearing testimony. These funds support a staff of 87 – 86 of whom are full-time employees (Smith, 2018).

Existing Gaps with Respect to Health Services

A key gap with respect to health services remains in the status of the inpatient care provided by the local hospitals and the access to primary care provided by the local Department of Health, FQHCs as well as with long term care facilities.

Inpatient Care

On St. Croix, as of November 2018, the Juan Luis Hospital was still without a functioning dialysis unit. Operating room capacity was reduced to one, and the number of beds reduced by 50%. Loss of operating rooms and specialists warranted continued transfer of patients off island for care. A number of evacuees remain in care across the mainland US. SRMC on St. Thomas also continues at reduced capacity. The reduction of inpatient beds, critical staff and the ability to provide specialty services such as radiation and medical oncology remains a major gap in services.

Primary Care

Gaps in primary care services accessible to vulnerable children and families in the USVI following the hurricanes of 2017 due to damage to the community health clinics of the VIDOH on all three major islands of St. Croix, St. Thomas and St. John. The VIDOH continues to provide primary care services in limited, cramped conditions, utilizing a mobile van and a temporary tent as service delivery sites on the island of St. Croix. The behavioral health services available one year following the storms may not be adequately reaching all those in need. The data from the community needs assessment suggests high levels of PTSD and depression in the school-age population surveyed, as well as in adults accessing primary health care services at the Federally Qualified Health Centers in the Territory.

Long-term Care

Long-term care services in the Territory remain a major concern for an aging population. The Herbert Grigg Home for the Elderly on St. Croix is slightly below census, primarily due to staff shortages. Home meal delivery and transportation services for the elderly are in operation at this time in both districts.

Priority Programmatic and Service Delivery Issues Related to Health and Health Services

In November 2017 and February 2018, the VIDOH collaborated with the CDC to conduct a Community Assessments for Public Health Emergency Response (CASPER) surveys to address Hurricanes Irma and Maria Recovery. The CASPER survey conducted found that 67% of households reported they were either very concerned or somewhat concerned about contracting mosquito-borne diseases. Additionally, 20% of households reported difficulty accessing needed medical care and over 50% of households had one or more members experiencing at least one behavioral health indicator of potential acute mental health issues.

The findings from this needs assessment suggest that access to medical care for chronic conditions, dental care, care for the elderly and the need for behavioral health services for children, adolescents and adults must be top priorities for the health care system recovery efforts. A comprehensive system of care in a community requires collaboration among leadership from a wide range of agencies and sectors to provide a network of health promoting services, in the areas of health, education, housing and human services, if the health outcomes for children and families in the Territory are to improve.

Section III: Current Status of Education for Children and Families

This section of the report provides a picture of the public education system, educational programs and services available for the children and families in the Territory following the passage of Hurricanes Irma and Maria. A summary of the programs and services available that support the educational needs of Virgin Islands children is presented. Secondary data from the VI Department of Education (VIDE) reports and budget hearings as well as newspaper articles from local and national media houses provide information on impacts of the hurricanes on the school system in the Territory and issues associated with implementing a recovery and return to more normal living conditions. Secondary data also provided information on the resources and programs available to ensure that the educational needs of the students are met following the disruption wrought by the hurricanes. The section closes with a summary of the existing gaps in the school system and priority programmatic and delivery services that are associated with the impacts of Hurricanes Irma and Maria on children and families of the Virgin Islands.

Programs and Services Available

The 2017-18 school year in the Virgin Islands was a major casualty of Hurricanes Irma and Maria. The children in the Territory experienced direct exposure to the disasters that disrupted their schooling and caused widespread damage. At the start of SY2017-2018, VIDE enrollment data records indicated that 25 private schools, both parochial and nonsectarian, enrolled 3,588 students while, for the same period, 27 public schools recorded enrollment totals of 10,868 students. For SY2018-2019, the fall enrollment (taken in October 2018), was 10,720, down 148 students from the previous school year (*See Table 3.1, below*.). However, as a result of the hurricanes, many school facilities were damaged and students across the Territory were out of school for more than a month. Kousky (2016) reports that after Hurricane Katrina 196,000 public school students missed a month or more of schooling along with losing their homes. The situation was similar for students in the USVI following the passage of Hurricanes Irma and Maria.

Table 3.1: Public School Enrollment by District: SY2017-2018 and SY2018-2019

	SY 2017-2018	SY 2018 - 2019
St. Croix	5,301	5,345
St. Thomas-St. John	5,567	5,375
Territory	**10,868**	**10,720**

In the immediate aftermath of the hurricanes, VIDE reported that across the Territory 10 schools had been shuttered; seven (7) schools in the St. Croix District (STX): (1) Lew Muckle, (2) Pearl B. Larsen, (3) Eulalie Rivera, (4) Arthur A. Richards, (5) Elena Christian, (6) John Woodson and (7) Alexander Henderson; and three (3) schools in the St. Thomas-St. John District (STTJ): (1) Addelita Cancryn Junior High School, (2) E Benjamin Oliver Elementary School, and (3) Guy Benjamin Community Center (McCollum, 2018b, p.5). The Commissioner of Education explained that the school system also lost a student-led chicken farm, two aqua farms used to produce fresh school lunches, and $3 million worth of musical instruments and band uniforms. She further added that as many as 58,000 books that had been sent home with students over the summer also remain unaccounted for (Craig 2018).

Double Session School Schedule

Due to the staggering amount of damage to the educational infrastructure creative approaches were employed to facilitate the resumption of classes in the Territory. When classes resumed in October 2017 in the St. Thomas-St. John school district, students from different schools were combined in a newly instituted system of double sessions. Students in K through 3rd grade for certain schools reported to classes at the same time in the morning hours (7:30 a.m.-11:30 a.m., with lunch from 11:30-12:00 noon); and after lunch, students for those schools, in the 4th, 5th, and 6th grades would report for classes (O'Connor, 2017) and be dismissed at 4:40 p.m. In the St. Croix district, October 23, 2017 marked the partial reopening of schools that also operated on double sessions. All the students who attended for the morning sessions arrived at 7:30 a.m. and had lunch from 11:30 a.m. to noon while afternoon session students had lunch from noon to 12:30 p.m. and were dismissed at 4:30 p.m. (St. Croix Source October 2017 & VI Consortium, 2017). Across the Territory, classes in the parochial and private schools generally resumed sooner than classes in the public schools. On St. Thomas classes for some private and parochial school students started on September 27, and on October 02, 2017 in St. Croix.

Disasters can interrupt children's education by destroying schools, terminating school programs, and displacing families. The literature shows that when schools cannot reopen after a disaster, not only are children's education disrupted, but sometimes some children may have to remain in potentially unsafe conditions. Additionally, there is a concern that if no alternative child care is available then the parents of households with younger children may be prevented from returning to work, thereby creating economic stress due to a lack of income (Kousky, 2016;

Zheteyeva, et al. 2017). In the case of the US Virgin Islands, the 2017 hurricanes also interrupted professional development opportunities and standardized testing schedules. The VIDE reports that no professional development opportunities or standardized testing took place in SY2017-2018.

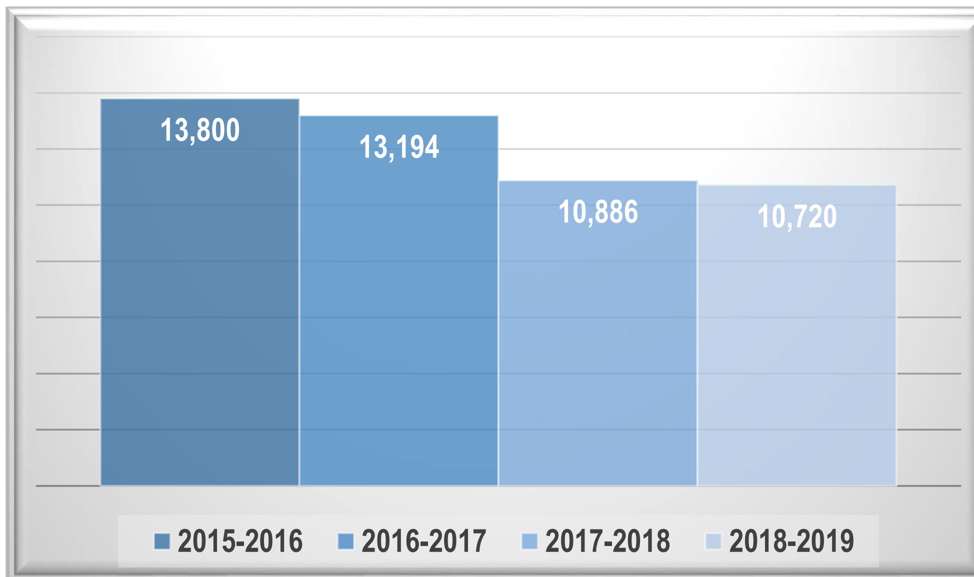
At the beginning of the new school year, September 2018, all schools in the Territory resumed full-day sessions.

Resources Available to provide Educational Services

One year later, 25 public schools in the US Virgin Islands resumed full sessions for the 2018-2019 school year. Two elementary schools that had operated at the beginning of SY2017-2018 were not re-opened in SY2018-2019 and those students were reassigned to two other public elementary schools that sustained minimal damage from the hurricanes and had the capacity to absorb the enrollment from the two schools that were shuttered. The resumption of all public schools to full-day instructional schedules was made possible by the work of contractors such as AECOM that worked Territory-wide on the sprung structures and modular units used to house school administration and the modular units to convene classes. APTIM, another contractor, worked on five schools in the St. Croix district focusing on repairs and remediation efforts. (VI Consortium July 2018). The U.S. Virgin Islands Department of Education has erected temporary facilities, comprising of more than 200 modular buildings and sprung structures in order to return 600 classrooms and facilities, such as libraries and cafeterias, to capacity to house students and staff for the 2018-2019 school year (Garner, 2018; HUD CDBG-DR Action Plan report, 2018). In August 2018, it was announced that 20 of the public schools would be ready to accept students on September 4, leaving some facilities still unprepared to house students and staff. It was anticipated that the remaining schools would commence classes two weeks later (*VI Consortium*, August 2018). Figure 3.1 below shows the signage on the perimeter fence of the Gladys Abraham Elementary school campus that is temporarily located in modular units on the grounds of the Lockhart Elementary school in St. Thomas.

Figure 3.1. Signage on Perimeter Fence of Gladys Abraham Elementary School

Figure 3.2. USVI Public School Enrollment: SY2015-2016 to SY2018-2019



Source: Office of Planning, Research & Evaluation, VI Department of Education

Although the public-school enrollment across the Territory continued its decline from 13,800 in SY2015-2016 to 10,720 in SY2018-2019 (Figure 3.2) the focus has shifted to the need for major reconstruction of permanent structures and full replacement of approximately three schools that have already been approved for demolition and rebuilding (Garner, 2018).

The proposed budget for the SY2018-2019 is $172,209,001. Table 3.2 below provides information on the disbursement of the funds. According to the VIDE Commissioner's July 2018 testimony, before the Finance Committee in the 32nd Legislature, the proposed FY2019 budget is

limited to the basic Operational needs of the Department. However, because of the impact of the hurricanes, the Department can expect increases in operational costs until the Federal Emergency Management Agency (FEMA) Project Worksheets (PWs) are obligated to facilitate a revolving reimbursement of funds (McCollum 2018b).

Table 3.2: VIDE Fiscal Year (FY) 2018-2019 Budget

BUDGET FUNDS ALLOCATED FY 2018 - 2019	AMOUNT
St. Croix District Personnel, Fringe Benefits, Supplies, Other Services, and Accreditation	$66,026,801
St. Thomas-St. John District Personnel, Fringe Benefits, Supplies, Other Services, and Accreditation	$61,332,838
State Educational Agency (SEA)	$44,849,362
Total Disbursement	**$172,209,001**

Source: VIDE Budget Hearing Testimony, July 2018

It is estimated that the total unmet need for the U.S. Virgin Islands' education infrastructure is $904 million. As of April 2018, VIDE has submitted $55.6 million in projects to the FEMA Public Assistance (PA) program, of which $1 million has been obligated (HUD CDBG-DR Action Plan report, 2018). Notably, as part of the disaster recovery there is supplemental legislation that updated the Robert T. Stafford Disaster Relief and Emergency Assistance Act. This legislation allows the Territory to address deferred maintenance issues and conduct resilience upgrades.

In discussing resources available to provide educational services in the Territory, post Hurricanes Irma and Maria, the Commissioner of Education shared with the research team information related to resources to support both infrastructure – facilities – and educational support for students – books for home libraries. The Commissioner underscored the support being received from the Federal government and noted that through the funding provided by federal agencies, VIDE will be able to provide better equipped classrooms and, as a priority, procure as many as 15 new school buses to provide transportation for students, including 5 for the special education population, in the St. Croix and St. Thomas-St. John districts (KI, November 2018).

The Commissioner further indicated that due to numerous physical plant issues and the extensive loss of student and teacher resource materials, the VIDE will seek to establish an agreement with the Department of Planning and Natural Resources, which has oversight for the libraries, to extend library hours on weekdays and weekends to accommodate students. Additionally, there is a program, in collaboration with World Book Inc., to help rebuild home

libraries because students also lost the books in their homes as a result of the hurricanes. The next phase for VIDE involves replacing the modular units with permanent structures that will provide a more conducive learning environment for students in public schools in the Territory.

Existing Gaps with Respect to Educational Services

Loss of Teachers and Staff

One of the more glaring gaps within the public-school system in the USVI is the high number of teaching vacancies within the school system. This has been a constant challenge for the Department due to the low levels of compensation offered to teachers and inability to compete nationally with other school districts. At the start of the SY2017-2018, the Commissioner, in her Budget Hearing Testimony before the 32nd Legislature of the US Virgin Islands, noted that the Department had a total of 151 teaching vacancies, 70 in the St. Thomas-St. John District and 81 in the St. Croix District. Additionally, VIDE had 282 professionals, who could retire imminently, including 131 teachers and 27 administrators (McCollum, August 2017, p.3). The February 2018 VIDE post-hurricane report stated that VIDE had received an additional 60 separations: 17 teachers from the St. Thomas-St. John district and 13 from the St. Croix district and the remaining 30 were support staff. The Department was utilizing a substitute pool of teachers comprising of 150 individuals: 62 in the St. Croix district and 88 in the St. Thomas-St. John district (McCollum 2018a, p.3). Later in the year, on June 29, 2018, the VIDE reported that it had a total of 101 teaching vacancies, 60 in the St. Thomas-St. John District and 41 in the St. Croix District. Although it has difficulty attracting and retaining new personnel, the Department hired a total of 53 teachers: 25 in the St. Croix District and 28 in the St. Thomas-St. John District. Of the 53 new hires, 16 came from the 2017 graduating class of the University of the Virgin Islands (McCollum 2018b p. 4-5).

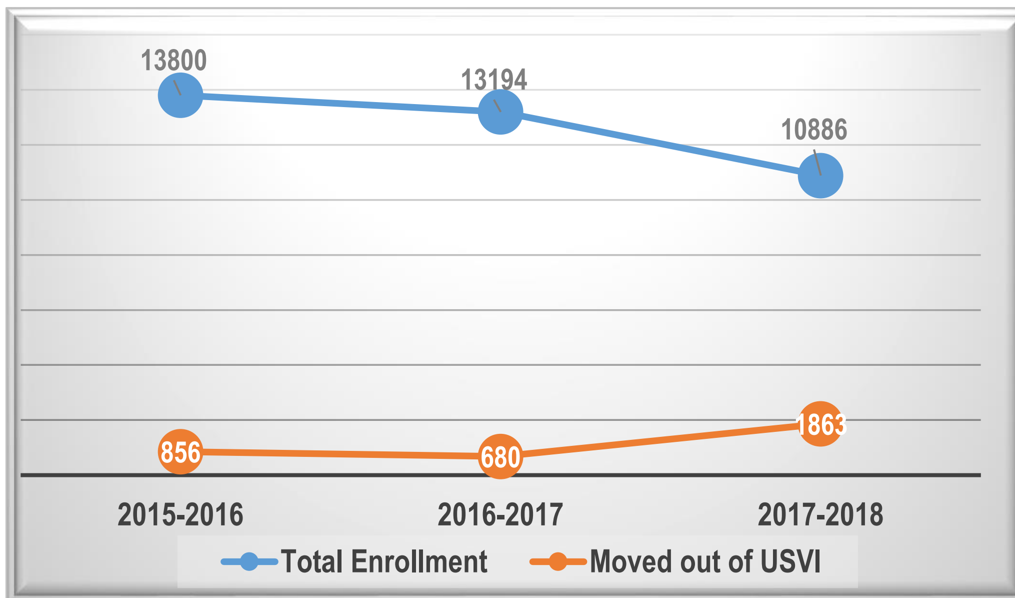
Loss of Students

According to the Commissioner of Education in her SY2017–2018 budget testimony before the 32nd Legislature, the student enrollment has been declining for the past nine years. It was noted that the gradual decline in enrollment has not resulted in a reduction in operational and instructional services to students because the same level of resources is needed for essential student services such as the school lunch program, procurement of student supplies, maintenance, student transportation, and instructional personnel including a substitute pool of teachers (McCollum

2018a p.2). However, the decline in the total public-school enrollment after the passage of Hurricanes Irma and Maria eclipsed the gradual decline observed for the previous nine school years.

More specifically, public school enrollment fell from 13,194 in SY2016- 2017 to 10,886 in SY2017 – 2018. The total enrollment for SY2018 – 2019 (10,720) shows that the trend towards further decline in the public student population is continuing (Figure 3.3).

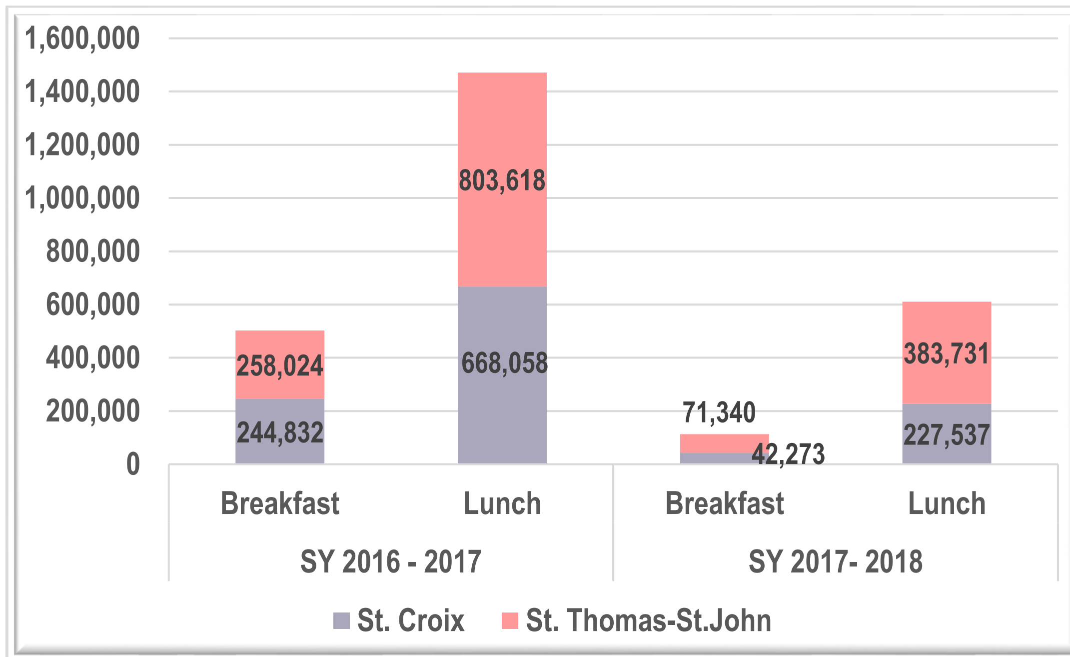
Figure 3.3. Public School Enrollment and Student Withdrawal: SY2015-2016 to SY2017-2018



Source: Office of Planning, Research & Evaluation, VI Department of Education

This significant reduction in enrollment has implications for other programs such as the school meal programs. For instance, the National School Lunch Program (NSLP) provided a total of 1,471,676 nutritionally balanced lunches and the School Breakfast Program (SBP) provided a total of 503,073 breakfasts at a combined reimbursable value of approximately 5 million dollars ($4,918,989.86) to students in the Territory in SY2016-2017. In comparison, the NSLP and SBP only earned a combined reimbursement value of just over 1.5 million dollars ($1,673,143.47) in SY 2017-2018, as a result of the impact of Hurricanes Irma and Maria (a reimbursement loss of $3,245,846.39 (McCollum, 2018b p.7)). Figure 3.4 and Table 3.3 confirm this dramatic fall off in the provision of breakfasts and lunches for students in public schools Territory-wide. There was a negative percentage change from SY2016-2017 to SY2017-2018 for both services in each district due in part to the extensive physical plant damage and a reduced student population in the aftermath of the hurricanes.

Figure 3.4. USVI School Breakfast and Lunch Programs: SY2016-2017 and SY 2017-2018



Source: VIDE (Correspondence with Superintendents)

Table 3.3. USVI School Breakfast and Lunch Programs: SY2016-2017 and SY2017-2018

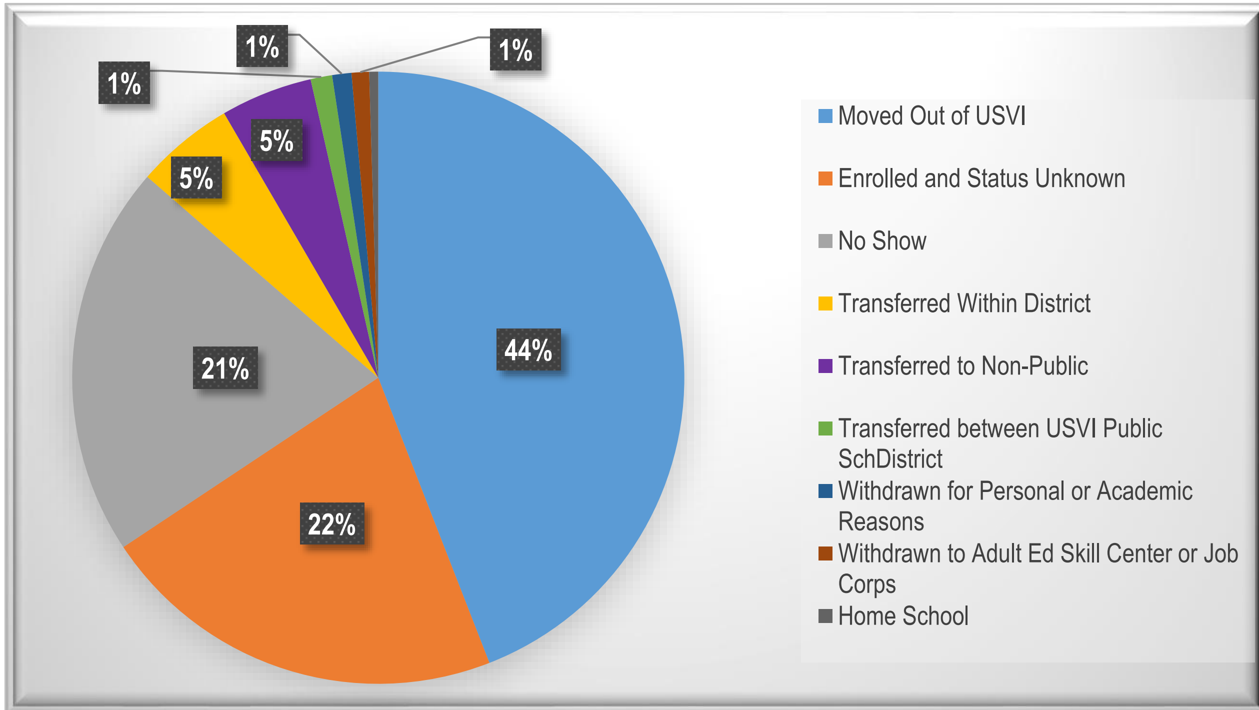
	St. Croix			St. Thomas-St. John		
	SY2016-2017	SY2017-2018	Percentage Change	SY2016-2017	SY2017-2018	Percentage Change
Breakfast	244,832	42,273	-82.73%	258,024	71,340	-72.35%
Lunch	668,058	227,537	-65.94%	803,618	383,731	-52.25%

Source: VIDE (Correspondence with Superintendents)

The 2017 hurricanes undoubtedly served as a catalyst for the exodus of school age children from the US Virgin Islands public school system. Figure 3.3 shows that more than two and one-half times as many students left the Territory in the SY2017-2018, than those who left in SY2016-2017. This represents a 274% increase in the number of students who left the school system in SY2017-2018. Additionally, the VIDE withdrawal data show that of the 1863 students who separated from the public schools in SY 2017-2018, 44% moved out of the Territory to attend schools elsewhere while an additional 22% were enrolled but their status is unknown (Figure 3.5). The fate of these students should be of concern to the VIDE, and to policymakers in general, because the sustainability of the school population and the future of the VI workforce is at stake. Kousky (2016) cautions that, if after a disaster, households reduce their investments in children's education - particularly at critical periods in children's development - the effects can persist into adulthood and

even to the next generation. The plans to re-engage students who have withdrawn and to maintain or grow the public school population are critical gap areas that will be addressed, in part, through the proposed demolition and construction of new schools for the Territory.

Figure 3.5. Student Withdrawal from USVI Public Schools: SY2017-2018



Source: Office of Planning, Research & Evaluation, VI Department of Education

Loss of Infrastructure for After School Programs

Reports from the St. Thomas-St John District state that no after school programs were held for SY 2017-2018. Additionally, summer programs were scaled back from 7 sites to 5 sites, and the absence of internet connectivity on campuses rendered the use of online resources and programs such as *PLATO*, *iReady* intervention, *PowerSchool*, and *TalentEd* inoperable. In focus group discussions with public school administrators, teachers, and counselors, they spoke passionately about the lack of library facilities, gymnasiums, safe play grounds, and media centers. The Department has submitted a supplemental budget outlining additional funds needed to promote intervention programs for K-3 programs, territorially, in order to increase reading and mathematics proficiencies and scores; as well as programs to allow our students to participate in Music in the School Programs at all levels, Jazz for Young People, Artist in Residence School Program, and the Battle of the Bands activities. The supplemental budget funding will also address educational

services such as funding for increasing school busing costs, and maintaining and expanding accreditation of school facilities.

Priority Programmatic and Service Delivery Issues Related to Education and Educational Services

The American Red Cross (ARC) findings from a Community Recovery Needs Assessment (CRNA) in the aftermath of the hurricanes showed that while respondents were coping well with school closures, part-time schedules and a complete loss of after school programs, more than 80% of teachers in the St. Croix and St. Thomas-St. John districts reported difficulties engaging students, and problems with morale. The ARC recommends that the issue of mental health be addressed by schools with targeted child-centered programs for teachers, students and parents (ARC Community Recovery Needs Assessment – personal correspondence). This priority need was corroborated by school nurses, school counselors and teachers in focus group discussions. These professionals indicated that they lack the resources necessary to address the mental health issues their students and families are experiencing in the aftermath of the hurricanes. Additionally, with high school counselor-to-student ratios (1:250) and scheduling limitations associated with itinerant rather than residential school counselors, the quality of counselling service to students needing mental health care in the public-school system is less than optimal.

Notably, research on children displaced by Hurricane Katrina suggests that the mental well-being of the parents/caregivers influenced the mental well-being of children. Empirical evidence shows that some parents experienced unresolved hurricane-related stressors (including homelessness and physical and financial adversity) at a two-year follow-up assessment. For children in that setting, where there have been few mental health providers to assist with psychological distress from the hurricane, behaviors are manifested in the classroom setting in the form of disciplinary issues, as well as school nonattendance (Cain et al., 2010). In the US Virgin Islands, following the compounded trauma associated with the hurricanes, and a school year of double session classes, followed by further assimilation processes into a new school setting, the mental well-being of students in the Territory should be a real concern. The extant literature shows that "…children exposed to catastrophic events are at heightened risk of symptoms of depression and anxiety… behavioral problems [and] diminished cognitive functioning" (Morris et al, 2007 p. 71; SAMSHA, 2018) as well as other post-disaster mental health issues that emerge over time (Madrid & Grant 2008). In fact, the parents and staff who support school-age students will also

require long-term mental health care in order to adequately care for the needs of child disaster survivors (Madrid & Grant, 2008; Prinstein et al., 1996).

Other priority programmatic and service delivery issues in the US Virgin Islands public education system post-Hurricanes Irma and Maria include questions pertaining to possible negative effects that requirements that students attend school on a double-session schedule (SY2017-2018) for a maximum of four contact hours a day, and sometimes at a location different from their original home school (prior to the hurricanes) could have on students' academic performance. In focus group discussions with public school teachers, counselors, school nurses, and administrators they revealed that students' academic performance has regressed after the hurricanes, as observed by classroom teachers and as measured by the standardized achievement tests.

The USVI utilizes the Smarter Balanced Assessment as a standardized measure of whether children (in grades 3-6) have grade level mastery of skills such as critical thinking, writing, and problem solving. While no standardized testing was done in SY2017–2018, performance on the fall 2018 administration of the Smarter Balanced Assessment is the best proxy for examining whether the hurricanes, and related disruptions, to include double session classes and reduced instructional contact hours, may have negatively impacted student performance.

In Table 3.4A and Table 3.4B, the summary data available for the Smarter Balanced Assessment among third to sixth graders in the Territory show that up to the end of SY2016-2017 students in the St. Croix school district consistently outperformed students in St. Thomas-St. John school district in mastery of both English Language Arts and Mathematics. However, while the data for fall 2018 reflects some improvement in the percent of 3rd to 5th grade students performing at grade level in English in both districts, the percentage was lower for the 6th graders (Table 3.4A). For the fall 2018 assessment, in mathematics, there was a drop in the percentage of students performing at grade level for all grades except 4th grade for St. Croix, while in the St. Thomas-St. John District, results varied: the percentage of students performing at grade level remained the same for 6th grade; declined for 3rd grade; and showed some slight increase in the percentage of students performing at grade level for 4th and 5th grades (Table 3.4B). Though causal statements cannot be made regarding the passage of the hurricanes and any observed lower performance by students, the possibility that the disruptions of SY2017-2018 may have negatively impacted student performance, as reflected in the Smarter Balanced Assessment scores, must be considered.

Table 3.4A Smarter Balanced Scores: English Language Arts SY2016 – SY2017 and Fall 2018*

St. Croix	SY2015-2016	SY2016-2017	Fall 2018*
3rd	18.0%	19.7%	23.4%
4th	22.5%	18.8%	25.2%
5th	24.9%	21.5%	30.0%
6th	26.4%	28.1%	23.9%
St. Thomas-St. John			
3rd	12.0%	11.0%	18.0%
4th	10.0%	15.0%	20.0%
5th	13.0%	14.0%	23.0%
6th	12.0%	15.0%	13.0%

**Data available for only Fall 2018. No testing was done in SY2017-2018. [For the fall 2018 Smarter Balanced Assessment, students were assessed at the grade level in which they were enrolled during SY2017-2018].*

Table 3.4B Smarter Balanced Scores: Mathematics SY2016 – SY2017 and Fall 2018*

St. Croix	SY2015-2016	SY2016-2017	Fall 2018*
3rd	12.3%	15.5%	8.2%
4th	10.3%	11.4%	11.4%
5th	6.4%	11.8%	4.3%
6th	9.6%	13.4%	7.9%
St. Thomas-St. John			
3rd	8.0%	11.0%	6.0%
4th	3.0%	6.0%	9.0%
5th	2.0%	2.0%	3.0%
6th	1.0%	6.0%	6.0%

**Data available for only fall 2018. No testing was done in SY2017-2018. [For the fall 2018 Smarter Balanced Assessment, students were assessed at the grade level in which they were enrolled during SY2017-2018].*

The teachers expressed concerns about the regression in learning that has taken place, noting that it is especially evident among students with special needs. Speculative explanations include the fact that after the hurricanes special needs students did not have designated classroom spaces and teachers were forced to move around and "make do" in spaces that were not designed to meet their needs. However, in the absence of available data from standardized testing, it is difficult for this team of researchers to independently verify the teachers' observations. At the end of SY2018- 2019, with the resumption of full sessions and standardized testing, the VIDE

anticipates that it will be able to examine data that may provide further insights about the impact of the disruptions on students' educational development.

Additionally, in addition to the widespread damage to physical plant of public schools and supporting facilities and the levels of student separation across the Territory, schools have experienced challenges accessing and verifying school records for students who have requested transfers and for students who were displaced. An examination of the extent to which the hurricanes prevented the timely delivery of both standard and special educational services would be important to inform revised policies and procedures and increase resilience in the system for responding to future disruptions. These are all critical gap areas and priority considerations for the VIDE going forward.

Section IV: Current Status of Human Services for Children and Families

This section of the report focuses on the current status of select human services programs offered in the USVI that target vulnerable children and families. As reported by the Commissioner of the Department of Human Services in her Budget Hearing testimony before the 32nd Legislature (June 2018), the Virgin Islands Department of Human Services (VIDHS) is the designated State Agency "… for all publicly financed social service programs, except those in public health and housing … [and] provides services to the poor, persons with disabilities, persons in need of supervision (PINS), the elderly and low income families (p.1)".

Some of the key mechanisms utilized by the VIDHS in meeting its State Agency mandate are four federally funded programs – the Supplemental Nutrition Assistance Program (SNAP), the Social Services Block Grant (SSBG), the Head Start (HS)/Early Head Start (EHS) Programs (EHS is administered by Lutheran Social Services of the Virgin Islands (LSSVI).) and the Temporary Assistance for Needy Families Program (TANF). With respect to the SSBG program, particular attention will be given to the Foster Care Program and centers licensed by VIDHS to provide services to children and families in the USVI community. In addition to supporting administrative tasks associated with the licensure of centers that provide services to children and youth in the community, SSBG funds are also available for eligible parents to enroll their child or children in licensed Day Care Centers across the Territory.

Given the thrust of the community needs assessment as well as the focus of these human services programs, these are key programs that have major implications for vulnerable children and families in the Territory. Therefore, examining the current status of the identified programs in the aftermath of Hurricanes Irma and Maria is important to understanding community needs, gaps, and critical issues that need to be addressed with respect to human services for the population of interest.

As with the areas of health and education previously presented, this section will first provide a snapshot of the SNAP, HS, EHS, TANF, and the SSBG programs and the services available through these programs (in the aftermath of Hurricanes Irma and Maria). In addition to presenting a snapshot of these programs – administered by the VIDHS and LSSVI (EHS), this section also provides a snapshot of day care center programs and services available through private providers, who are licensed by VIDHS. As previously noted (Chapter II), information describing the HS and

EHS programs and services was extracted from Program Information Reports (PIRs) available *http://hses.ohs.acf.hhs.gov/pir* and TANF data received from VIDHS as well as retrieved from *https://www.acf.hhs.gov/ofa/resource/tanf-caseload-data-2018*.

The brief description of select human services programs and services is followed by a presentation of the available resources for delivering the programs and related services. Existing gaps related to the identified programs and related services are then presented. This section of the report ends with a delineation of priority programmatic and service delivery issues related to the identified human services programs in the USVI in the aftermath of Hurricanes Irma and Maria.

Programs and Services Available

Supplemental Nutrition Assistance Program

The VIDHS provides information on benefits available to eligible children and families through SNAP (*http://www.dhs.gov.vi/financial_programs/documents/2019-COLAAdjustmentsandDeductionsTable10-18.pdf*). The focus of this program is the provision of funds for children and families below the poverty level to be able to afford nutritious meals. SNAP, previously called the Food Stamp Program, has been in place in the USVI for close to four decades. Table 4.1 captures information reported by the U.S. Department of Agriculture, Food Nutrition Service, relative to SNAP in the USVI for FY2015-2016 and data from VIDHS for FY2016-2017 and FY2017-2018.

Table 4.1. SNAP Participation and Benefits by Persons and Households in the USVI: FY2015-2016 to FY2017-2018

Period	Persons Participating (Monthly average)	Households Participating (Monthly Average)	Total Issuance	Average Monthly Benefits per Person	Average Monthly Benefit per Household
FY2017-2018	28,239	13,816	$60,744,544	$179.26	$366.39
FY2016-2017	26,688	12,693	$54,646,965	$170.64	$358.78
FY2015-2016	27,760	13,068	$56,776,573	$170.41	$361.99

As would be expected in the aftermath of Hurricanes Irma and Maria, which led to economic disruptions, closure of businesses, and layoffs, the fiscal year following the disruptions

resulted in higher monthly averages of both the number of participating households as well as number of participating persons (Table 4.1). Additionally, the average monthly benefit per person increased by approximately 5%, going from an average of $170.41 and $170.64 in FY2016 and FY2017, respectively, to $179.26 in FY2018. Based on the average monthly benefits per person as well as per household, the USVI is ranked 4th for the fiscal years in question, with only Hawaii, Alaska, and California having higher average monthly benefits per person and per household for the periods in question.

SNAP data received from VIDHS for FY2016-2017 and FY2017-2018 allow for a comparative analysis of SNAP benefits the month immediately preceding Hurricanes Irma and Maria, the actual month in which Hurricanes Irma and Maria hit the USVI, and one year after the passage of the two hurricanes. These data are captured in Table 4.2 and show that in every category, there are increases one year after the hurricanes when considering overall amount of benefits disbursed, as well as the number of participating persons and households. This is true whether comparing these statistics for the month prior to the hurricanes (August 2017) and September 2018, one year after the hurricanes, or whether comparing benefits disbursed and persons and households participating the month of the passage of the hurricanes (September 2017) and September 2018, one year later. Table 4.2 reveals an 18.6% increase in the number of participating households from September 2017 to September 2018, which resulted in an increase in overall benefits of 16%. The decrease in the number of persons and households receiving SNAP benefits from August 2017 to September 2017 could be the result of residents leaving the Territory in the aftermath of the hurricanes.

Table 4.2. SNAP Benefits in the US Virgin Islands – Percentage changes after Hurricanes Irma and Maria

	September 2017	August 2017	September 2018	Percent Change – Sept. 2018 vs	
				August 2017	September 2017
Benefits	$4,292,340	$4,411,883	$4,977,497	+12.8%	+16.0%
Participating Persons	25,406	25,867	28,933	+11.9%	+13.9%
Participating Households	12,028	12,363	14,260	+15.3%	+18.6%

Source: VIDHS; Note: Numbers do not include D-SNAP benefits.

In response to the passage of Hurricanes Irma and Maria, and the Presidential Disaster Declaration, a one-time disbursement of funds, through the Disaster Supplemental Nutrition Assistance Program (D-SNAP), was made available to residents in the USVI who would not

ordinarily be eligible for SNAP benefits. This was done in recognition of the realities of residents' limited access to financial resources and challenges associated with damaged or loss of homes, which created new or increased need for assistance in the Territory. Thus, following the passage of Hurricanes Irma and Maria, the VIDHS Division of Family Assistance processed approximately 30,316 applications for D-SNAP benefits. Of these, 28, 164 were deemed eligible applicants; 1,783 were ineligible applicants; 198 were cancelled applications; and 171 were withdrawn applications. The eligible applications represented 28,164 households and 57,616 persons. Approximately $30 million in D-SNAP funds were disbursed to eligible households in the USVI.

Head Start (HS) and Early Head Start (EHS) Programs

In its role as State Agency for administering publicly funded social service programs, VIDHS administers the *Head Start (HS)* program in the USVI. The HS program in the USVI is the most comprehensive childhood program in the Territory and is funded to provide services to 894 eligible children annually (Michael, et al., 2016). The program is center-based and normally operates 15 centers with 45 classrooms across the two districts, during a 166-day school year, where teachers and assistant teachers provide instruction and other services to children enrolled in the program.

However, since the passage of Hurricanes Irma and Maria, the HS program in the Territory has had to consolidate classrooms due to damage to some centers in the St. Croix District, as well as the St. Thomas-St. John District. In the St. Croix District, two Head Start Centers remain closed in the aftermath of Hurricane Maria, namely: Marley Head Start Center (one classroom) and Profit Head Start Center (two classrooms). In the St. Thomas-St. John District, two Head Start Centers remain closed in the aftermath of Hurricane Irma, namely, Cruz Bay Head Start on St. John and Minetta Mitchell Head Start Center (five classrooms) on St. Thomas. The Minetta Mitchell Head Start Center classrooms have been relocated to the Sugar Estate site, where conference rooms and other common spaces have been transformed into classrooms.

The *Early Head Start (EHS)* program is administered by LSSVI in the St. Croix District. The program operates two centers, one in the west and one in the north central area of St. Croix. There are three components to the EHS program – a Center Based program, a Home-Based program, and a Pregnant Women's program. Unlike the HS program, the Center-Based EHS program operates full-day, year-round for 72 children, 0 through 2 years of age. The Home-Based program is

supported by staff who are trained Home Visitors, with funds providing support for regular visits to 24 families in their homes. The Pregnant Women's program supports 24 participants. As with the Home-Based program, the Pregnant Women's program provides for Home Visitors to make home visits to expectant mothers to support them in understanding and practicing good health practices during their prenatal months. EHS also provides support for mothers in the early months after delivery, focused on fostering good health outcomes for the infants and young mothers (*LSSVI, n.d., https://lssvi.org/what-we-do/care-for-children/early-head-start*). Neither of the EHS program's facilities received structural damage as a result of Hurricane Irma or Hurricane Maria. Both centers (east and west) reopened and received the EHS family and children within a month of the passage of the hurricanes.

The findings presented below relative to enrollment, medical and dental care, and family services for the HS and EHS programs were extracted from Program Information Reports (PIRs) for the HS and EHS programs in the US Virgin Islands for SY2015-2016 through SY2017-2018. These reports are part of a national data repository which houses program information reports for all HS and EHS programs across the US, Puerto Rico, and the USVI.

Enrollment

Figure 4.1. Head Start and Early Head Start Enrollment: SY2015-2016 to SY2017-2018

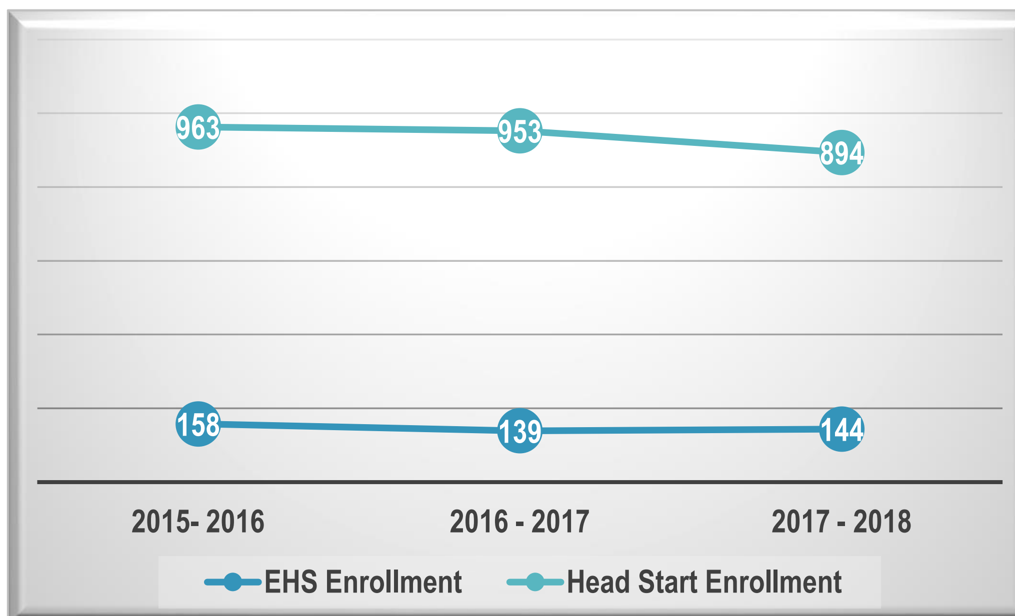


Figure 4.1 captures information about the enrollment levels in the HS and EHS programs over the past three school years. Notably, the HS enrollment decreased each school year, with the lowest enrollment registered for SY2017-2018, representing a 7.2% reduction in enrollment from SY2015-2016 to SY2017-2018. Of note is that the enrollment level for SY2017-2018 represents the

enrollment level at which the HS program in the USVI is funded by the Administration for Children and Families. In years when the HS enrollment exceeds 894, local funds are used to supplement the 894 slots that are federally funded.

Though the federally funded HS slots in the USVI have been capped at 894, there has historically been waiting lists of children whose families desire to participate in the HS program. For SY2014-2015 through SY2016-2017, the waiting list for HS ranged from 447 to 548, territorially (Michael et al., 2016). In the aftermath of Hurricanes Irma and Maria, though there are still waiting lists of children waiting to be enrolled in the HS program, the overall numbers have dropped significantly from the three school years just referenced. Specifically, for SY2017-2018, the territorial waiting list was 89, with 55 children on the STTJ waiting list and 34 on the STX waiting list. Those numbers have started increasing again, as the territorial waiting list is at 243, with 175 children on the waiting list for the STTJ District and 68 on the waiting list for the STX District (Personal communication, USVI HS Program). The low numbers on the waiting list for SY2017-2018 could be indicative of families leaving the Territory in the months right after the storms.

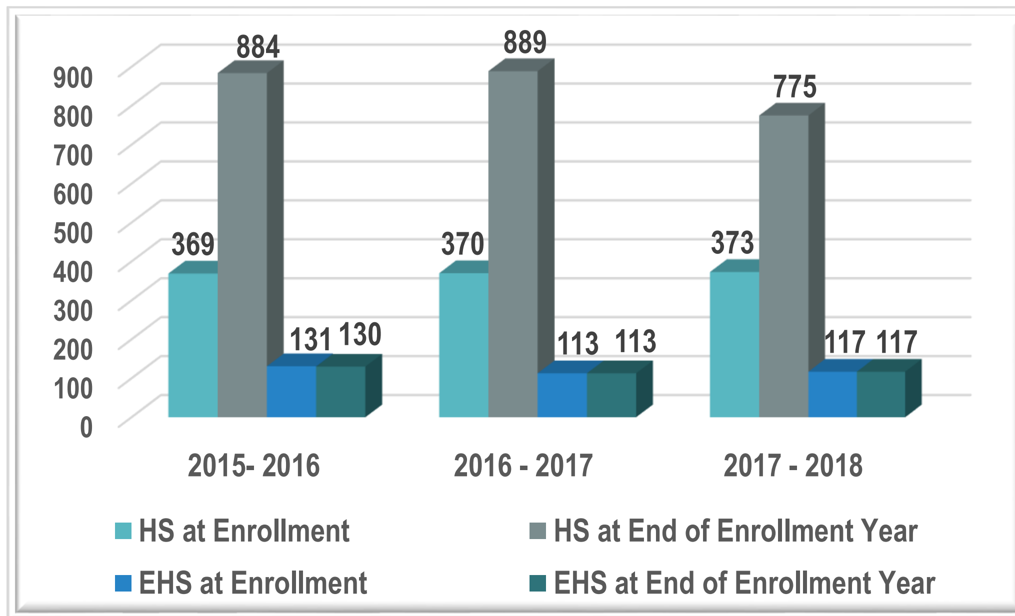
Though there were also declines in enrollment for EHS from SY2015-2016 to SY2017-2018, the largest decline was between SY2015-2016 and SY2016-2017, representing a 12% decline. It should be noted that the EHS enrollment figures reflect both children and pregnant women, with 26 pregnant women included in the enrollment numbers and 118 children in the home-based and center-based programs during SY 2017-2018 (Annual Report, 2018).

Access to Health and Dental Screening and Medical and Dental Health Services

Access to health care is one of the core elements of both the HS and EHS programs. The literature shows that HS participation increases the chances of children from low income families obtaining dental care, health insurance coverage and positive health outcomes (Lee, 2016). Based on the information captured in Figure 4.2, while EHS children had access to health insurance throughout their participation in the program for all three school years noted, the same was not the case for HS children. Of note, for SY 2015-2016 and SY2017-2018, there was a significant gap in the number of HS children who had health insurance (a proxy for access to health care) at the end of the HS school years. More specifically, of the 894 children enrolled in HS at any given point through the three school years captured in Figure 4.2, at the beginning of each school year fewer than half of the HS children had health insurance. For school years 2015-2016 and 2016-2017, 99%

of children had insurance at the end of the school years. However, for SY2017-2018, the school year in which the USVI experienced significant disruptions due to the passage of Hurricanes Irma and Maria, only about 2 in 5 HS children had insurance coverage at the beginning of the school year and approximately 87% (775 of 894) had health insurance at the end of the school year. For the 13% of HS children with no insurance at the end of SY2017-2018, it is unclear why the children would not have been covered through Medicaid or another type of insurance.

Figure 4.2. HS and EHS Children with Health Insurance at the Beginning and End of Enrollment: SY2015-2016 to SY2017-2018



Medical screenings are part of the services provided to HS and EHS children and families. Head Start requires all enrollees to undergo developmental, sensory and behavioral screenings as well as further follow-up treatments should any concerns be identified (Lee, 2016). Figure 4.3 captures information on the number of HS children who received primary health care screening. The figure also captures information on the number of HS children identified as needing medical services – based on the screenings done, and how many received the needed medical services.

While Figure 4.3 shows that the overwhelming majority of HS children received primary health screening, the information shows a consistent gap in the number of HS children identified as needing medical treatment and the number who received this treatment. For each of the three years for which data are reported, less than one-third of HS children identified as needing medical care received the needed care. Based on an environmental scan completed on the HS/EHS and TANF

programs in the USVI, some of the reasons that HS children may not have received needed medical care could be challenges in scheduling appointments, due to a limited number of providers who accept Medicaid insurance, missed appointments by parents of HS children – which are sometimes due to transportation or childcare challenges, or simply not keeping appointments, or a combination of provider-related factors and family-related factors (Michael, et al., 2016).

Figure 4.3. HS Children Identified as Receiving Preventive Primary Health Care, Needing and Receiving Medical Care: SY2015-2016 to SY2017-2018

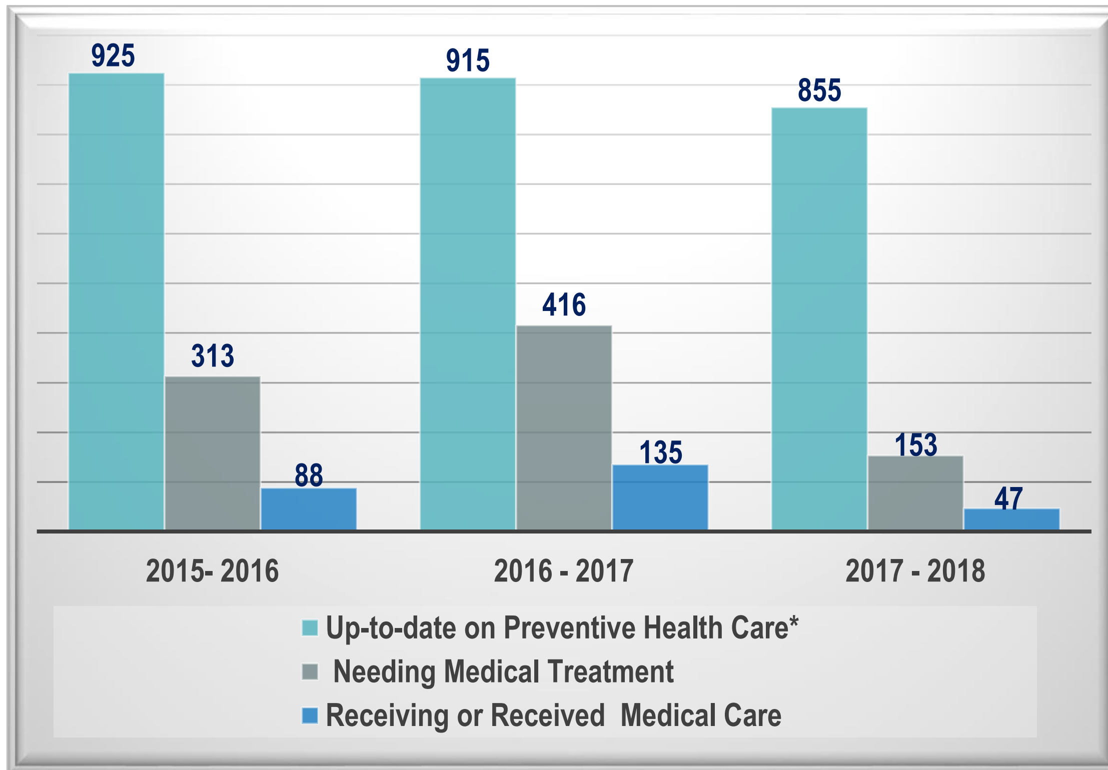


Figure 4.4 captures similar information for EHS children. In contrast to data reported for HS children, based on enrollment figures for EHS children (See Figure 4.1), Figure 4.4 shows that for the three years in question, including SY2017-2018, the school year during which the USVI was hit by Hurricanes Irma and Maria, EHS children were current on preventive primary health care and those that needed medical treatment received that treatment.

Dental health is also important for the HS and EHS populations and an indicator of access to health care that is captured for children participating in both programs. Figure 4.5 captures information on the number of HS children who had access to dental care at the beginning and end of each school year, for the three-year period, SY2015-2016 through SY2017-2018. When considering the total HS enrollment for SY2017-2018 (Figure 4.1), it can be observed from Figure

4.5 that for SY2017-2018, at the end of the school year, there were still over 25% of HS children that did not have accessible dental care.

Figure 4.4. EHS Children Identified as Receiving Preventive Primary Health Care, Needing and Receiving Medical Care: SY2015-2016 to SY2017-2018

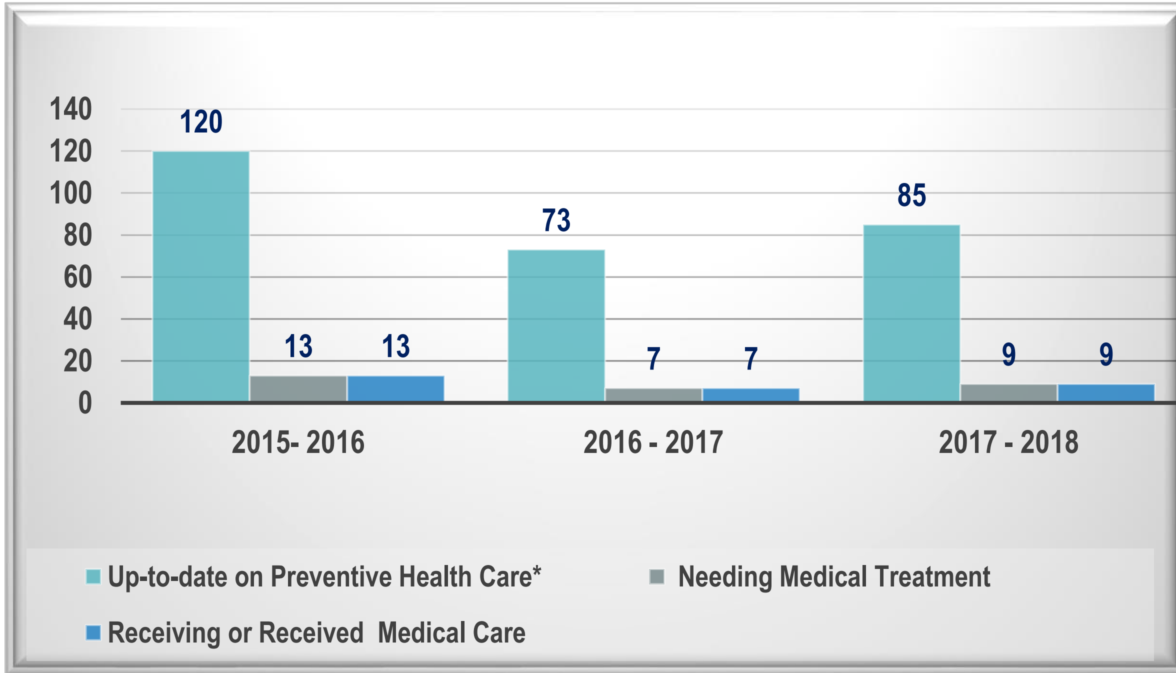
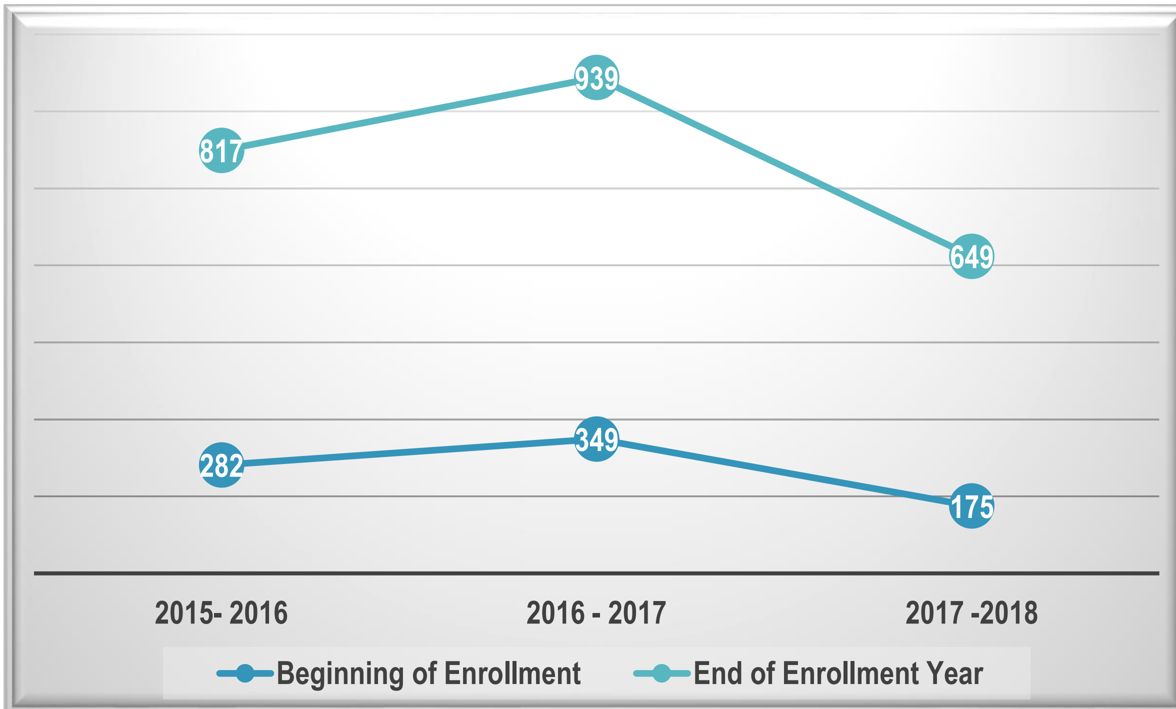
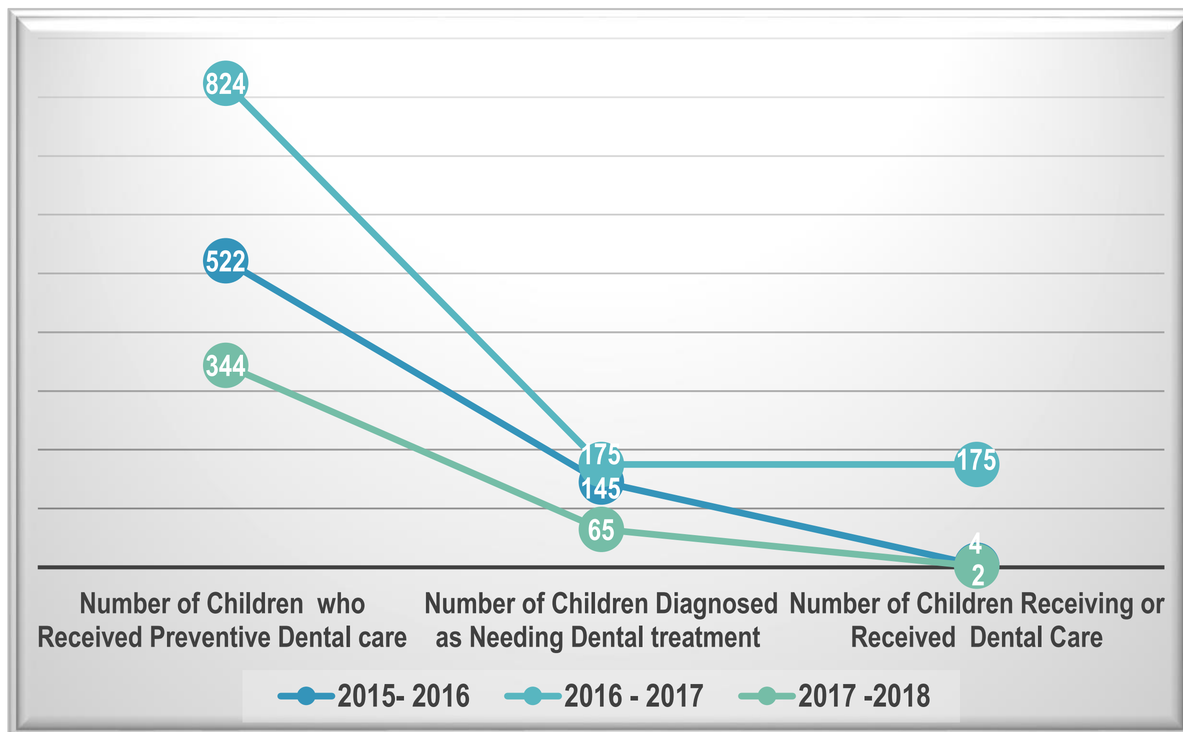


Figure 4.5. HS Children with Accessible Dental Care: SY2015-2016 to SY2017-2018



Further, in addition to preventive primary health care screening services available for HS children, preventive dental care screening services are also provided to this population. Figure 4.6 reveals that for all three school years in question, the number of HS children who received primary dental screening services over the three school years was lower, and, for two of the three years, substantially lower than the HS children who received primary health care screening (Figure 4.4). In particular, for SY2017-2018, the school year following the disruptions of Hurricanes Irma and Maria, fewer than two in every five HS children (38.5%) received preventive dental care. This percentage is significantly lower than the percentages of HS children receiving preventive dental health services in SY2015-2016 (over 90%) and SY2016-2017 (approximately 60%).

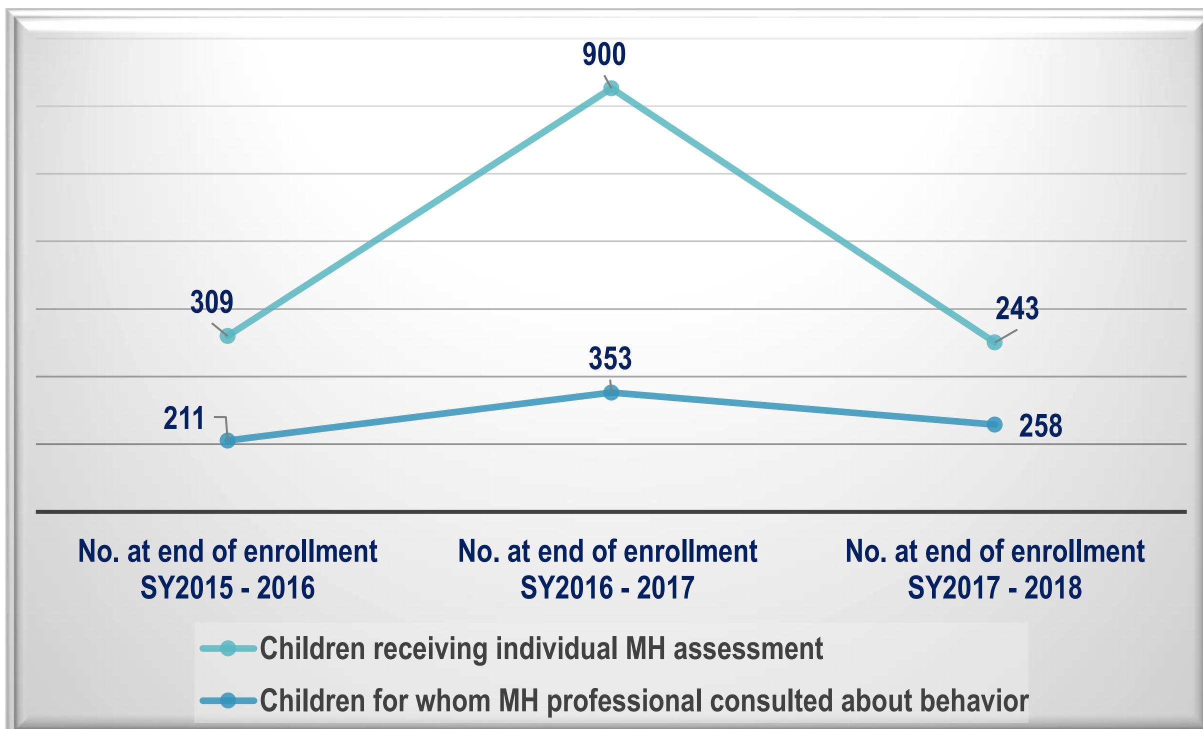
Figure 4.6. HS Children Receiving Preventive Dental Care, Identified as Needing and Receiving Dental Treatment: SY2015-2016 to SY2017-2018



Further, of those who did receive preventive dental health services, approximately one in five (19%) needed dental treatment. Finally, of HS children identified as needing dental treatment during SY2017-2018, only 2 of 65 received the needed treatment, which represents only 3% of HS children identified as needing preventive dental care – compared to 100% of HS children identified as needing preventive dental care receiving such care during SY2016-2017.

Besides primary preventive health and dental services, some HS children also received services from mental health professionals over the course of the three school years, SY2015-2016 through SY2017-2018. Figure 4.7 shows the number of HS children for whom mental health professionals were consulted about behavior issues as well as the number of HS children that received individual mental health (MH) assessments. It can be further observed that for SY2017-2018, fewer than one-third of the children reported as being enrolled in the HS program at some point during SY2017-2018 received an individual MH screening, whereas for the prior school year, SY2016-2017, 94% of the HS children who were enrolled at any time received an individual MH assessment. It is noteworthy that for SY2017-2018, more HS personnel consulted a MH professional about the behavior of a larger numbers of HS children than the number who received a preventive assessment. Though the PIR data do not include narrative information, it is quite likely that the statistics captured in Figure 4.7 are associated with some of the after-effects of Hurricanes Irma and Maria.

Figure 4.7. Number of HS Children served by Mental Health Professionals: SY2015-2016 – SY2017-2018



Family Services

In addition to health services provided to HS and EHS children, the HS and EHS programs also provide services to support HS and EHS families, as depicted in Table 4.3. Unlike many of the health services provided for HS and EHS children, Table 4.3 shows that the most recent school year, SY2017-2018, was the school year in which the largest number of HS and EHS families were supported through family services. Notably, the largest number of families – 300 – received emergency or crisis intervention during SY2017-2018, with this intervention addressing immediate needs of food, clothing, and/or shelter. This service is in keeping with the reality that Hurricanes Irma and Maria struck the Territory during SY2017-2018.

Table 4.3. Services Available for Head Start Families: SY2015-2016 to SY2017-2018

Services available to Head Start Families	SY 2015-2016	SY 2016-2017	SY 2017-2018
Emergency/crisis intervention such as meeting immediate needs for food, clothing, or shelter	2	15	300
Housing assistance such as subsidies, utilities, repairs, etc.	3	50	65
Mental Health Services	0	5	17
English as a Second Language (ESL) training	8	30	0
Adult education such as GED programs and college selection	8	12	0
Job Training	4	7	16
Substance Abuse Prevention and Treatment	1	0	0
Child abuse and neglect services	0	3	3
Domestic violence services	16	2	4
Child support assistance	7	0	0
Health education	38	316	50
Parenting education	20	27	60
Relationship/marriage education	9	5	0
Number of families counted in at least one of the services listed above	83	488	515

Social Services Block Grant (SSBG) Program

The SSBG represents a Consolidated Block Grant that provides another avenue for the VIDHS to support vulnerable children and families through a range of social service programs. Funds from the SSBG are used to help vulnerable families achieve or maintain economic self-sufficiency through the prevention, reduction, or elimination of dependency. SSBG funds are also used to prevent or reduce neglect, abuse, or exploitation of children and adults. Essentially, then,

SSBG funds in the USVI are used to supplement, expand and strengthen traditional services to families, children, and adults in need. These funds are used, in part, to support the Child Protective Services unit and to monitor and license private Day Care Centers. SSBG funds also provide funding for eligible families who are in need of Day Care Center services for their children. The funds also support the monitoring and licensing of after school programs and related centers that provide services to the youth of the Territory (V.I. Department of Human Services, 2018). Table 4.4 provides a listing of the grants consolidated under the SSBG and the funds associated with each grant.

Table 4.4. Grants Consolidated under the Social Services Block Grant and Funding Levels of Each

Grant	Funding Level
Administration for Community Living (Aging)	$2,713,33
Child Abuse and Neglect	$257,805
Child Welfare Services	$452,601
Community Services Block Grant	$1,114,452
Developmental Disabilities Council	$235,156
Family Violence Prevention Services	$304,250
Low Income Home Equity Assistance	$580,868
Family Preservation	$85,000
Family Preservation Caseworker	$504,549
Social Services Block Grant	$293,103
All Grants	**$6,541,116**

In its current SSBG renewal grant application, VIDHS has identified six major components and activities that will serve to focus programs and services delivered through the SSBG. These broad categories of programs and services supported through the SSBG are:

- Senior citizen services;
- Children and family services;
- Developmental Disabilities;
- Intake and emergency services;
- Family Assistance Program; and
- General administration, planning & development, Special Programs and Project for Community Needs

Two specific programs funded under SSBG are noteworthy: 1) the licensing and monitoring of child care centers, and 2) the support for foster parents. The licensing and monitoring of child care centers, to include private day care centers is a critical activity that receives SSBG funds. Licensed private day care centers service a significant number of children across the Territory and provide an avenue through which families are able to access child care that could not be accessed

through the HS/EHS programs either because their children do not qualify for HS/EHS or due to space availability after programs have reached their caps. Table 4.5A reveals that 21 of 23 or 91% of private, licensed day care centers on St. Croix had enrollment lower than their capacity, in the aftermath of Hurricanes Irma and Maria. For many day care centers, enrollments were more than 50% lower than the facilities' capacity.

Table 4.5A. Child Day Care Centers & Preschools – St. Croix District: Capacity and Enrollment as of December 2018

Name of Facility	Ages Served	Capacity	Post Hurricane Enrollment
Church of God Holiness Preschool, Inc.	3 – 5 yrs	94	40
Do Re Mi Day-Care Group Home, Inc.	2 – 14 yrs	55	30
Free Will Baptist Preschool	3 – 5 yrs	71	18
Good Hope Country Day Preschool	3 – 5 yrs	60	16
Happy Faces II Academy, LLC	2 – 5 yrs	54	38
Kids Can Do It Adventure Center	2 – 13 yrs	16	15
La Petite Learning Center	2 – 12 yrs	49	44
Leap and Learn Academy	2 – 14 yrs	50	26
Lifeline Educational Services, LLC	2 – 14 yrs	15	15
Little Achiever's Childcare and Learning Center	2 – 4 yrs	12	12
Little Kids Klub	2 – 5 yrs	34	23
Nana's Learning Center	2 – 5 yrs	13	11
Nurturing Minds Developmental Day Care Center	2 – 14 yrs	26	11
Rattan Montessori Preschool	2 1/2 – 6 yrs	45	19
Reading Rainbow Preschool	3 – 12 yrs	61	29
St. Croix Christian Academy Preschool	3 – 5 yrs	93	30
St. Croix Montessori Preschool	2 1/2 – 5 yrs	30	9
St. Mary's Preschool	2 1/2 – 14 yrs	112	14
Star Apple Montessori Preschool	2 – 5 yrs	15	11
Tenacious Toddlers Learning Center	2 – 10 yrs	42	24
Watch Me Grow Academy, LLC	2 – 4 yrs	14	12
Word of Life Preschool Day Care & Learning Center	3 – 14 yrs	33	13
Zion Christian Academy	2 – 14 yrs	59	45

Source: VI Department of Human Services, 2018, unpublished document

In the St. Thomas-St. John District, 29 of 34, or 85% of day care centers had enrollments lower than their facilities' enrollment capacity, with one center having a zero enrollment and another with only one enrolled child (Table 4.5B). These data should be interpreted with caution, as VIDHS staff shared that YTD comparative data are not available annually, so there are no similar data to which these data can be compared (*Personal communication with VIDHS personnel*).

Table 4.5B. Child Day Care Centers & Preschools – St. Thomas-St. John District: Capacity and Enrollment as of December 2018

Name of Facility	Ages Served	Capacity	Post Hurricane Enrollment
All Facilities			
A+ Preschool, Inc.	2 – 10 yrs	12	1
Angels of Love Day Care	2 – 14 yrs	33	19
Antilles School, Inc. ELC	2 1/2 – 6 1/2 yrs	54	48
Antilles School Inc. TLC	2 – 6 yrs	24	24
Bethel Baptist Preschool	B – 5 yrs	12	12
Beyond Bright Daycare	2 – 14 yrs	32	32
Bright Beginnings for Early Explorers	3 – 5 yrs	12	6
Christian Outreach Ministry Learning Center	2 – 5 yrs	12	8
Christian Unity Church Academy	2 – 13 yrs	32	10
Faith Alive Christian Academy	3 – 14 yrs	24	22
Gifft Hill School	2 – 14 yrs	33	18
Handy Spandy Preschool	2 – 14 yrs	40	22
Hibiscus Learning Center	2 – 14 yrs	25	16
Hibiscus Nursery (Day Care Center)	2 mos – 2 yrs	11	8
Kid's Preschool	2 – 12 yrs	35	20
Learn and Play	2 – 14 yrs	30	12
Little People's Learning Center	2 – 6 yrs	40	40
Minds in Motion Academy	4 – 5 yrs	8	0
Moravian Preschool	2 – 14 yrs	56	48
Morning Joy Day Care & Preschool Academy	2 – 12 yrs	30	6
New Testament Academy	2 – 14 yrs	105	50
Newborn Kids Academy	3 – 14 yrs	39	9
Precious Moments Preschool and Nursery	2 – 14 yrs	25	15
Rosie's Angels Day Care, Inc.	2 – 4 yrs	24	3
St. John Christian Academy	4 – 12 yrs	38	31
St. John Methodist Preschool	2 – 14 yrs	33	25
Sts. Peter and Paul Preschool	4 – 5 yrs	20	16
St. Thomas Calvary Christian Academy	3 – 5 yrs	52	52
Sunbeam Preschool	2 – 14 yrs	41	37
Sunshine Bear Daycare & Preschool	2 – 12 yrs	27	23
Ursula's Child Care	2 – 3 yrs	13	12
VI Montessori Preschool, La Casa	3 – 12 yrs	45	43
Wesley Methodist Preschool	2 – 14 yrs	73	72
Wesleyan Academy Pre-Kindergarten	3 – 14 yrs	45	34

Source: VI Department of Human Services, 2018, unpublished document

Overall, the VIDHS reported that, in the aftermath of Hurricane Irma, 27 centers in the St. Thomas-St. John District that provided services to youth closed, and, in the St. Croix District, 12 such centers closed in the aftermath of Hurricane Maria (*See Appendix VI for a complete listing.*).

The SSBG also supports the Protective and Foster Care program in the Territory. In the fiscal year following the hurricanes, close to 300 children across the Territory were either in foster care or protective care, as can be noted in Table 4.6. It can also be observed that the majority (73%) of children in protective care are in the St. Thomas-St. John District, while the majority (61%) of children in foster care are in the St. Croix District.

Table 4.6. Protective and Foster Care Cases by District: FY2017-2018

	All Care	Protective Care	Foster Care
Territory	295	179	116
St. Croix District	119	48	71
St. Thomas-St. John District	176	131	45

Source: VI Department of Human Services, 2018, unpublished document

Temporary Assistance for Needy Families (TANF) Program

Besides the HS and EHS programs, another human services program that supports vulnerable children and families is the TANF program. TANF is a cash benefit program that is authorized by the Social Security Act (Michael, et al., 2016). One of the primary goals of the TANF program is to assist program participants to achieve self-sufficiency. Thus, there is a mandatory work experience component for most TANF recipients. Exceptions to this requirement is made based on circumstances delineated in the program's guidelines.

Also, TANF has a stipulation that participants can draw cash benefits for a period not to exceed 60 months, or five years. The 60-month timeframe need not be consecutive; however, once the clock on the 60 months begins, it continues, even if a TANF recipient is able to get off the program due to securing employment. Further, unlike the HS/EHS programs that have strict federal guidelines that all programs must follow, no matter the jurisdictions, the TANF Program allows for some degree of local flexibility. Based on this flexibility, there are two elements of the USVI TANF Program that are noteworthy: 1) only single persons can qualify for TANF; 2) for a mother to qualify for TANF, she must provide information to the Division of Paternity and Child Support, within the USVI's Department of Justice, with the name and contact information for the

father(s) of all her children. For mothers who are unable to or who refuse to provide this information, applications for TANF benefits are not advanced.

Figure 4.8A captures information on the number of families receiving TANF benefits by number of child recipients. Two trends can be observed in a review of Figure 4.8A. First, most families receiving TANF benefits are families with either one or two children. Second, the number of families receiving TANF benefits are decreasing, with 358 families receiving benefits during FY2014-2015 compared to 222 families in FY2016-2017.

Figure 4.8A. Families Receiving Aid from the TANF Program by Number of Child Recipients: FY2014-2015 to FY2016-2017

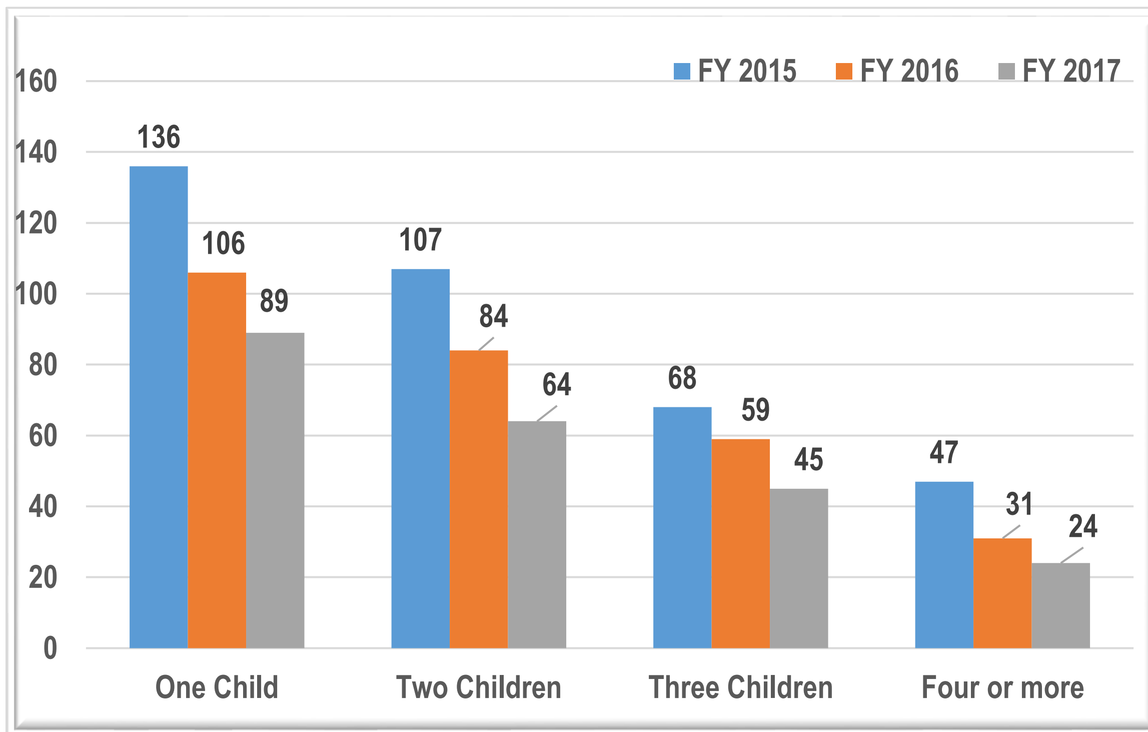


Figure 4.8B. TANF Caseload, Adult and Child Recipients by District: FY2017-2018

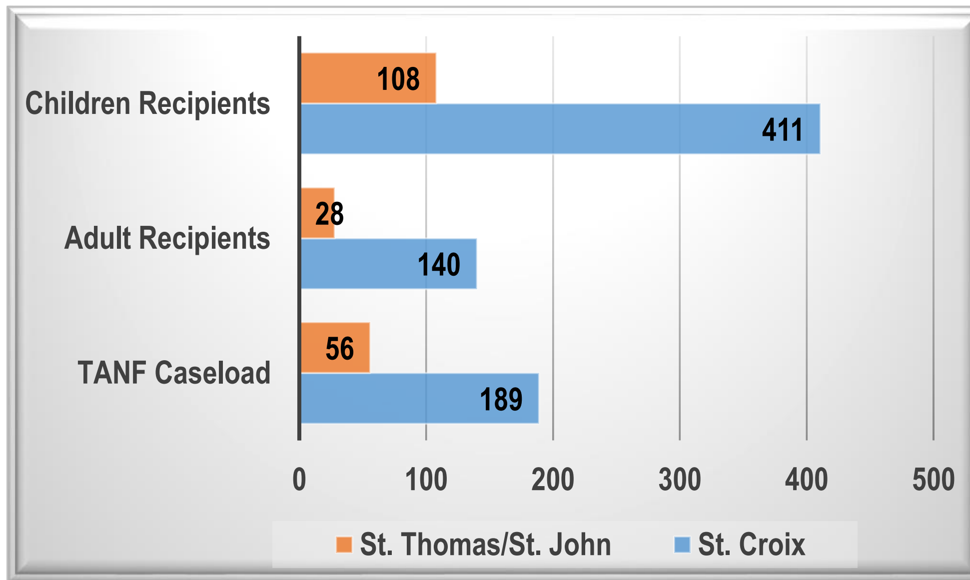


Figure 4.8B shows a significant contrast between both the caseload of TANF clients across the two districts as well as a major difference in the number of adult and child recipients by district. Essentially, there is almost a 4:1 ratio of TANF recipients in the St. Croix District compared to TANF recipients in the St. Thomas-St. John District, whether the recipient is a child or an adult. These differences in both the caseload numbers as well as the recipient numbers may be in part due to the reality of higher unemployment rates on St. Croix than on St. Thomas but could also be attributable to some individuals potentially being eligible for TANF not meeting eligibility criteria that requires submission of information on their child's or children's father(s) required for the assessment of child support payments. Once employment has been secured, TANF benefits are suspended. Additionally, TANF program personnel shared with the research team, anecdotally, that some TANF recipients left the Territory in the aftermath of the hurricanes. This, too, could partially explain the lower program participation in the St. Thomas-St. John District.

Figure 4.9, below, captures information on other public assistance that TANF families in the Territory received during FY2014-2015 through FY2016-2017. All TANF families received Medicaid insurance benefits (MAP), while 98% of TANF families also received SNAP benefits. However, a substantially smaller percentage (between 17 and 21%) received subsidized housing benefits. This may be due, in part, to the fact that TANF recipients residing in public housing communities would be automatically eligible for reduced or no rent, as well as a utility subsidy.

Figure 4.9. USVI TANF Families Receiving other Public Assistance: FY2014-2015 to FY2016-2017

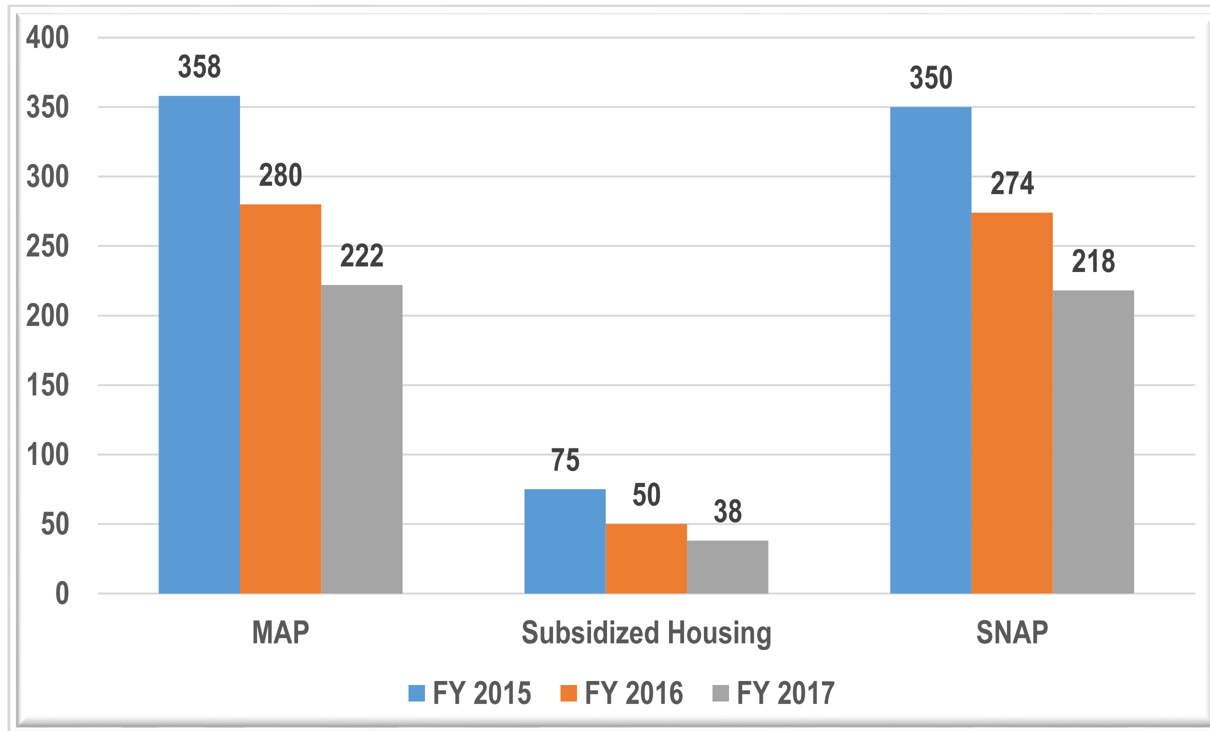
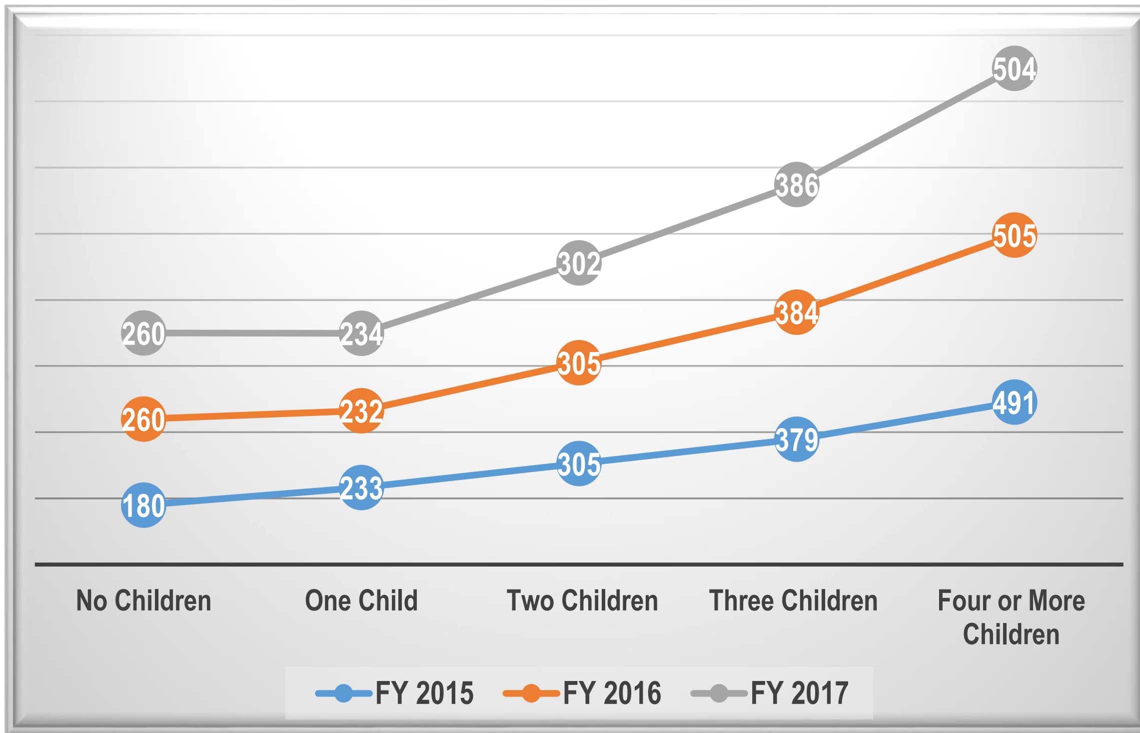


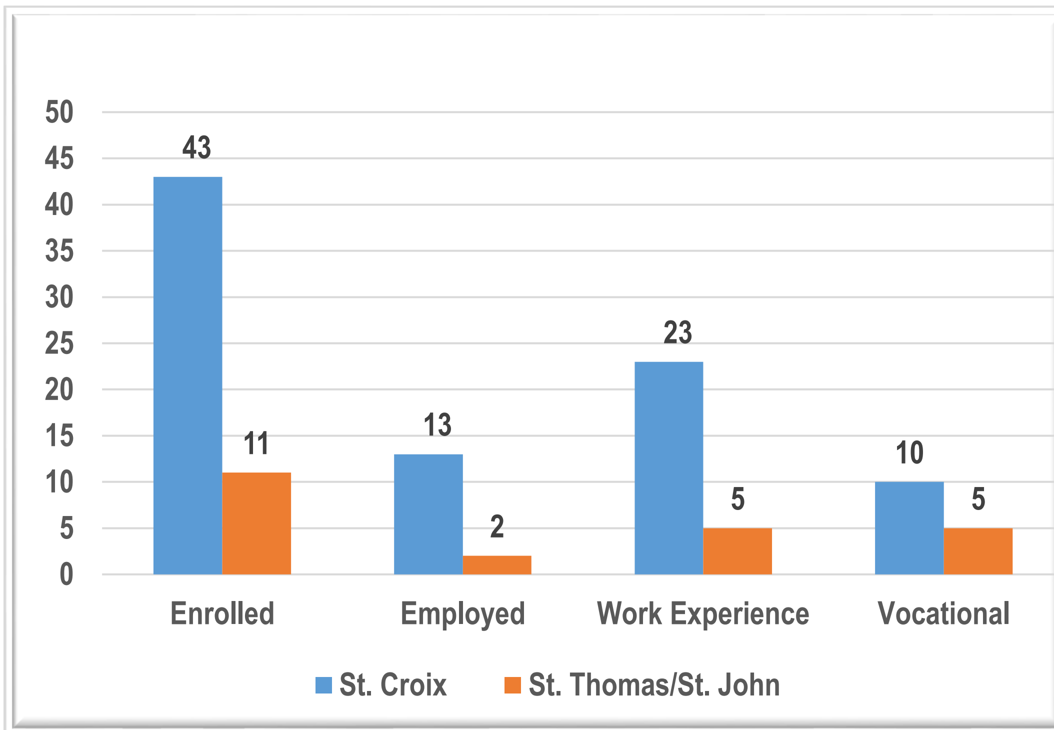
Figure 4.10 captures information on the average monthly cash benefits that TANF families received, based on the number of children that were a part of the TANF families. A review of the graph reveals that over the three years represented, the average monthly cash benefits increased as the family size increased and also increased over the years, with the highest average monthly cash benefits received during FY2016-2017. This information was not available for FY2017-2018.

Figure 4.10. Average Monthly Cash Benefits for USVI TANF Families by Number of Child Recipients: FY2014-2015 – FY016-2017



A final aspect of the TANF program that is important to examine is the JOBS services provided to TANF recipients. As noted previously, one of the key goals of the TANF program is to assist TANF recipients in achieving self-sufficiency so that they are not continuously dependent on the TANF program for financial assistance. Hence, in part, the 60-month time limit for receiving TANF benefits – unless there are extenuating circumstances (which program personnel address on a case by case basis) – serves as an incentive for TANF participants to take advantage of opportunities available through the JOBS program to secure employment. Figure 4.11 captures the JOBS services provided to TANF recipients in the fiscal year immediately following the passage of Hurricanes Irma and Maria. A perusal of the information captured in Figure 4.11 reveals that only a small percentage of adult TANF recipients (See Figure 4.8B for adult recipients for FY2017-2018) received JOBS services during the fiscal year in question. Of those receiving services, 13 of 43 on St. Croix and 2 of 11 on St. Thomas were able to secure employment. This represents a significant gap in the achievement of the self-sufficiency goal for USVI TANF recipients.

Figure 4.11. JOBS Services Provided to USVI TANF Recipients: FY2017-2018



Resources Available to provide Select Human Services

The major source of resources available in the USVI to provide the services described in this report is federal funding. In some instances, local matches are required. Table 4.7 captures actual, estimated, and projected funding levels for the following key programs in the VIDHS: SNAP, Head Start, TANF, and the SSBG, to include the local match contribution amounts.

Table 4.7. Actual, Estimated and Projected Federal Funding: Select Human Services Program – FY2016-2017 to FY2018-2019

Grant/ Program	FY2017 – Actual	FY 2018 – Estimated			FY 2019 – Projected		Local Match
	Total Expenditures	Prior Year GA - BBF	Total Award	Total Est. Expenditure	GA CFB	Total Award	
SNAP	$4,600,497	$1,008,197	$5,948,754	$6,956,951	-	$6,105,867	$4,587,743
Head Start	$7,969,315	$7,403,755	$8,300,094	$8,903,755	$6,800,094	$8,421,784	$2,770,403
SSBG	$4,433,755	$786,458	$7,234,975	$4,403,946	$3,617,488	$7,277,641	-
TANF	$2,777,740	$59,430	$913,061	$59,430	$913,061	$2,829,976	$939,543

Source: USVI Proposed Executive Budget, FY 2019
Notes: 1) GA – BBF – Grant Award – Balance Brought Forward;
2) GA CFB – Grant Award – Carry Forward Balance

Head Start and Early Head Start Programs

The USVI HS program is funded by the Administration for Children and Families (ACF) in the Office of Planning, Research and Evaluation (OPRE), Department of Health and Human Services (DHHS). As can be observed from Table 4.7, when the local match is added, the HS program in the USVI is funded at over $10M annually. The HS program is supported by staff who work with the program in both districts. The program is led by an Administrator, who is in the St. Thomas-St. John District and an Assistant Administrator in the St. Croix District. There are also managers and supervisors who support the program in both districts. Additionally, the HS teachers meet the federal requirements regarding credentials and the assistant teachers in the program also have CDA credentials or have earned an Associate degree (*The organizational chart for the HS program is included as Appendix VII*.). The EHS Program is also federally funded, through LSSVI, and supports program operations at two centers on the island of St. Croix. The EHS program is headed by a Director, who supervises middle managers, teachers, assistant teachers and support staff in a model that is similar to the HS program (*The organizational chart for the HS program is included as Appendix VII*.).

SSBG Program

The overall SSBG consolidated block grant is funded at a level just over $6M annually. Table 4.7 captures the funding levels for each of the six major areas funded through this mechanism. Because this is a consolidated grant program, funds are pooled to optimize the range of services that can be provided to the persons served through the VIDHS, from infants to the elderly. The most recent block grant application, as well as the proposed Executive budget for FY2018-2019, suggests that adequate funding is available to support the delivery of services under the SSBG.

Temporary Assistance for Needy Families (TANF) Program

Based on the most recent budget for the local government retrieved from http://www.caribbeanelections.com/eDocs/budget/vi_budget/vi_executive_budget_2019.pdf, funding for key human services programs is captured in Table 4.7. Funding for the TANF program is shown at approximately $2.8M for FY2016-2017, a 67% drop in the estimates for FY2017-2018, and a projected funding level of $2.8M for FY2018-2019. As with the HS program, there is also a

required local match for the TANF program, projected to be funded at approximately $940,000 for FY2018-2019. The estimated funding level for FY2017-2018 as well as the estimated expenditures may have been affected by TANF recipients leaving the Territory in the aftermath of Hurricanes Irma and Maria. There has also been an increase in the number of applicants who do not have the required personal information about the father(s) of their children, and as a result are not approved for TANF benefits (*Personal Communication, TANF Program personnel*).

Existing Gaps with respect to Human Services

Head Start and Early Head Start Programs

In the aftermath of Hurricanes Irma and Maria, one of the biggest gaps with respect to the HS Program in the USVI is the closure of multiple centers across the Territory – specifically two centers on St. Croix, representing three classrooms; two on St. Thomas, representing six classrooms; and one classroom on St. John. Additionally, the HS Program has had some staffing challenges, relative to HS teachers and assistant teachers. Even prior to the passage of Hurricanes Irma and Maria, one HS center in the St. Croix District was delayed in opening for the school year due to the lack of teachers.

The EHS Program lost its Program Director in the aftermath of Hurricanes Irma and Maria; however, a new Program Director was hired late fall 2018. The EHS Program continues to be impacted by staffing shortages that require some staff to serve in multiple roles.

Select SSBG Programs

Based on qualitative data gathered from a key informant interview and focus group discussion with key personnel from VIDHS, one of the gap areas for the SSBG program is a shortage of persons to serve as foster parents. The challenge of getting persons to commit to this responsibility increased in the aftermath of Hurricanes Irma and Maria, due to challenges that potential foster parents faced due to the disruptions of the hurricanes. Additionally, VIDHS faces challenges with meeting the needs of children and adolescents in the custody of the agency who require behavioral health support (*KI, DHS October 2018*).

Temporary Assistance for Needy Families Program

The information presented on the TANF program suggests that a gap may be the effective identification of qualified children and families for TANF benefits, particularly in the St. Thomas-St. John District. Additionally, there seems to be challenges with program efforts to assist TANF recipients to get to self-sufficiency.

Priority Programmatic and Service Delivery Issues Related to Human Services

Based on the information presented on the services available through the human services programs highlighted in this section of the report, some brief observations are made regarding priority programmatic and service delivery issues that need to be considered by program personnel, particularly given the purpose of human services programs, namely to support the most vulnerable in our community.

Head Start and Early Head Start Programs

One of the most pressing priorities for the HS Program is the repair and reopening of the centers that closed in the aftermath of the hurricanes. This has major implications for the resumption of the full scope of services and learning experiences for HS families, but particularly for the HS children who have had to attend HS in rooms converted from conference rooms to classrooms and for whom outdoor space is limited because nine classrooms of children (approximately, 180 children), rather than four classrooms of children (approximately, 80) must share one playground. Further, several centers are operating without usable playgrounds, limiting children's access to outdoor play spaces.

Additionally, key vacancies in both the HS and EHS programs need to be filled so that service delivery to HS and EHS children and families could be at optimal levels.

Select SSBG Programs

One of the highest priorities for the SSBG program is the identification of foster parents to support minors for whom the Department of Human Services have guardianship. The VIDHS provides training for persons who are interested in serving as foster parents and there is also financial support provided through the SSBG.

Temporary Assistance for Needy Families Program

The information presented on the TANF program suggests that urgent attention needs to be given to the program, particularly in the St. Thomas-St. John District. Though the data show that the enrollment in the program has been decreasing steadily in both districts, there has been a much greater decline in the number of TANF recipients in the St. Thomas-St. John District, even in the fiscal year immediately following the passages of two category 5 hurricanes. While the goal of the TANF program is to move individuals to self-sufficiency, the factors affecting the low participation in the St. Thomas-St. John district warrant closer examination in order to ensure that those in need in that district are indeed being reached and served by this program.

Additionally, a review of the approach that the program has taken to JOBS experiences for TANF recipients and progress toward the ultimate goal of self-sufficiency seems to be warranted. Finally, there may be a need to revisit the local criteria for qualification for TANF benefits, particularly the requirements that only single persons can qualify for TANF benefits and that mothers must provide information about their children's fathers in order to meet TANF qualification requirements.

Section V: Current Status of Housing and Housing Options for Children and Families

Recovery of the housing sector is crucial to overall post-disaster recovery of any community. Therefore, the reestablishment of permanent housing is inextricably linked to all other dimensions of recovery (Rathfon, 2013). Thus, this section concentrates on the status of housing and housing options for the children and families in the Territory following the passage of Hurricanes Irma and Maria. A summary of the programs and services available that support housing needs for Virgin Islands families, especially those with low incomes, is presented. The secondary data from the VI Housing Authority (VIHA) and the VI Housing Finance Authority (VIHFA) as provided to Federal agencies and the local government during the emergency relief and recovery periods provide information on impacts of the hurricanes on the housing stock in the Territory and issues associated with implementing a recovery and return to more normal living conditions. The secondary data also provided the information on the resources necessary and those available to ensure housing needs are met in the Territory following the devastation of the hurricanes. The section closes with a summary of the existing gaps in housing options and needs along with priority programmatic and delivery services that are associated with the impacts of Hurricanes Irma and Maria on children and families of the Virgin Islands.

The passage of two Category 5 hurricanes over the US Virgin Islands, and neighboring islands in the Caribbean, in the first three weeks of September 2017 devastated the infrastructure and severely damaged and reduced the housing stock and housing options for the communities on the three main Virgin Islands and Water Island. The damage to buildings from hours of winds in excess of 185 miles per hour and tens of inches of rain resulted in families in private and public housing, owners and renters, and low as well as high income earners experiencing significant challenges. These challenges were associated with clean-up of water and debris, loss of personal items, emergency repairs, displacement, mobilization to address insurance and more permanent repair requirements, and high levels of stress. The passage of two hurricanes within two weeks of each other resulted in weakened and unprotected structures being vulnerable to inches of rain, producing estimates of over 85% of households reporting damage and beginning the recovery with an estimated 90-95% of the residents living without electrical power and access to internet and telephones (VIHFA Report to US Department of Housing and Urban Development, CBDG Action Plan, May 2018).

During the emergency relief efforts and the beginning of the recovery phase, data and information on damages and losses with respect to housing and infrastructure were compiled by FEMA and the VI Government, led by VIHFA, and sent to the US Department of Housing and Urban Development (HUD) to request and access Community Development Block Grant Disaster Recovery Program funds for the Territory. Most of the documented information obtainable on the extent of damages, the resources available to citizens, and the actions taken to address the damages was available from local government reports and from the reports submitted by VI Government agencies to the Federal Emergency Management Agency (FEMA) and other Federal agencies during the disaster response and early recovery periods. As expected, numbers and outputs changed with time and as additional input from citizens and government agencies have become available. The information did not allow for easy identification of efforts to address the emergency relief and recovery actions that did not fall under assessment and assistance offered through FEMA-linked programs.

Programs and Services Available

The housing options available to people in the Virgin Islands are normally either in the private sector where services are handled through banks and private financial arrangements or linked to the public sector through public housing programs under VIHA. Additionally, in the public sector, low- and moderate -income homeownership is made possible via VIHFA initiatives. Both private and public sector housing are expected to meet building codes and households are expected to prepare for extreme weather, like hurricanes, by protecting their living quarters.

The VIHFA HUD 2017 Amended Community Development Block Grant Disaster Recovery Program Action Plan (HUD 2017 CDBG-DR Amended Action Plan) reported FEMA data estimates available by September 2018 indicated that 23,301 households incurred some damages to their primary residences from one or both hurricanes. Table 5.1 summarizes three categories of damage reported for over 22,000 residences. Of these, 5,175 sustained major or severe damages. In the pool of residences which sustained major or severe damages, 2,813 were renter-occupied units and 2,362 were the owners' primary residences.

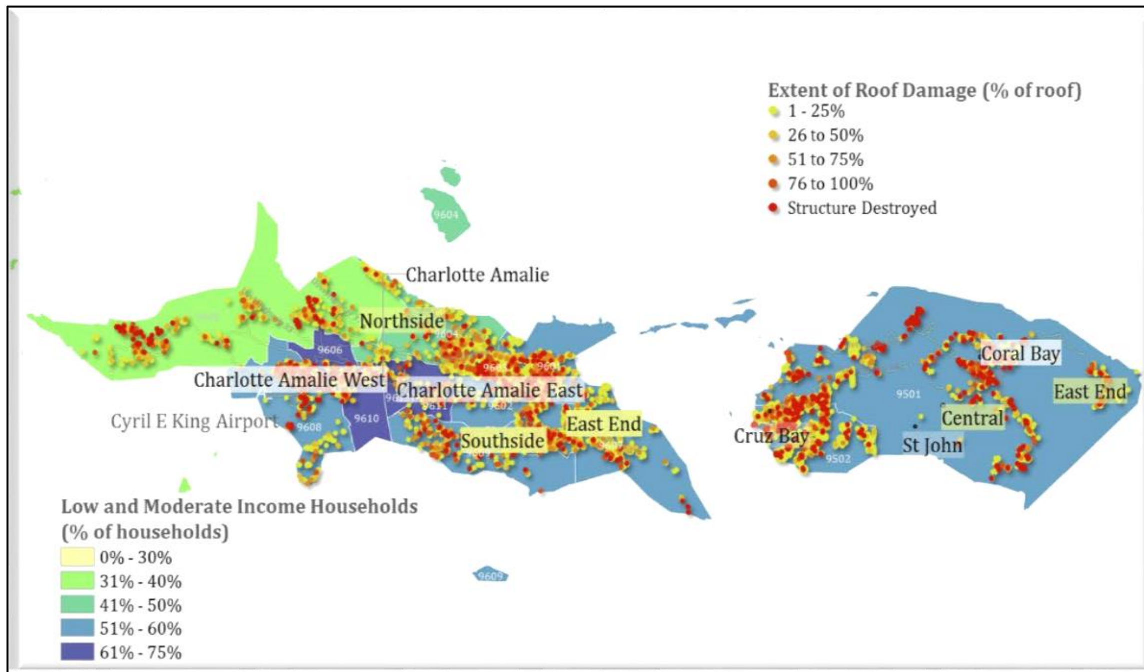
Table 5.1. Housing Units Damaged by Severity and Occupant Type for FEMA Individual Assistance Applicants

Level of Damage	Owner		Renter		Total Households		
	No. of Households	% of Damaged Households	No. of Households	% of Damaged Households	No. of Damaged Households	% of Damaged Households	% of Total Households
Minor Damage	11,827	83%	5,525	66%	17,325	77%	39%
Major Damage	1,847	13%	2,688	32%	4,535	20%	10%
Severe Damage	515	4%	125	2%	640	3%	1%
Total	**14,189**	**100%**	**8,338**	**100%**	**22,527**	**100%**	**50%**

***Source**: HUD 2017 CDBG-DR Amended Action Plan -FEMA Individual Assistance Data, effective March 30, 2018; 2014 VICS for total households*

A vivid picture of the concentration of damages to houses is seen on maps of the Territory that identify low- and moderate-income areas in the background of the National Oceans and Atmospheric Administration (NOAA) Hurricane Aerial Imagery of the Territory. As shown in Figure 5.1A and Figure 5.1B, there are a significant number of damaged households located in parts of the islands designated as having high low- and moderate-income densities.

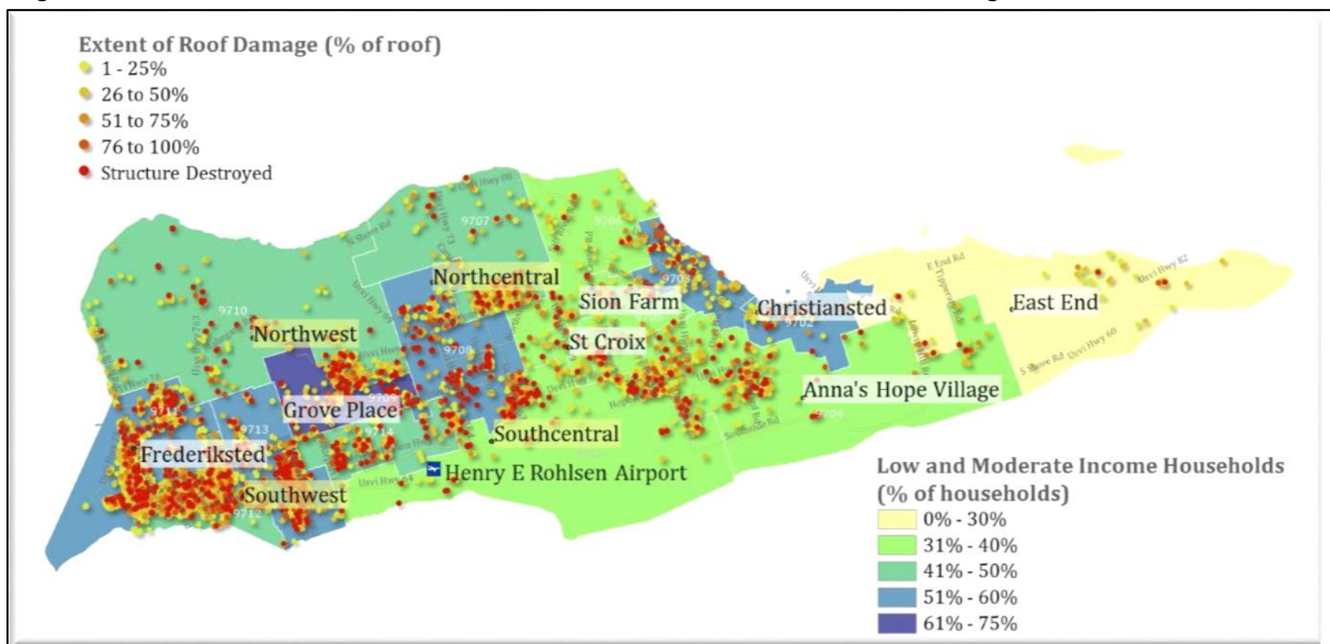
Figure 5.1A. Low- and Moderate-Income Households and Extent of Roof Damage: St. Thomas - St. John



***Source**: HUD 2017 CDBG-DR Action Plan, May 3, 2018: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018); NOAA Hurricane Aerial Imagery*

Despite the linkages that appear to be apparent between the level of household income and concentration of damaged homes, it should be noted that the aerial photographs would basically show structural damages, not the impact of water inside houses or structures. Based on anecdotal information, water damages were prevalent across the economic spectrum of households in the Territory. This is important, because as Grogan (2017) notes, water damage and flooding add to hurricane-related cost if disaster relief is not provided timely, as saturated properties continue to deteriorate the longer it takes to have them fixed.

Figure 5.1B. Low- and Moderate-Income Households and Extent of Roof Damage: St. Croix



***Source**: HUD 2017 CDBG-DR Action Plan, May 3, 2018: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018); NOAA Hurricane Aerial Imagery*

In addition, other variables such as physical factors including locations prone to wind shear, or amount of protection from other buildings or exposure on hillsides are not necessarily linked to income but may be important in some of the areas reporting high structural damages. After the hurricanes, houses severely damaged by the storms could be easily identified by the blue tarps offered by FEMA or bought by owners to protect what was left inside from the rains that continued and the intrusion of insects and rodents that proliferated in damaged areas. While some families did the best they could to be comfortable and safe in damaged homes, many families and children with damaged houses became part of the displaced Virgin Islanders who were forced to seek shelter with relatives or friends, or find a house to rent, or leave the Territory for at least a period of weeks. The number of displaced families and the influx of relief workers from outside of the Virgin Islands

placed a great demand on the few rental properties available and undamaged after the hurricanes. Similar housing challenges were reported on the US Gulf Coast where there was a significant increase in demand for affordable housing following hurricane Katrina in 2005 (McIntosh, Gray & Fraser, 2009).

In the USVI, Territorial emergency relief and early recovery programs for damaged households included two home repair programs organized and implemented by the Government of the US Virgin Islands, and FEMA. The Sheltering and Temporary Essential Power program (STEP) which was slated to begin one month after the passage of the hurricanes, began in January 2018 to address the home repair needs of the thousands of homeowners that signed up through the FEMA process. The Virgin Islands Housing Finance Authority (VIHFA) as the lead VI Government agency for this program, reported that as of September 2018, 10,350 applicants signed up for assistance and repairs have been completed on 5,129 of the 7,500 houses expected to complete the program (HUD 2017 CDBG-DR Amended Action Plan, September 2018). The STEP program will not be able to repair all the damages in the homes tackled due to budget limitations, but VIHFA reported that every home entered for repairs has a complete scope of work recorded for use in the second phase of the home repair program being funded. The plan is to use the data for all unmet repair and hardening needs captured in the STEP program to position the Territory to qualify for other Federal funds to meet the unmet housing needs identified in the Territory.

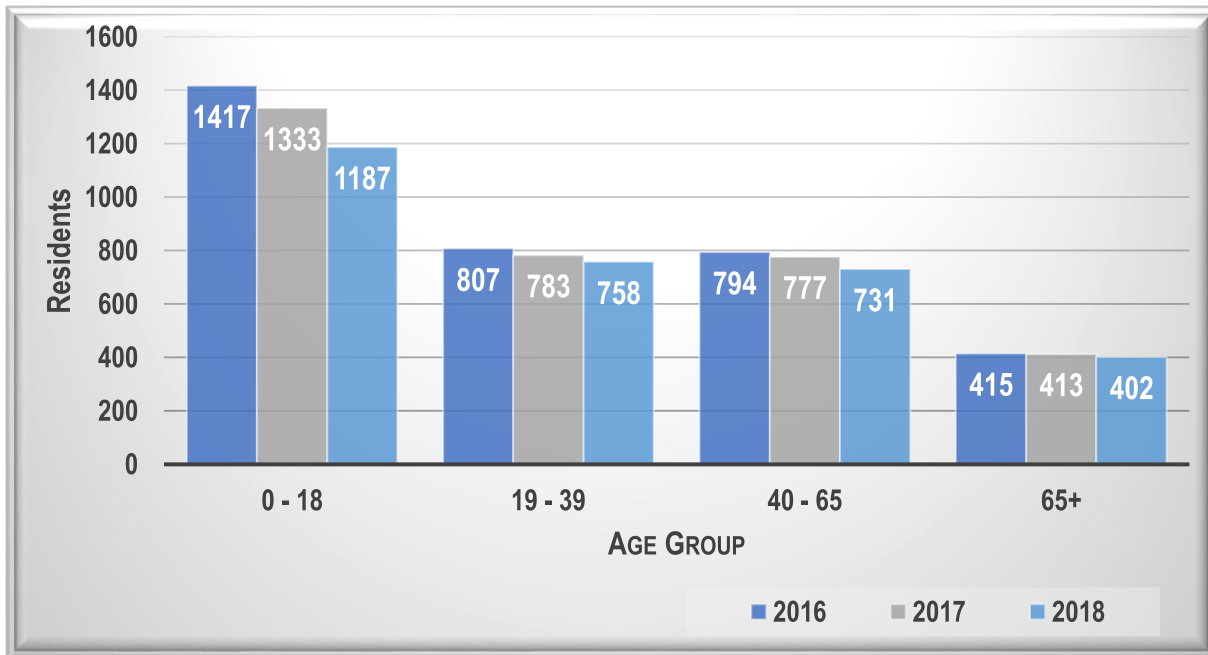
The laws and policies that allow access to funding in support of hurricane recovery actions and the unique position of the Territory within the United States legal system created a complex and not always clear path to assistance for Virgin Islanders. In October 2018 at Town Hall meetings organized by VIHFA, members of the public expressed gratitude for the assistance as well as frustration with the process being led by VIHFA that did not share enough information regarding guidelines, timelines and goals of the various housing repair programs available under the recovery plans put in place under FEMA and the VI Government. For example, the STEP program was not allowed to replace roofs until August 2018 when FEMA (after significant lobbying and initial denials) was able to approve a roof replacement solution as a part of the program, removing a major obstacle for more than 4,000 homeowners with the main damage being a missing or compromised roof. The solution used by FEMA is the Permanent Housing

Construction program found in Section 408 of the Stafford Act, which permits full repairs and reconstruction for both owner-occupied and rental housing in Insular Areas of the United States. The timelines of this process resulted in thousands of households living with the stress of unrepaired homes or displacement for more than 6 months in most cases. However, the literature shows that it is not unusual for the authorities and survivors to be overwhelmed by the logistics and challenges associated with disaster reconstruction in the aftermath of hurricanes, and for mid-course corrections to take place as a recovery evolves (Barrios, 2014; Rathfon et al, 2013).

The hurricanes of 2017 severely impacted the federally subsidized housing stock in the Territory. Subsidized housing, which is managed by the Virgin Islands Housing Authority (VIHA), lists 26 public housing communities or 3,014 housing units. These units include public housing, housing financed primarily for older adults, and Housing Choice Voucher (HCV) rentals, which provide housing assistance for over 1,600 families. According to the HUD 2017 CDBG-DR Amended Action Plan, estimates reported in April 2018 indicate twenty-four (24) of twenty-six (26) public housing communities were damaged by the hurricanes. At least four public housing communities were damaged beyond repair and are scheduled for demolition, including 119 of 304 units in the Estate Tutu housing community and 85 units at the Lucinda Millin Home. In addition, the HUD 2017 CDBG-DR Amended Action Plan estimated that it would take $20 million to repair the damages to the 368 units in the four VIHFA-managed, HUD-assisted communities on St. Croix. It is noteworthy that the average age of the public housing inventory is 50-60 years, which is a vulnerability when considering future disasters.

As a consequence of the damages to the public housing communities, the number of occupied units decreased in 2017 and 2018 on both St. Thomas and St. Croix. The public housing population on St. Thomas contracted by 10% and the number of occupied units decreased by 12% between 2016 and 2018. This contrasted with a 3% decrease in population and a 1% loss of occupied units on St. Croix between 2016 and 2018 (See Figures 5.2A and 5.2B, below.). The largest decrease in occupied units and population is linked to the destruction of the St. Thomas Estate Tutu Housing Community structures by the hurricanes, which created a serious displacement challenge for the families that were impacted and the VIHA.

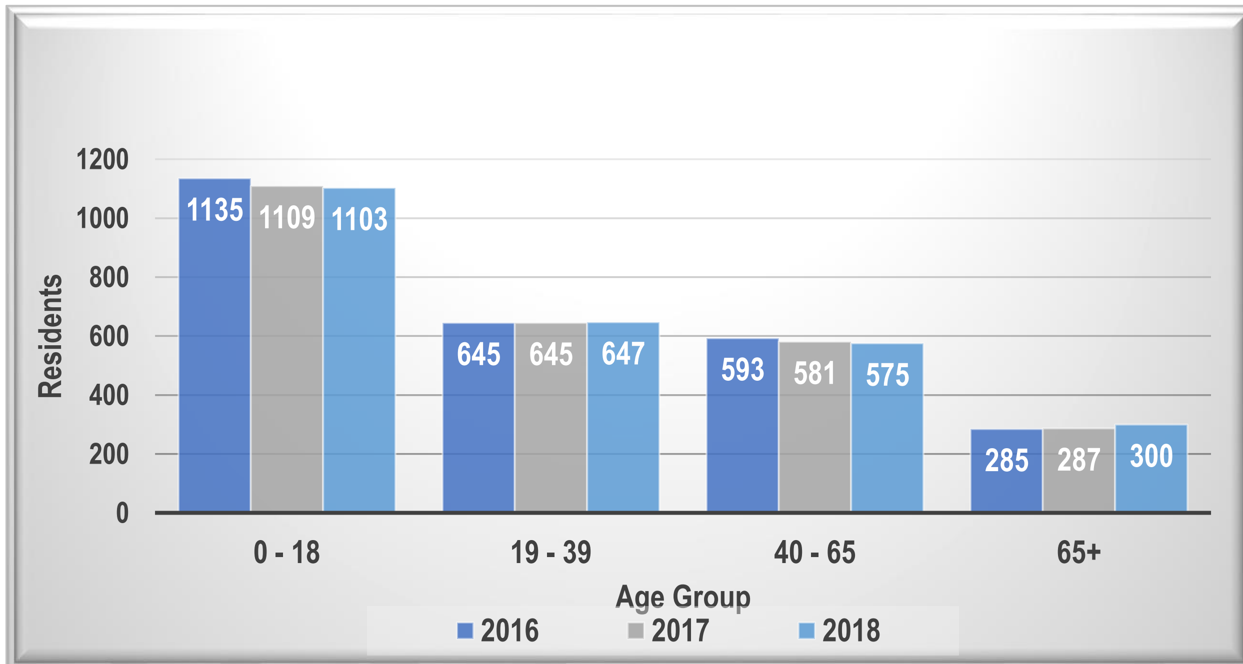
Figure 5.2A. Public Housing Residents by Age Group, St. Thomas: 2016–2018



Source: Virgin Islands Housing Authority (VIHA), unpublished data, 2018

Choices for families displaced from their homes due to hurricane damages included staying in a public shelter as long as possible, moving in with relatives or friends, finding a place to rent, or leaving the Territory.

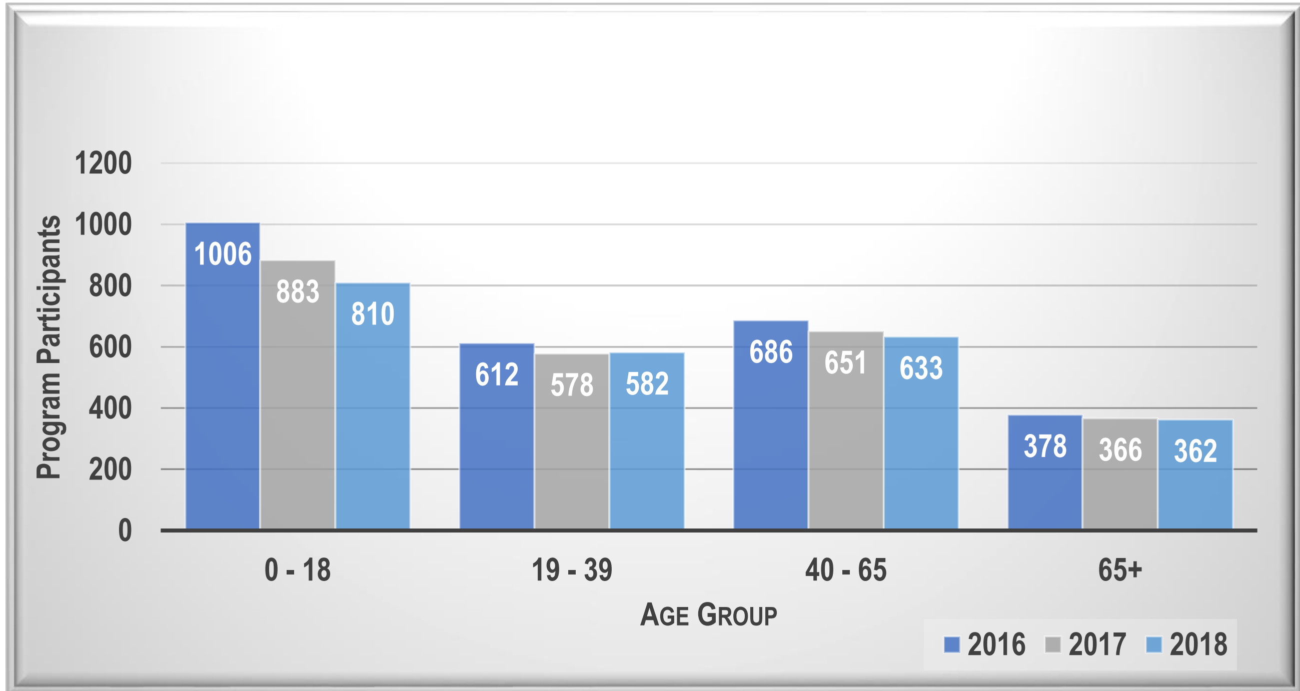
Figure 5.2B. Public Housing Residents by Age Group, St. Croix: 2016–2018



Source: VIHA, 2018, unpublished data

Figure 5.3A and Figure 5.3B, below, reveal that the VIHA Housing Choice Voucher Program (HCVP), which subsidizes the cost of rent for low-income families that find rentals in the general housing stock, reporting a 5% decrease in clients between 2016 and 2018 on both St. Thomas and St. Croix.

Figure 5.3A. Housing Choice Voucher Program Participants by Age Group, St. Thomas District: 2016–2018



Source: VIHA, 2018

The competition for a reduced rental stock increased after the hurricanes due to an amplified demand that included owners and other renters with uninhabitable homes as well as emergency and recovery workers from off-island needing housing.

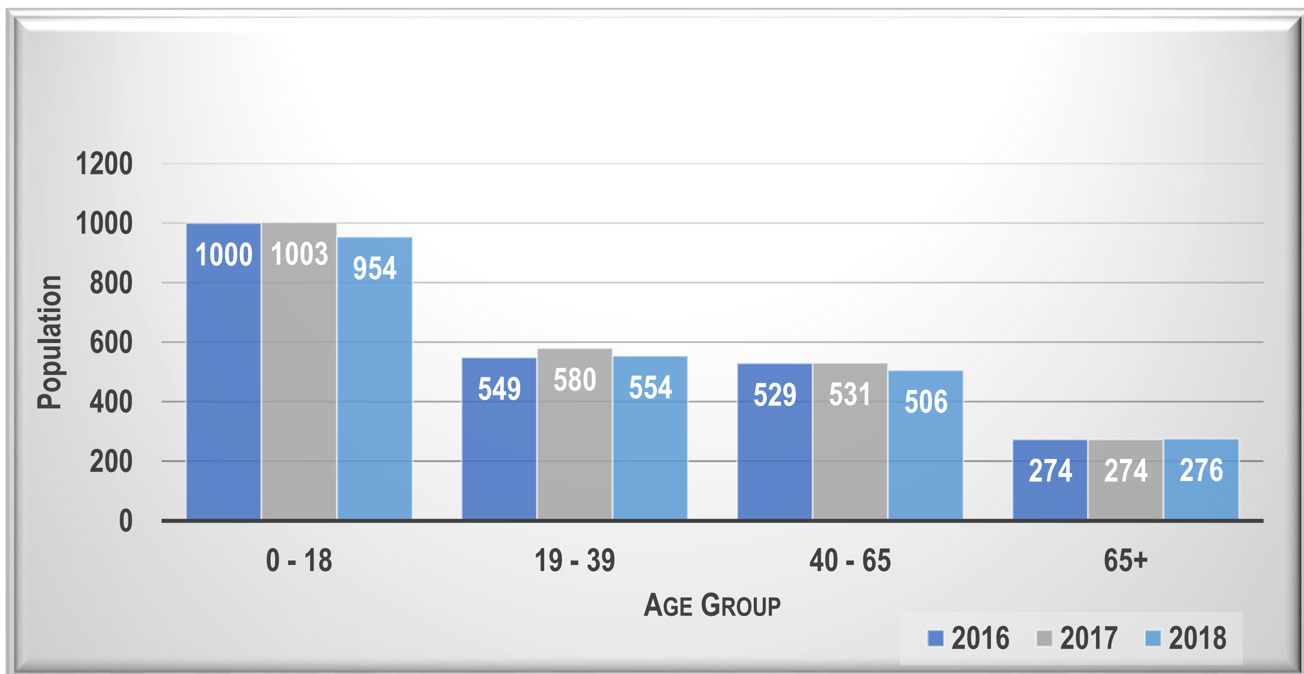
As can be observed from Figures 5.2A and 5.2B, over the three calendar years, 2016 through 2018, the population of young people, ages 18 and below, living in public housing represented 38% to 43% of all residents in the USVI public housing communities, as compared to approximately 20% in the general population. Figures 5.2A and 5.2B show that for CY2016 – CY2018, youth ages 0 – 18 make up the largest single age group of residents living in public housing in both the St. Thomas-St. John and St. Croix Districts.

According to census data, in the US Virgin Islands, children and youth ages 0-18 comprise approximately one-fifth of the general population. A perusal of Figures 5.2A and 5.2B reveals that, across the Territory, in public housing communities, children consistently make up 38% to 43% of

all residents. This means that children and youth were disproportionately more likely to be exposed to the conditions associated with displacement and homelessness, in the aftermath of the hurricanes. This also reflects the level of poverty affecting families and further illuminates the vulnerability of children and families in low-income housing communities. The literature shows that these communities are more vulnerable to the risks of natural disasters and struggle the most to recover from a severe weather event (Krause & Reeves, 2017).

In a similar vein, Figures 5.3A and 5.3B confirm that children and youth 0-18 years of age form the largest cohort of beneficiaries of the Housing Choice Voucher Program in the Territory. Although there has been a gradual decline in the last three years, from 1006 in 2016 to 810 in 2018, the total number of children consistently outnumber other age groups benefitting from the Housing Choice Voucher Program (HCVP) on both St. Thomas – St. John and St. Croix. The loss of housing and subsequent relocation of some of the most vulnerable children and families who lived in public housing have also destroyed the social networks they had built up overtime. For the children, the loss of housing triggered uncertainty about school and other issues associated with displacement.

Figure 5.3B. Housing Choice Voucher Program Participant by Age Group, St. Croix District: 2016–2018



Source: VIHA, 2018

In the weeks and months after the hurricanes, private home owners and public housing officials focused a great deal of time on the time consuming and sometimes frustrating tasks of assessing damages, identifying funding and contractors for repairs, and undertaking repairs and replacement of parts to all of the housing stock damaged by Hurricanes Irma and Maria.

As a means of providing education and social support for the youth in its housing communities, VIHA was able to conduct tutorials and after school homework assistance activities when schools reopened. VIHA also offered a summer camp for residents in 2018 on both St. Thomas and St. Croix. The programs are offered in licensed community centers in most of the housing communities for between 21 and 30 six- to fourteen-year old residents. On St. Croix, the number of participants increased slightly between 2016 and 2018 with after-school tutorial and homework assistance going from 70 to 76 participants and summer camp participation increased from 82 to 126. On St. Thomas, damages to community centers and other buildings, as well as the displacement of residents, contributed to a decline in the after-school tutorial and homework assistance program participation, from 122 to 78 individuals in 2018, and a decline in the summer camp participation, from 198 youth in summer 2016 to 78 youth in summer 2018.

Resources Available to support Housing and Housing Options

Though a significant driver for the completion of this community needs assessment was the passage of two category 5 hurricanes across the Territory in September 2017, the consideration of resources available to support housing and housing options in the Territory includes an examination of resources that are more generally available to support this critical aspect of life, which has been identified in the literature as one of the social determinants of health. Through the VIHFA, there are several resources that are important for vulnerable children and families in the Territory with respect to housing and housing options. Table 5.2 summarizes some of the existing resources and the segment of the community to which these resources are targeted.

Table 5.2. Synopsis of Programs Administered through the VIHFA

Programs Administered by VIHFA	Funding Level	Description of the program and target population
Emergency Solution Grant	USD 100,000	A grant *to reduce homelessness administered in collaboration with nonprofit organizations* such as Catholic charities and Lutheran Social Services.
Community Development Block Grant (CDBG)	USD 1.9M annually	A community development grant which provides funding to reduce homelessness and to support after school programs for children.
Home Program		A loan and grant program that provides loans at one percent or less (≤1%) interest rate for first time home buyers.
Virgin Islands STEP Emergency Home Repair Program	USD 450M	A FEMA sponsored program that provides home repairs post Hurricanes Irma and Maria. The scope of the program has expanded from providing only temporary home repairs initially, to providing more permanent repairs and roof repairs.
New grant program for launch in 2019	Low income tax credit to the USVI – USD 3.1M annually	A program to be administered through HUD for average medium income (AMI) earners. It will be used in conjunction with the low income housing tax credit.

The Virgin Islands Emergency Home Repairs Program was a critical resource to homeowners in the Territory in the aftermath of Hurricanes Irma and Maria. More than 52% of households sought assistance with recovery from the impacts of the hurricanes through the Federal Emergency Management Agency (FEMA) and its local and Federal partners. (HUD 2017 CDBG-DR Amended Action Plan). Table 5.3 summarizes the severe damage reported to homes after the hurricanes.

Table 5.3. Percent of Housing Stock with Major to Severe Damage and LMI* Status

Tenure	No. of Households with Major to Severe Damage	No. of Households with Major to Severe Damage that are LMI	% of Households with Major to Severe Damage that are LMI
Owner	2,362	1,650	70%
Renter	2,813	2,813	100%
Total	**5,175**	**4,463**	**86%**

Source: *HUD 2017 CDBG-DR Amended Action Plan - FEMA Individual Assistance Data, 2018.*
LMI – Low- and moderate-income

During the recovery period, homeowners and the VIHA worked with contractors from on and off-island to repair damages to the housing stock in the Territory. Challenges to both the private and public sectors included shortages and the high cost of materials that had to be brought in from outside the Territory and limited number of qualified contractors. Reality for the Territory throughout the emergency relief and recovery periods has been finding solutions to delays and time constraints associated with being at the end of the supply chain for goods and services in a period when up to four states in the continental US experienced disasters and were also competing for the same supplies and assistance from FEMA and other sources of aid.

The USVI utilized resources needed to repair and replace damaged housing units, public and private, from a range of sources to meet the estimated $2.5 billion (HUD 2017 CDBG-DR Amended Action Plan) needed to rehabilitate and rebuild the Territory's housing stock. In addition to the significant grants and loans from the Federal Government through FEMA and associated agencies, private insurance and philanthropic funding were used to pay the costs of repairing damages to houses. The VI Government and FEMA estimate that even after some of the most urgent emergency response needs have been met there will still be $1,075,429,283 of unmet housing needs that will need to be addressed by the Territory. The focus has been on low- and moderate-income (LMI) housing needs as well as shelters and mitigation efforts for future natural hazards. The Action Plan for the US Virgin Islands Community Development Block Grant - Disaster major Recovery lays out the agreed-upon approaches to addressing unmet housing needs with funding from FEMA, HUD or other federal agencies.

Table 5.4. Housing Funding Sources for 2017 Hurricane Impacts as of September 2, 2018

Entity	Funded Activities/Awards	Obligated or Disbursed
FEMA	Individual Assistance for Homeowners: Repair and Replacement	$33,324,952
FEMA	Individual Assistance for Renters: Rental Assistance awards	$22,055,097
FEMA	Individual Assistance for Homeowners and Renters: Other Needs Assistance	$10,241,160
FEMA	Public Assistance (Public Housing. HUD-assisted housing, and other affordable housing)	$22,225,892
FEMA	STEP - Temporary repairs to homes	$235,898,083
SBA	Approved Disaster Loans for homes	$399,133,800
NFIP	Publicly funded flood insurance	$13,851,443
Private insurance	Payout for private insurance	$620,251,188
CDBG-DR Tranche 1		$72,000,000
Total		**$1,253,210,308**

***Source**: HUD 2017 CDBG-DR Amended Action Plan - FEMA Individual Assistance Data, effective August 10, 2018; FEMA Public Assistance PWs effective August 10, 2018; SBA Disaster Loan Data and NFIP data via July 22, 2018 FEMA Incident Storyboard; Division of Banking, Insurance and Financial Regulation, April 26, 2018.*

Existing Gaps with respect to Housing and Housing Options

The major gaps with respect to housing and housing options are linked to the difficulties associated with providing safe, affordable housing to a population that is over 50% low and moderate-income, living on small islands with limited land mass and a high cost of living. The immediate challenge is providing some level of assistance to the more than 5,300 households that suffered severe or major damage from the catastrophic hurricanes. In addition to repair programs for damaged houses, support for families that are displaced is paramount. Assistance with temporary housing and replacement of the basics needed for living are immediate priorities. Short-term and long-term efforts will need to consider hardened and appropriately equipped housing for the vulnerable populations of elderly, disabled and mentally ill, and children in the Territory. Planning for future natural hazards in the general and public housing communities require attention to the identification and preparation of future sites and facilities for shelters. Identification of funding sources and sites for low and moderate-income housing that will reduce the $1 billion in unmet housing need in the Territory will need to be an ongoing initiative.

Priority Programmatic and Service Delivery Issues Related to Housing and Housing Options

The priority programmatic issues are linked to actions associated with filling the gaps in housing availability and conditions in the Territory. A major service delivery issue is the development of a communications strategy for the general public to understand and follow the guidelines, actions and timelines of housing repair programs. It will also be critical to many in the community to develop housing initiatives to reduce the unmet housing needs in the Territory that consider the needs of vulnerable groups in the community. It will be important to develop programs to continue learning for children in public housing communities during recovery periods following hurricanes and other natural disasters. Safe, affordable housing is acknowledged as being a critical component of community development. The USVI must factor in economic, size and isolation challenges as it works to ensure a future where citizens will have a place to live that has a chance of withstanding extreme weather events like hurricanes.

Section VI: Voices from the Community

The research team embarked upon this community needs assessment recognizing that a critical element of understanding the community's needs in the areas of health, education, human services and housing would require speaking directly with community members. Thus, this section of the report provides the reader with a glimpse of what community members shared about needs in these areas, without imposing the stricture of the specific objectives on the presentation of the "voices". What you will hear represents voices of policy makers, teachers, university students, counselors, school nurses, school administrators, men, women, grandparents, fathers, mothers, heath care providers, social workers, entrepreneurs, and retirees.

The team spoke with over 50 persons over the course of two months. The team conducted four focus group discussions (FG) with representatives from the V.I. Department of Education – two on St. Croix and two on St. Thomas. Four town hall meetings (TH) or community forums were convened, two on St. Croix and two on St. Thomas, and key interviews (KIs) were conducted with nine policy makers.

The transcripts generated from these data collection efforts yielded approximately 700 pages of information. Hence the use of the term "glimpse" to characterize what will be shared in the next few pages. Analyses of the transcripts generated from the town hall meetings, key information interviews, and focus group discussions resulted in a range of themes emerging from the information shared, in part due to the questions posed (See Appendix III for protocols.). Yet across the different mechanisms used for data collection and the diversity of persons who participated in data collection activities, there were some themes that resonated with the majority of participants. Therefore, what follows are highlights of some of the themes that emerged from the content analysis of the transcripts by three members of the research team. In presenting the themes, sample quotes that capture the essence of the theme are shared.

Notwithstanding the richness of the data, the themes shared speak most directly to the overarching focus of the community needs assessment which essentially is to determine where the community is, and most particularly the current status of vulnerable children and families, in the aftermath of two category 5 hurricanes that ravaged the Territory in September 2017.

Theme 1: Initial and continuing effects of stress and trauma

One of the questions posed to persons attending the Town Hall meeting (TH) asked participants to reflect on how they felt immediately after Hurricanes Irma and/or Maria and how they felt presently. This query led to a wide range of responses, with a common thread interwoven among the responses. Several persons shared their feelings of fear, helplessness, being traumatized, being overwhelmed, and trying to make sense out of what had happened. There was some acknowledgement that, even more than a year after the hurricanes, residents are still struggling and still trying to "make it".

The quotes below are representative of some of the comments made by participants regarding initial and lingering trauma and how that trauma has affected them or others that they have observed.

> *But, I promised myself, after going through that hurricane and I think after the hurricane -- going through it was one thing, but what happened after, the lack of services; not having proper, you know, electricity, running water, and all of that stuff for a long time -- I'm going to leave. I'll be the first person on Frederiksted dock on that mercy ship -....... 'cause I -- I don't want to go through that again....* [TH, 10/2018]

> *You're so busy trying to get things done, and it was forced. Did my body heal a hundred percent? I don't know. I won't know. I will never know unless something major happens. I think it did. Because I had to get to it, I had to roll up my sleeves and get stuff done. But anxiety-wise, the anxiousness, the just going through all of that, I will be the second person in line to leave.* [TH, 10/2018]

> *So -- and for me I think it's more like boredom, and I'm tired, I'm tired. After this hurricane, I'm really, really tired.* [TH, 10/2018]

> *So, what I try to do now is bite stuff in small pieces. I used to be able to like multi-task and do a whole bunch of stuff at one time; okay? It's just too much to do at one time now. I don't know if it's because I'm like one year older too. But I don't -- you know, nothing is -- I just have -- something came over me, you know. Like nothing matters. My life. That's it.* [TH, 10/2018]

> *What I see as a problem, I think many of our children are still experiencing emotional trauma. Many of them are still living in homes that have not been repaired. They are also displaced. Many are living, not even in their homes. Families have had to combine households or they're maybe living apart from their parents living with another relative. And on a day such as today or any day where we have inclement weather, I find particularly with the younger children, that they are traumatized. And we will have to deal with those behaviors and the effects, after effects of what they're going through as an effect of Irma and Maria.* [KI, 11/2018]

> *Definitely the children are a lot more clingy… clingy. A lot more clingy. They hold onto you. They want an explanation of the rain, when we just had that rain there come back to school. And I definitely,*

definitely have to answer that because I lived downstairs when the roof went. And when it rain I had foil pan, pots, pan, cups, everywhere. And I still jump up even to know that it rain. When it stop rain to make sure I have everything in place, water not going to come through. So I understand that. [FG, 12/2018]

I feel like I have -- I feel like I have -- I always joke about it -- but I feel like I have like PTSD. Now, I can understand how these guys feel when they go to the military. [TH, 10/2018]

The mental part, the emotional part, for the most part, we are still in recovery for some quicker than others. Physically some adults are still going through the trauma of it. [FG, 12/2018]

We don't always address the mental and emotional side of things right away. [FG, 12/2018]

We had two suicide attempts by our individuals with disabilities. They were both young men…. So that's tough. [TH, 10/2018]

You mentioned going forward, the data that you're collecting, what can they do going forward. And here, right here, people, they know what to do, but the people out there who don't are the ones that are not being reached. And I'll tell you the reason why I say this. Because I went to The Palms one day, and I was sitting there by myself – actually, it was my birthday and I was by myself – and I sat there and the water was really rough. And I've been going through some other struggles, and I said, 'I can see how people just walk in the water'. 'Cause I'm saying this now when you said about the suicide I can see how people can just walk in the water when they feel overwhelmed, and where they feel hopeless. So that set of people going forward is, how do you – I don't know, I'm just throwing it out – you know, that is the part where people can breakdown; feel hopeless; feel out, just totally out. [TH, 10/2018]

The biggest take-away from what was shared with respect to this theme on the initial and continuing effects of the trauma, associated with the two hurricanes, is that there are lingering effects of the trauma on the psychological well-being of those who experienced the extreme weather events. This should be a priority area for attention by health care providers and policy-makers who have the authority to direct resources to this critical area to address the behavioral health of the community.

Theme 2: Surviving; being a survivor; survival

This theme points to looking at survival from different perspectives – in terms of more instinctively responding to a situation as a human being and wanting to live – immediacy; or more broadly as working through a situation and staying the course – long term.

*It's survival, I guess, where I sat back and I said 'you know what? You are going to die here if you continue this route and not do anything; not get up and do some walking'***.** [TH, 10/2018]

The kids are more loving to me. They're very trusting, because like, you know, we were there, you know. They came back to school and they were there with us. And it's nice to tell my students you know, we survived the storm. We survived. You know, so just being there with them. [FG, 12/2018]

On that note, I believe the community went into survival mode. It met the basic needs of what was needed. People got together and did what they had to do some were faster than others and whatnot. Food and shelter and what was needed was made more available. [FG, 12/2018]

Whether because we don't know how to process it ourselves and we're just ***surviving*** *trying to get as normal as we can. Or we're just going through the motions*. [FG, 12/2018]

We cooked for three months on a coal pot. Survival again. And since I had bananas and stuff in the yard, -- it had happened that they had just put out some, so – [TH, 10/2018]

I think we always have an education on how to prepare for a hurricane, ***but we don't educate people how to prepare to live after a hurricane****, and* ***so just those survival skills****, what to expect – I mean, because we've lived through it … I think if we know going in what to expect, it will go a long way. So* ***it's just about preparing for the aftermath of a hurricane****. You've got to prepare for it, prepare to do when it's happening,* ***but then really and truly life goes on so you need those skills to pick up and prepare to survive after the hurricane***. (Emphasis added) [FG, 12/2018]

These quotes speak to the importance of survival on different levels and the need for the persons in the community to know that they can survive a category 5 hurricane – or two category 5 hurricanes.

Theme 3: Counseling – need for counseling; stigma associated with counseling

The discussion around counseling was interesting and came from both the full range of qualitative data collected – from key informant interviews, to focus group discussions, and also the town hall meetings. There was great sensitivity to the need for counseling by students. Interestingly, at the town hall meetings, several persons commented on others who needed counseling. However, some persons acknowledged that though initially not thinking that they needed to speak with someone or feeling that they were "handling" the situation well, have come to recognize that they, also, need support.

But in terms of children and families, immediately after the storm the Feds brought in behavioral health counselors but they didn't last. They came maybe for the first month or two and then they're gone, but the need is still here. So I think that's something to show it needs more power -- or it's more than sending for support for the first 60 days, especially as far as behavioral health goes. [KI, 10/2018]

I see a whole lot of emotional needs. I would prefer if I didn't have to ... dig here and there to find help. I need the readily available resources. … Children are way behind on their vaccines. Sometimes getting consent from their parents … [FG, 12/2018]

There were and still continues to be the need around counseling and stress related to, you know, the hurricane and certain diseases and people being displaced and things like that still is a concern. [KI, 10/2018]

When the students returned we had them write about their hurricane experiences what they went through. Through what they wrote, we were able to identify students who needed counseling. Some of them were traumatized. We also reached out to the parents. [FG, 12/2018]

Nursing standpoint—have medical assistance available to kids. At school I have diabetics, asthmatics, kids who are referred to clinics and hospitals. At least mobile units; Medical care available for not only for students but for their families. ... Psychotherapists, psychologists; somebody to come and deal with them.... they need those professionals to take care of those things we cannot. ...if I could have a doctor on hand when I see these things, they are right there. They have medication on hand. Students get to see therapist immediately and have prescription filled timely. I would like to see a community based resource of services. [FG, 12/2018]

As a counselor I would like to see a bank of professional resources for our community because we have students who are going through separation, grief; we have abuse; the list can go on and on and on. Develop a community plan; develop plan that includes the parent. 1. Develop a contingency plan 2. Parenting skills—reading; math 3. Parenting room – work with and ongoing. 4. Parents themselves become educated. [FG, 12/2018]

Also, we need counseling for -- we need children counselors, people that -- after the storm, that's the one demography I think that got away for the most part, because they went through a traumatic experience as well. [TH, 10/2018]

Well, what about offering like, you know, a service -- mental services? I mean I haven't like -- well, when it was during the recovery phase, they have only done it like a couple of times, you know. And, you know, after that, it just… more than likely, they can't afford it or they do not have insurance or the insurance itself doesn't even cover it. [TH, 10/2018]

And everything cost. And also stigma. Nobody wants to be the crazy person in the room. I mean this is reality. I mean the minute that you say that you are going to get mental health, automatically a red flag goes up. Like mental health. That means you are crazy. That means you are off balance. It means something is wrong with you … So I think the old perception of how we view the words "mental health," -- you know, the whole perception needs to change as a community – So within that farce, we find ourselves a lot -- we all wear the mask, right. So behind that mask, it's very hard for us to take off that mask because we don't have a society that says it' s okay to take your mask off in here and let us just talk. We are in here now. We good. This is a safe place. So we need to make safe places more common. [TH, 10/2018]

Even within my generation, they don't want to be perceived of needing help. We have Dr. ____ as a Counselor. I don't see much people going to her. No, I don't see anybody reaching out. I think a lot of people in my generation rather stay to themselves. They are introverts. They work things out on their own, I would say. [TH, 10/2018]

The following excerpt from an exchange among Town Hall participants is enlightening in understanding how this theme of counseling, seeking counseling and the stigma associated with it unfolded during data collection.

> *There are some people out there who need to seek help, but they don't go out and seek it. I guess they don't want to be considered like an outsider. They don't seek help.* [Speaker 1] *I don't think they're aware that they need it.* [Speaker 2] *Some are aware that they need it, but they just don't seek it.* [Speaker 1] {Moderator: What do you think it takes for somebody to go and get some help? Even if there is a stigma in the community. What do you think it takes?} … *First of all, they need to have some place to go to get this help. Right now, my son is going through that thing. When you're supposed to be sleeping at night, I get a text from him. At 12, 1 o'clock in the morning, he's supposed to be sleeping … you're getting a text from him. But if you try to take him to a doctor; he doesn't want to go.* [Speaker 1] [TH, 10/2018]

An important point that came across in the discussions about counseling, particularly for adults, is the cultural perception that something is wrong with a person who needs and/or seeks counseling and the stigma that comes with that. This is an area where health care providers, professional organizations such as the Association for Virgin Islands Psychologists (AVIP) and the National Association of Social Workers – Virgin Islands Chapter (NASW-VI) and policy-makers, particularly in the area of public health, can educate the community regarding the benefits of counseling and that dealing with mental health issues is part of overall wellness. Another important point is that counseling remains a need in the community, more than one year after Hurricanes Irma and Maria.

Theme 4: Displacement from homes; no stable home; disruption in families

Though few, the quotes related to this theme highlight the negative outcomes associated with the instability of being displaced and having to stay with family or friends.

> *Many are still not in their own place; housing issues are still on-going; You have a high number of folks who are unemployed; because many were in the service industries—like hotels, that were damaged."* [KI, 10/2018]

> *"……because you had quite a few families who lost their homes and ended up going on to live in their mom's house or brother house or whatever, but we all had to be in doors by 8:00 or whatever. And we all had quite a few of situations played out where whether it was siblings or cousins or whatever, ended up being arrested and so forth and whatnot because of domestic violence.'* [KI, 10/2018]

'And the other thing that is impacting that, again, is where are the children living? Are they -- many of them, again, as I said before, are not at home. They may be living -- they are still displaced' [KI, 11/2018]

...it seemed like a split in the family. ...parents complain that the kids need a place to exercise, run around. They really don't have that…. people in the community still fuss about us taking their ballfield. Some of them are still not living the way … you can tell from their appearance. [FG, 12/2018]

Theme 5: Concern for children

In the focus group discussions with educators, many expressed concern for the students and the challenges the students have had since the hurricanes. Some described how they have been working with the students to assist them in dealing with their negative emotions.

The quotes below offer a context for the concerns expressed by several educators.

So here it is with have these children that are stressed. We've been, you know, unable to come outside for over a year now, you know, so it's stressing me out. Our PE teacher have to be outside. And, you know, it's very frustrating. So to tell you the truth, as far as my part, other than with the help and teach help, he's been working on a lot of life skills. How to deal with things, like I said, because of the storm there's a lot of stressful situations. You know, resolving conflicts, you know, they're fighting, they're frustrated. So I kind of put on health as far as physical being. [FG, 12/2018]

One of the things I often tell myself in this profession is that I am not a physician so I refrain from giving a diagnosis to somebody. But you can't help but make observation and see. So even though it's a small percentage, it is very much a small percentage; you often would think or realize that there's some long-term impact on some of the students. When they were doing the ten-question survey I just kind of leaned over because I was curious as to how they were responding. I know some children do have some forms of PTSD you immediately can see it. Some children are not coping well with the transition because some parents had to leave to look for employment. …When I finish I'm coming back. And so you could see how this impacted the children with the back and forth. Sometimes the parents would say I need to sign him or her up because I'm going up here, got my cousin. And sometimes you want to the have a conversation with the parent about the best interest of the child and support. So with some students you can still see it. It's a lot of impact on them. [FG, 12/2018]

Though this quote is anchored in the theme of concern for children, it is evident that there are also threads with respect to *Theme 1, Initial and continuing effects of stress and trauma*. The quote also speaks to *Theme 4, Displacement from home/no stable home*. Another interesting observation is that the perception, anecdotally, is that only a "… very small percentage …" of students have issues with PTSD and related challenges. The quantitative data presented point to evidence of PTSD within the school population, but at a higher level than may be perceived.

The children ... when it rains they will say, oh, a hurricane coming. And they are still scared because the wind is blowing... they are still scared.... so they need to be prepared.... we need to talk to them more about hurricanes, ... the causes and the effects ... That should be part of the curriculum. [FG, 12/2018]

"I told her, on my first day, I couldn't understand what the kids were saying. They're Kindergarteners. She asked me why? I said because they're always talking in a screeched voice. I had to ask them to repeat what they were saying. I'm still subbing now, and I could understand them now. So I think they had trauma. You see the behavior changes that they had [TH, 10/2018].

In looking at our numbers, cases, looking at the type of treatment, we noted that there was an increased emphasis of children between 3rd and 6th grades. There's been more issues along tooth decay. Not sure if that was presented before and not captured in the data. But we've begun post-storm to focus both outreach with school nurses and PSAs we've been running to focus on pediatric dentistry specifically within that age group. [KI, 10/2018]

Dealing with a group of educators who genuinely care … we had a vested interest in this community. The cares and trials and education of the children were ours as well. The joys and successes of overcoming the obstacles was ours as well. So because of that we just bonded with the kids. Their pains were ours, the happiness were ours … The support that the adults gave them, gave each other, was crucial because you can't support the children and you not have an outlet for yourselves. [FG, 12/2018]

… some students who were going through grief not directly as a loss due to the hurricane, but some of them lost family members after; some of them lost family members who left ... I had someone who came in from Women's Coalition and we had groups of students who had the same or similar had group counseling … students who come in who complain that "my belly hurting or something". You realize when you talk to them they let a lot out and then you explain things—this is what happened, this is why it happened; this is what you should do. We as nurses try to help as much as we can. [FG, 12/2018]

….so when you talk about the children and the families, AC TK and some of our staff really worked hard to create an environment for the children especially in those sites, collaborating with education, but also looking out for their well-being in terms of predators, and making sure that activities were there. So you know, we have a prototype now that we're working to develop to make sure that moving forward, we build it in our plan to protect children even in sheltering and other things like that…. [KI, 11/2018]

Otherwise than that, I think things are kind of coming back nicely, but we have no recreational places for children. [TH, 10/2018]

And for me I have observed my students already have regressed a lot; like, a lot because perhaps they have been bombarded with a lot of problems. Even though they are still children they know their family still have problems. They see that their roof is not fixed; they have problems with windows, with ceiling. All sort of things. And moving from place to place and find out, you know, some help. [FG, 12/2018]

But I'm amazed at the, I feel like resilience is just an overused word, the strength and the commitment of the students as well as the teachers in getting back to school, getting back to work. At the initial point of the recovery when I was at two of the shelters, and often I was with the Governor, and one of the things that was -- it pulled on your heart strings, but at the same time it helped to renew the commitment to the

kind of work we had to do because we got the first set of schools opened 34 days after Irma. But children would come up and talk to you. [KI, 11/2018]

Once regular sessions went back to normal, kids were happy in their own environment because they did not have to come in the afternoon. Once they left they could finish their homework. All kinds of issues still were going on, but they were Happier going back to their respective school and having the full day. Instead of a rushed four hours a day. [FG, 12/2018]

The quotes shared bring attention to a very real important and continuing health issue for the youth of our community that requires urgent attention – that of the psychological well-being of the children of the Territory in the aftermath of Hurricanes Irma and Maria.

Theme 6: Vulnerability of the Elderly/Concern for the elderly

The quotes below capture the vulnerability of the elderly and the concern expressed on their behalf.

With many of the elderly there appears to be repeating health decline. Some of them may have been robust prior to the storm, after the storm you see the physical presenting of health decline. It may not rise to a level of mental health, but counselling behavioral health and counseling support; some kind of collaborative effort with the community centers and health centers would provide a good benefit for the senior citizens. We have a lot of senior citizens who haven't navigated the health issues and they don't know what to do.' [KI, 10/2018]

Because we had a lot of patients in the geriatric age range who we couldn't contact. There were a lot of people on island who have no family. They're here by themselves. And so there was, I didn't see a big push of people going out to check on those patients. So they were in their homes trying to make do as best as they could. [KI, 11/2018]

Prior to the hurricane we had a lot of people with dementia-related, whether it be -- and since the storm we see a lot of elderly with more of a delirium, in that the baseline had acutely changed following the storms. More confusion, not knowing what medicine to take when. We had to do a lot of filling pill boxes for the elderly because some of them who were able to manage their medications, were in a confused state where they needed additional help. [KI, 11/2018]

So – and we saw a lot of seniors who I felt just gave up; just didn't feel – you know, just was tired. So I thought this experience, if you know an elderly person, that we really need to reach out to them, 'cause I think that it impacted them. [TH, 10/2018]

Given that the USVI population is aging, as presented in the Community Profile, the need to address the vulnerability of the elderly in the community in the aftermath of disruptions is critical.

Theme 7: Disruption in services/gaps in services

Disruptions occurred for various reasons, took various forms, and have had wide-ranging effects on programs, services, staffing, and physical facilities, as the quotes below demonstrate.

> *… we utilized providers that came in and did training with the counselors...the counselors... then go into the classrooms and provide whole group sessions with classes and … were also able to work with teachers. ...' referrals are made to the Department of Health through the Department of Human Services,* ***but because of the storms both those agencies have been negatively impacted and stretched very thin in terms of what they can do***. (Emphasis added) [KI, 11/2018]

> *We had seen quite a lot of new patients in the first months after the storm as quite a few of the private offices didn't open immediately or didn't open at all. Some people did relocate, especially as a result of the hospital. With the hospital downsizing and the fact that you can't do elective surgeries a lot of the private providers have relocated in that they can't do anything.* [KI, 10/2018]

> *Lost a lot of employees. Some you are really attached to, so it was quite a loss. I mean trying to manage through all of that was really difficult.* [FG, 12/2018]

> *The major disruption that we had had to do more with generators, when we were utilizing the generators after the storm…We had brand new generators at some sites. At other sites it wasn't that new… They were saying that we still had a good bit of life out of them, but the challenge of everyday, 24 hours a day, they were breaking down.* [KI, 10/2018]

> *The hurricanes impacted our adult-bed capacity by 50 beds reduction. Second, we lost five of our ER suites; which is back up operationally since we rectified it. And we lost the CT-scanner for a while. … The Cancer Center is completely closed right now so those patients requiring radiation cannot be done. … They have to leave the island. … Both the OR and the ER are back operational. … And the only area with problems is the bed capacity on the fourth floor; that's still compromised.* [KI, 11/2018]

> *The hurricanes created some real challenges across the board. Number one: in terms of our facilities … it created significant challenges on St Croix because we had to totally evacuate that location. In St. Thomas, this location was significantly challenged and remains challenged… So, the facilities from which we operate are challenged… the mold – it's a big issue. Huge for us. Even though we've done – try to do our best in terms of mitigation. We have one particular area where our vocational rehab program occupied in this building – uninhabitable. So, we've had challenges at least with the locations for staff. When you look at client services and areas that we operate from, Head Start centers were critically affected – impacted, where we weren't able to open the classrooms and even when we have been able to open them, it's at a different level. The Head Start Center that was in this building – we totally could not operate. The mold was a problem as well as our nutrition area where food is stored – couldn't operate because it wasn't safe… On St. Croix, our senior centers on St. Croix is under repair; we're hoping to repair that roof very soon … significant challenges at Herbert Grigg, the cafeteria is totally compromised, which has compromised our kitchen…* [KI, 11/2018]

The quotes shared on the theme of disruption make one thing very clear – the effect of the disruptions from Hurricanes Irma and Maria remain and are likely to affect staff and service delivery for an extended period of time.

Theme 8: Collaboration; cooperation; teamwork

The quotes related to this theme highlight the two sides of collaboration/cooperation or teamwork and how the lack of cooperation and teamwork can add to the stress of the recovery process while the presence of effective collaboration can be beneficial.

> *That was difficult to endure, losing things. But it ah -- but for me it was feeling good that I was able to help others, even though when I needed help myself in terms of -- you know, getting the basic things I need for myself and my son.* [TH, 10/2018]

> *We continue to look at ways of filling the gap. We always invite collaboration/cooperation with all entities that serve the population of patients that we see. We will always embark to lead rather than wait.* [KI, 10/2018]

> *….when she indeed receives this particular child we're doing in what's best in their interest. So, it's a team approach …* [KI, 11/2018]

> *…..we were going out and doing community service, helping like at distribution shelters. That's when it was a lot of distribution shelters. We were going out and helping there. We've even done clean-ups and that type of stuff.* [TH, 10/2018]

> *So because of the storms, people are realizing -- and I am not just saying it's just the church, but people are realizing that we need to help our community. So because of the storms, I'm seeing that there is a rise in groups wanting to do more for our community.* [TH, 10/2018]

> *You had to shut your own house down and we working as a nurse in the shelters and that's a very heavy thing to do—working on skeletal staff; people depending on you but yet you still had the same problem like the people; but we still went out and did those twelve hours. You had to go out there and help the people. Long hours, you know. I admire all the nurses because I know what we went through as nurses; it wasn't an easy thing to do, to leave your stuff behind and then come to the community and trying to help*. [FG, 12/2018]

> *So we shared a lot. And, so if I have the science books and my colleague didn't have, then we shared the books, so we had a lot of sharing. However, when we were with another school, that in itself had its conflicts because then I was lucky so I had a class for myself that no one used. I didn't have to worry, but it had teachers in the morning that they would hide the remote for the AC. I mean, it's hot…* [FG, 12/2018]

Theme 9: Communication

The quotes below highlight the importance of communication, particularly within the context of responding to disruptions. There are many considerations and many levels on which communication needs to be addressed to be effective.

> *The general public. If you can't afford it, there is really no place for you to go.* [TH, 10/2018]

> *'My concerns since the hurricane, and I would say everyone today, is that we do not have an effective and liable communication system in place. This morning I could not get on the radio and at home of course. It seems that everything we're doing now is via cell phone. And the reason I couldn't get on is that the towers were not working, so the earliest I could get a call in to say that schools were closed was 7 a.m. But my constant descriptor of the hurricanes, and I'll include today as well, is our management of emergencies is via cell phone and the communication system that we have is just not reliable. Cell phone is just not the way to manage this.* [KI, 11/2018]

> *We basically just went around and speak to the children, speak to the adult. Again I think we had someone from Red Cross come round and did an activity for the adults. There was no consideration at all to communicate with the parents or children at the school … the counselor and I we went to the administration and said we need to connect with my students and we had to find a way. There was no one no leadership to say it's a problem, other students are in school, here in this school children were totally out. We still out. Everyday there is a question and no one seems to know what is going to happen next. The parents were saying we could have come and we could have cleaned up … the parents were very angry because they were not involved with helping; to create an atmosphere for their children …* [FG, 12/2018]

> *—I don't think—if I could be critical of myself—that we did as well as we could have in getting information out…* [KI, 11/2018]

> *We had more communication with your neighbors and strangers and anybody that would need help and sometimes you might see people on the road that you know and you ask them where they are going and stuff. You know they had no vehicle so you just take them. I found the community had a lot of love; we were helping each other and even though a lot of people did not have a lot of things at that time, they still was willing to give whatever little they had.* [FG, 12/2018]

Theme 10: Need for better planning for future disruptions

Both during Town Hall meetings and focus group discussions there were strong views that appropriate plans were not in place for responding to the disruptions caused by Hurricanes Irma and Maria. For some participants, they provided a framework within which policymakers should be addressing response plans. The quotes below capture some of these sentiments.

I think one of the ways that impact disruptions after the hurricane is part of the process in which the Department [VIDE] itself needs to have an action plan in place pending natural disasters. Because really, we were in a state of playing catch up. What is the protocol? What are procedures? Because by the time it came to the school that was long gone. That was after I done secure my home and go to the school. So you say to me going to the school I going to try to salvage my materials, my classroom. I came to assess what damage without you having to tell me, guessing the plan that's about to take place, how can schools combine? Because they have no representative schools. So a plan prior to the natural disaster. … Sadly, we were lacking that. And because we didn't have a game plan, every day we were moving the game post. So this is what we're going to do, no, we're going back to doing that. And so you were always in a state of not sure and that created to our stress level and the pain of not knowing what and where. [FG, 12/2018]

We need to put a task force together ... administrators, some teachers, some support staff ... a core group of individuals, and just kind of reflect on what were the needs right after Irma and Maria; and kind of put some plans in place. … we need to be a little more proactive rather than reactive ... it could also be extended to the families that you know. At one point they had parent universities. ...a parent university prep for the storm kind of thing; this is what you should be doing to help the families ... and then what to do after and then just have it right there. [FG, 12/2018]

We play these things out and we're always there. We always attend, we always participate in it. And we've done these exercises and they have gone great, now here the real thing comes. And what was really interesting for me with the real thing was the people who had been coming from the other agencies weren't the decision makers. I go to them, but other commissioners and assistant commissioners and deputy commissioners, they don't come. So anyway, now they are there and they're the ones making the decisions, Commissioner of Property and Procurement, Commissioner of Consumer and the commissioner of blah, blah, blah. These are the people there and they are the ones making the decisions and they didn't have an appreciation for us. [KI, 10/2018]

And after the storm I became kind of frustrated because of, I think, we could have done better. When I say "better," like the VITEMA side, the government side and better preparedness. So, it's just, besides the frustration, I was able to just take -- do something different, get back as a volunteer, as a Red Cross volunteer and help those where they needed help. [TH, 10/2018]

I don't think, from my observation--and I've been in education for a while--I think my first year we had Hurricane Marilyn. My first year, which was back in '95, we had Hurricane Marilyn. And even when I reflect on all of the -- everything that I've heard then, in comparison to now, it seem to me like we moved backwards, like certain things should have been in place already, there should be a plan. And I don't feel like there was a plan and it was kind of like, have a meeting and oh, yeah, okay, let's do this; but today in the event this happens, this is what we do. And that's my position on that. I don't think there was a plan. [FG, 12/2018]

> *And another, thing is non-involvement of some of the key personal on campus decision making. Decisions were made and these are the decisions that were given to you and you were expected to abide by it.* [FG, 12/2018]

The need to develop responsive preparedness plans is highlighted in the recommendations coming out of this community needs assessment. The need to be inclusive in the plan development will be important for the community, in general, but particularly for those who have a role in providing services to vulnerable children and families.

Section VII: Summary of Program and Services Gaps in Key Areas

Objectives 2 through 5 present findings from an extensive data collection effort to describe and document the health, education, human services and housing needs of children and families approximately one year after the major devastation caused by Hurricanes Irma and Maria in the USVI. It is well documented that communities impacted by such natural disasters, as experienced by the residents of these islands require an extended amount of time to recover and rebuild to pre-event levels and that the effect on the mental health of children can be long-lasting (Murray, 2011). Generally, immediate response efforts tend to focus on the more tangible needs of shelter, food, water, electricity and transportation while the impact on the psychological well-being of the community members receive less attention. One year after the hurricanes, there remain program and service gaps in the areas of health, education, human services and housing needs of the community that warrant the attention of policy-makers, providers and the general community.

Health

- Availability and delivery of behavioral health programs and services for children, adolescents and their families remains a major health service gap in the Territory. The findings reveal lingering effects of the hurricanes on the psychological well-being of children and adults juxtaposed with limited resources to address those needs.
- Specifically, there are not enough school counselors to meet the behavioral health needs of the children in the Territory's public schools.
- Limited access to dental care services that existed prior to the hurricanes remain a major service gap, with the only provider that accepts Medicaid having a wait list of 4000 for dental services on the island of St. Croix.
- Another service gap is in the area of inpatient care in the Territory. With damage to the hospitals, inpatient and outpatient programs and services remain well below pre-hurricane levels and evacuation of patients continues due to the loss of operating rooms, inpatient beds and critical staff.

Education

- Lack of resources for counselors to address mental and behavioral health needs of children in the public school system has been identified as a gap in services in the education system.
- Challenges accessing and verifying school records for students who requested transfers and for students who were displaced also emerged as a gap area.
- Lack of after school programs for youth means that many youth may be unsupervised.

Select Human Services

- DHS personnel shared that there is a shortage of persons to serve as foster parents to children in the agency's custody remains a concern.
- Damage to HS facilities result in reduced services to HS population on all three islands.

Housing

- The major gaps with respect to housing and housing options are linked to the difficulties associated with providing safe, affordable housing to a population that is over 50% low and moderate-income, living on small islands with limited land mass and a high cost of living.
- In addition to repair programs for damaged houses, support for families that are displaced is needed.
- Lack of safe housing for the vulnerable populations of elderly, disabled, mentally ill, and children in the Territory.
- Planning for future natural hazards in the general and public housing communities require attention to the identification and preparation of future sites and facilities for shelters.
- Identification of funding sources and sites for low and moderate-income housing that will reduce the $1 billion in unmet housing need in the Territory will need to be an ongoing initiative.
- There is a lack of safe, quality after school and recreational programs for the Territory's youth.

Section VIII. Priority Programmatic and Service Delivery Issues that Need Urgent Attention

The programmatic and service delivery issues summarized in this section reflect the collective findings of information gathered through various methods-qualitative (key informant interviews, focus group discussions and town hall meetings); quantitative (surveys of school-age children and adult clients of two FQHCs); and secondary analysis of administrative and program data requested from key agencies. Overall, the need for effective disaster plans, communication of such plans to the community, and the void left by the exodus of service providers, in all segments of the community addressed in this community needs assessment-health, education, human services and housing emerged as major issues. While external resources mobilized in the immediate disaster response phase, and into the initial stages of recovery, provided invaluable support, the Territory must address the long-term needs of the vulnerable children and families who must reside in the USVI. In addition to the identified need for effective disaster plans and communication of such plans and the void left by the departure of a wide range of providers, the following priority programmatic and service delivery issues emerged:

Priority Programmatic Issues

Health

- Identify and implement primary and secondary intervention programs to address PTSD and depression in children and adults at the population level.
- Recruit professional staff and providers, particularly in the areas of behavioral health, chronic conditions (diabetes and hypertension), respiratory conditions (asthma), dental care and pediatric care.
- Strengthen collaborative arrangements with stakeholders within the local health care system to improve preventive care programs for children and the broader community before and after a disaster.
- Strengthen collaborative arrangements with providers outside of the Territory to improve management of clients in the wake of such a disaster, to include plans for evacuation of patients in the eventuality hospital systems fail as occurred in September 2017.

Education

- Fill critical vacancies in the public school system, to include teachers, school nurses and school counselors.
- Establish redundant systems to safely store student data in the event of loss due to damage as seen in recent disaster.
- Increase capacity for providing safe, effective, after-school programs for the school age population.

Human Services

- Low participation in TANF in the St. Thomas-St. John district warrant closer examination in order to ensure that those in need in that district are indeed being reached and served by this program.
- Re-evaluate the approach to JOBS experiences for TANF recipients and progress toward the ultimate goal of self-sufficiency.
- Revisit the local criteria for qualification for TANF benefits, particularly the requirements that only single persons can qualify for TANF benefits and that mothers must provide information about their children's fathers to meet TANF qualification requirements.

Housing

- The priority programmatic issues related to housing are linked to actions associated with filling the gaps in housing availability and conditions in the Territory.
- Develop housing initiatives to reduce the unmet housing needs of vulnerable groups in the community.
- Provide some level of assistance to the more than 5,300 households that suffered severe or major damage from the catastrophic hurricanes, to include temporary housing and replacement of the basics needed for living.
- Rebuild/replace the aging housing inventory to ensure hardened structures that better address issues such as accessibility for residents, environmental considerations, energy efficiency, and right-sizing based on smaller family sizes.

Priority Service Delivery Issues

Health

- Repair service delivery sites, particularly hospitals and VIDOH.
- Replace lost equipment and resources needed to deliver quality healthcare to children and families in the USVI.
- Fill critical healthcare provider vacancies in the VIDOH to increase ability to deliver quality health care, to include dental care and in the hospitals to build capacity to provide inpatient care.

Education

- Rebuild schools, to include school libraries.
- Restock lost equipment such as promethean boards and computers for classroom instruction.
- Restock lost equipment for programs such as athletic programs, music programs and other enrichment activities typical of the wide range of programs available in the Territory's public school system.

Human Services

- Rebuild and reopen HS centers and classrooms (damaged and closed in the aftermath of the hurricanes) in order to resume optimal program delivery of HS services.
- Fill key vacancies in both the HS and EHS programs so that service delivery to HS and EHS children and families could be at optimal levels.
- Increase pool of persons/families to support the foster care program.
- Increase access to preventive dental and medical care for the HS population.
- Re-evaluate the approach to work experience for TANF recipients through the JOBS Program and progress toward the ultimate goal of self-sufficiency.
- Revisit the local criteria for qualification for TANF benefits, particularly that only single persons can qualify for TANF benefits and that mothers must provide information about their children's fathers in order to meet TANF qualification requirements.

Housing

- A major service delivery issue is the development of a communications strategy for the general public to understand and follow the guidelines, actions and timelines of housing repair programs.
- Acknowledge safe, affordable housing as being a critical component of community development.
- Factor in economic, size, and isolation challenges while working to ensure a future where citizens will have a place to live that has a chance of withstanding extreme weather, like hurricanes.

CHAPTER IV: LIMITATIONS, DISCUSSION, AND RECOMMENDATIONS

Limitations

There are several limitations that are noteworthy with respect to the completion of this community needs assessment (CNA). A major limitation revolves around the limited data available to the research team to provide expansive information in some critical areas of the report. Though valiant efforts were made by the research team over the period of seven months, the team was unsuccessful in securing critical secondary data (for FY2017-2018 or CY2018) from the only public health department in the Territory and received limited data from the two public hospitals in the Territory.

Additionally, while key informant interviews (KIs) were conducted with leaders of the two FQHCs and the SRMC, the research team was unable to complete KIs with leaders from the VIDOH and JFL. This has resulted in an incomplete picture of the health status of children and families and the current status of the health systems in the Territory. The continuing challenges of recovery-related conditions that took priority as well as the time-frame for data collection for the community needs assessment may have contributed to the limited access to requested secondary data at these critical agencies.

Another area related to data limitations is in terms of the nature of the secondary data available for the HS and EHS programs in the Territory. Though qualitative data revealed significant reductions in attendance at HS classrooms as well as some loss of infants from the EHS program, the quantitative data extracted from the Administration for Children and Families (ACF) site which houses HS/EHS Program Information Report (PIR) data show full enrollment in the both programs, since enrollment data would have been reported prior to the hurricanes. The research team also encountered difficulty reaching out to potential study participants, particularly key agencies and persons who could not always be reached due to continuing challenges with communication in the form of non-working land lines, and sporadic cellular service.

Additionally, the data collection plan called for focus group discussions with educators from parochial and private schools. However, due to timing challenges, those were not conducted.

Yet another limitation is that this report does not provide trend data in any of the focus areas, primarily due to the limited amount of post hurricane data that was available for inclusion in the report and the span of time that the data represent. Therefore, further examination of the status

of the community post-Hurricanes Irma and Maria will be needed moving forward, particularly as it relates to the lingering impact on the health and education outcomes for vulnerable children and families in the Territory. Additionally, the data in no way speak to cause and effect, but rather show associations between the hurricanes and some key outcomes, particularly with respect to the primary data collected.

Notwithstanding these limitations, the research team is confident that the information presented in this community needs assessment will be useful to service providers, policy makers, and potential funders as the Territory continues recovery efforts aimed at increasing resilience of the residents, systems, and entities to be better prepared for future disruptions.

Discussion

This community needs assessment was undertaken to determine the health, education, human services, and housing status and needs of children and families in the US Virgin Islands in the aftermath of Hurricanes Irma and Maria. The report has achieved its purpose and, through the findings captured in Chapter III, has documented not only the programs and services available in the areas of health, education, select human services, and housing and housing options to vulnerable children and families in the Territory, but also the needs and gaps in services in these areas.

To facilitate the use of this report by a wide range of policy-makers, service providers, and potential funders, summaries were provided of program and service gaps in the four key areas, as well as priority programmatic and service delivery issues. These areas of the report can be used as quick reference points to distill the detailed information presented early in Chapter III.

A striking aspect of this work was the extent to which, during the collection of qualitative data, there were many instances where study participants seemed to go back to their experiences during and immediately following Hurricane Irma and or Hurricane Maria. A very sobering and troubling perception that emerged was that there were limited or no plans in place with respect to responding to a natural hazard such as what the Territory experienced with the passage of Hurricanes Irma and Maria. This suggests that one of the immediate actions that needs to be taken by the leadership of the key agencies represented in this community needs assessment, as well as by key government officials and policy makers, is the need to identify effective approaches to

communicate to the community regarding existing Emergency Response Plans, and, indeed, involve members of the community in the development and "testing" of these plans at the agency-level, as well as at the broader community-level.

The information shared in the focus group discussions, key informant interviews and community town hall meetings, as well as the responses to the survey questions by adults and children alike paint a stark picture of the lingering effects of the hurricanes on the mental health of those who experienced the historic storms of September 2017. The findings reveal a need for counseling services for residents during the response and long-term recovery period in affected communities. Disaster preparedness and response plans would do well to include plans to provide counseling services in affected communities, in addition to increasing services in the area of behavioral health, both in the primary care and hospital inpatient care settings.

Thus, as plans are developed for post-disaster recovery, it is paramount that the Territory considers pre-hurricane conditions so that planning is purposeful, responsive, and realistic. The pre-hurricane conditions that must be considered are the characteristics of the USVI population: a decreasing and aging population; the educational attainment level of the average adult in the community; and the reality that between 25% and 31% of children and families live in poverty. These factors could exacerbate the level of economic stress among the survivors of such disasters as recently experienced in 2017.

The findings of this community needs assessment point to the need for planning efforts that must include ways/strategies/approaches to function with reduced human resources and compromised spaces and infrastructure. Such plans would do well to recognize the need for federal and other external dollars and resources, in addition to local and individual investment in recovery efforts. Another key finding of this community needs assessment is the need to recognize and address the strengths and weaknesses associated with telecommunication resources and mobile (cellular) devices which should not be the only medium for communication.

Further, recognizing the realities of climate change, and the attendant expectation that the Territory is likely to experience additional category 5 hurricanes, planning efforts related to addressing the needs of vulnerable children and families must align with the level of potential impact. A necessary, though not sufficient condition for relevant, responsive, and purposeful planning is the availability of quality data. Therefore, policy-makers leading planning efforts must

also commit to investing in the necessary systems to ensure the collection, storage, sharing, and use of key data. Finally, it is imperative that the planning process and plans developed recognize that recovery continues for years beyond the actual disruption/disaster. The findings of this community needs assessment support the need to plan and work with a long-term recovery approach for the USVI in the aftermath of Hurricanes Irma and Maria.

In conclusion, the findings of this community needs assessment point to the need for responsive, realistic, collaborative and community-engaged disaster planning that is mindful of the mental and physical needs of the vulnerable children and families who may bear the brunt of the trauma from natural disasters that cause major disruptions in their systems of care. Otherwise, the community may yet hold the perception that appropriate planning for responding to potential disruptions were not adequate to meet the community's needs.

Recommendations

Given the overarching purpose of this community needs assessment, the recommendations are offered within the framework of the social determinants of health, as captured in the graphic below.

Figure 6. Social Determinants of Health: Know What Affects Health

Source: Centers for Disease Control and Prevention; https://www.cdc.gov/socialdeterminants/index.htm

Figure 6 speaks to five domains of social determinants of health, namely, education, economic stability, the neighborhood and the built environment – to include housing and the safety of neighborhoods, social and community context, and health and health care.

The social determinants framework, a priority focus for Healthy People 2020 (CDC), is very relevant for considering the needs of the USVI community in the aftermath of two category 5

hurricanes, and particularly the needs of vulnerable children and families. The community profile provided a backdrop for understanding where vulnerable children and families in the USVI are in the aftermath of Hurricanes Irma and Maria. The findings highlighted in the community profile provide a portrait of a community with educational attainment levels well below the national attainment levels. Based on the key role that education plays as a social determinant of health, there are likely to be health challenges for our vulnerable children and families. Further, findings related to the education objective reveal that the public education system is in recovery, with many facilities unusable and instruction being provided in modular structures. Educators reported observing post-traumatic stress-type behaviors among children, with discernable physical reactions to inclement weather as well as some regression in performance on standardized assessments.

The existence of increased health challenges in the community is further borne out from the findings on the large proportion of clients who have Medicaid insurance or no insurance at all who access health services from the two FQHCs in the Territory. As a factor in access to health care, low levels of insurance coverage are another critical marker for vulnerable children and families in the USVI. Additionally, findings from health data collected from youth and adults in the St. Croix and St. Thomas-St. John Districts point to behavioral and psychological health challenges that are affecting both children and adults in the community one year after the hurricanes. These findings dovetail with the social determinant that focuses on the social and community context.

The continuing effects of the storm are evident not only through results of responses to the battery of instruments completed by adults, and the single instruments completed by students, but also with information shared in Town Hall meetings regarding reluctance of both youth and adults to seek help for behavioral health issues. This level of reluctance is due, in part, to the stigma associated with seeking counseling or being perceived as "crazy," and, in some cases, even denial about having an issue that warrants professional attention. Within this social and community context, coupled with the gap that exists in the area of health care options and health care providers in the area of behavioral health, the health and wellness of vulnerable children and families in the Territory in the aftermath of Hurricanes Irma and Maria are of paramount concern.

Finally, recommendations are provided taking into account findings related to select human services programs offered to vulnerable children and families in the Territory. Findings indicate ongoing needs for vulnerable children, particularly those in need of foster care, as well as HS

children that are not receiving needed health and dental services. The findings also show a marked increase in SNAP benefits disbursed a year after the two category 5 hurricanes when compared to the month prior to the hurricanes and the month of the hurricanes. The extensive number of services that are offered and supported through the Social Services Consolidated Block Grant also speak to the economic challenges that vulnerable children and families face in the Territory, as do the findings on the proportion of children living in poverty and the substantial number of children under six years of age living below the Federal Poverty Level.

The economic challenges affecting vulnerable children and families are exacerbated by the economic disruptions that were a direct result of the hurricanes, with many businesses in the hotel and hospitality industry closing their doors for over a year, and many still not operational as of December 2018. Further challenges with the built environment were documented in the findings related to housing and housing options, with one housing community having to relocate over 300 families as a direct result of substantial structural damage in the aftermath of Hurricane Irma. Many landlords who participate in the Housing Choice Voucher Program were unable to rent to qualified families due to damage to their rental units. As of December 2018, this situation has improved, with new landlords coming on board. However, for many families, as indicated in the findings, issues with displacement of family members and challenges with home repair remain.

In short, the findings of this community needs assessment point to a Territory with the most vulnerable experiencing challenges in five key areas that CDC has highlighted as social determinants of health. This then requires urgent attention and action on the part of policy-makers, funders, and service providers – whether health, education, human services or housing to set priorities that, taken individually, or as part of a whole, will improve the social determinants for vulnerable children and families in the Territory, thereby strengthening their health and well-being, which is foundational to learning, growing, and earning.

Recommendations to improve the overall health of vulnerable children and families

- Immediately increase access to quality healthcare for all residents, particularly in the areas of behavioral health, dental health, preventive, primary health.
- Immediately increase access to preventive health and behavioral health for children by hiring an adequate number of school nurses and counselors in the public school across the Territory.

- Take steps needed to repair health care facilities to be able to provide, at a minimum, the level of healthcare services available prior to Hurricanes Irma and Maria.
- Implement a health education/health literacy campaign to debunk the perception that seeking counseling is a sign of weakness or craziness.
- Invest in a long-term solution that provides incentives for residents to pursue health-related degrees and return to fill gaps that exist in the health field, to include allied health.

Recommendations to improve educational outcomes for our youth

- Rebuild schools, noting decreasing population trends and shifts in demographics.
- Include learning media centers in the construction of new schools.
- Establish enrichment programs to provide additional academic support for students who have lost ground due to disruptions of the hurricanes and other disruptions that have ensured.
- Stabilize internet connectivity and associated technology to enhance teaching and learning.
- Reinstate and expand after school programs for students to address social as well as academic needs.
- Provide support services for teachers and other school personnel so that they can better address students' needs.

Recommendations to increase economic stability of vulnerable families

- Re-engineer TANF program to assist TANF recipients in securing jobs to move them out of poverty.
- Increase support for families participating in the Foster Care Program.
- Provide certificate programs through UVI CELL to enhance skills of displaced workers so that they can return to the labor market.

Recommendations to improve neighborhoods and the built environment

- Upgrade existing public housing stock to improve health and safety aspects of housing communities.
- Provide financial support to vulnerable families still struggling to repair damaged homes so they have stable home environments.

Recommendations to improve the community's preparedness for future disruptions

The recommendations offered are anchored in a framework which presupposes an overarching, policy approach to disaster preparedness which results in a community that is prepared and able to support and take care of itself – at least for a period of time – during and after a disaster. To that end, the following recommendations are offered:

- Disaster preparedness planning must begin at a sector and community-level, facilitated by a revitalized VITEMA as the lead coordinating entity for disaster preparedness for the Territory.

- Key government agencies must develop and test emergency preparedness plans that include Standard Operating Procedures (SOPs) for specific types of disasters (hurricanes, tsunamis, earthquakes, active shooter, etc) and include collaboration (MOUs) with non-governmental entities that play critical roles in response and recovery efforts.
- Preparedness plans must be intentional in addressing the needs of vulnerable populations in our community, to include the elderly, persons with disabling conditions, children, and the poor.
- Disaster planning needs to include contingencies for instances of limited external assistance.
- Non-school locations need to be identified for mass shelter and similar locations need to be identified for sheltering special needs residents.
- Communication protocols associated with disaster preparedness planning should be sensitive to
    - Cultural nuances
    - Educational levels
    - English language proficiency
    - Reliability of communication mediums
    - Appropriate channels for disseminating information
    - The most appropriate entity/person to lead communications efforts.
- During the planning process, at the community as well as the territorial level, a compendium of strategies to address the emotional, psychological, and social aspects of the aftermath of disasters need to be included.
- Disaster plans should include plans for the effective and ongoing data collection, data storage and data access mechanisms that are necessary to inform data-driven decision making at all levels.

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APPENDICES

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Appendix I: List of Acronyms and Abbreviations

Abbreviations and Acronyms

A

ACA .... Affordable Care Act

ARC .... American Red Cross

ASQ .... Ages & Stages Questionnaire

AVIP .... Association of Virgin Islands Psychologists

B

BER .... Bureau of Economic Research

BRS .... Brief Resilience Scale

C

CAC .... Community Assessment Committee

CASPER .... Community Assessments for Public Health Emergency Response

CBO .... Community-Based Organization

CBPR .... Community-Based Participatory Research

CDBG-DR .... Community Development Block Grant Disaster Recovery

CDC .... Centers for Disease Control and Prevention

CERC .... Caribbean Exploratory Research Center

CESD .... Center for Epidemiologic Studies Depression Scale

CEO .... Chief Executive Officer

CFVI .... Community Foundation of the Virgin Islands

CHMC .... Charles Harwood Memorial Complex

CKCI .... Charlotte Kimelman Cancer Institute

CLIA .... Clinical Laboratory Improvement Amendments

CNA .... Community Needs Assessment

CPSS .... Child PTSD Symptom Scale

CRNA .... Community Recovery Needs Assessment

CSCHN .... Children with Special Health Care Needs
CTSQ .... Child Trauma Screening Questionnaire
CY ....Calendar Year

D

DBHADDS............. Division of Behavioral Health, Alcoholism, and Drug Dependency Services
D-SNAP .... Disaster Supplemental Nutrition Assistance Program

E

ECC .... Eastern Caribbean Center
ED .... Executive Director
EHDI .... Early Hearing Detection and Intervention
EHS .... Early Head Start
EMS .... Emergency Medical Services
ERQ .... Emotion Regulation Questionnaire

F

FEMA .... Federal Emergency Management Agency
FG .... Focus Group Discussion
FHC .... Frederiksted Health Care, Incorporated
FPL .... Federal Poverty Level
FQHC .... Federally Qualified Health Center
FY .... Fiscal Year

G

GDP .... Gross Domestic Product
GSES .... General Self-Efficacy Scale

H

HCVP .... Housing Choice Voucher Program

HIPAA .... Health Information and Portability Accountability Act

HPSA .... Health Professional Shortage Area

HRSA .... Health Resources and Services Administration

HS .... Head Start

HUD .... Department of Housing and Urban Development

I

IDEA .... Individuals with Disabilities Education Act

IRB .... Institutional Review Board

J

JFL .... Juan F. Luis Hospital and Medical Center

JOBS .... Job Opportunities and Basic Skills

K

KI .... Key Informant Interview

L

(Project) LAUNCH .... Linking Actions for Unmet Needs in Children's Health

LSSVI .... Lutheran Social Services of the Virgin Islands

M

MAP .... Medical Assistance Program

MCH .... Maternal and Child Health

MH .... Mental Health

MIECHV (Program) .... Maternal, Infant, and Early Childhood Home Visiting

MKS .... Myrah Keating Smith Community Health Center

MOA .... Memorandum of Agreement

N

NASW-VI .... National Association of Social Workers – Virgin Islands Chapter

NGO .... Non-governmental Organization

NIH .... National Institutes of Health

NOAA .... National Oceans and Atmospheric Administration

NSLP .... National School Lunch Program

P

PA .... Public Assistance

PAC ....Project Advisory Committee

PINS .... Persons in Need of Supervision

PIR .... Program Information Report

PRE .... Planning, Research and Evaluation

PSS .... Perceived Stress Scale

PTSD PCL .... Post-Traumatic Stress Disorder Checklist

PW .... Project Worksheet

R

RLS .... Roy Lester Schneider Hospital

S

SBA .... Small Business Administration

SBP .... School Breakfast Program

SNAP .... Supplemental Nutrition Assistance Program

SRMC .... Schneider Regional Medical Center

SSBG .... Social Services Block Grant

SSI .... Supplemental Security Income

STEEMCC .... St. Thomas East End Medical Center Corporation

STEP .... Sheltering and Temporary Essential Power Program

STTJ .... St. Thomas-St. John

STX .... St. Croix

SY .... School Year

T

TANF .... Temporary Assistance for Needy Families

TB .... Tuberculosis

U

UDS .... Uniform Data Set

USDA .... United States Department of Agriculture

USVI .... United States Virgin Islands

UVI .... University of the Virgin Islands

V

VIC .... Virgin Islands Code

VICS .... Virgin Islands Community Survey

VIDE .... Virgin Islands Department of Education

VIDHS .... Virgin Islands Department of Human Services

VIDOH .... Virgin Islands Department of Health

VIHA .... Virgin Islands Housing Authority

VIHFA .... Virgin Islands Housing Finance Authority

W

WCSC .... Women's Coalition of St. Croix

WIC .... Women, Infants and Children

Appendix II: Research Team & Committee Memberships

Research Team

Core Research Team

Student Researchers

Community Assessment Committee

Project Advisory Committee

Letter of invitation to serve on Project Advisory Committee

List of Invitees

Project Advisory Committee Members

Research Team

Core Research Team

Name	Role
Noreen Michael, PhD	Project Director/Principal Investigator
Janis M. Valmond, MS, DrPH	Co-Project Director/Co-Principal Investigator
Velma A. Abramsen, MPA	Administrative Specialist; Project Coordinator (8/2018 – 2/2019)
Deborah E. Brown, PhD	Research Associate
Gloria B. Callwood, PhD	Director/PI, CERC; Research Associate
LaVerne E. Ragster, PhD	Senior Research Associate
Asha DeGannes, PhD	Project Coordinator/Program Manager (3/2018 – 8/2018)

Student Researchers

STUDENT RESEARCHERS

NAME	ROLE
Kendell Daughtry, M.S.	Graduate Research Assistant
Merl Eustache-Webster, MPA	Graduate Research Assistant
Selena Cuffy	Research Assistant
Aisha Griffin	Research Assistant
Annouska James	Research Assistant
LaKeesha Laudat	Senior Research Assistant
Christian Soto	Research Assistant
Azriel Williams	Research Assistant

Community Assessment Committee

Community Assessment Committee

Name	Role
Anna Scarbriel, PhD	Project Sponsor/Director of Grants and Programs, CFVI
Velma Abramsen, MPA	Administrative Specialist *[Mar – Aug 2018]* Project Coordinator *[Aug.2018 – Feb. 2019]*
Deborah Brown, PhD	Research Associate
Asha DeGannes, PhD	Project Coordinator/Manager *[March – Aug. 2018]*
Noreen Michael, PhD	Project Director/PI
LaVerne Ragster, PhD	Senior Research Associate
Janis Valmond, DrPH	Project Co-Director/Co-PI
Gloria Callwood, PhD	CERC PI/Director/Research Associate

Project Advisory Committee

Sample Letter of Invitation

University of the Virgin Islands

Historically American. Uniquely Caribbean. Globally Interactive.

Caribbean Exploratory NIMHD Research Center *School of Nursing*

March 23, 2018 ***VIA E-MAIL ONLY***

Ms. Vivian St. Juste
Executive Director
Family Resource Center

Email: vestjuste@gmail.com

Ref.: Letter of Invitation / Community Needs Assessment Project Advisory Committee (PAC) Member

Dear Ms. St. Juste:

The Community Foundation of the Virgin Islands (CFVI), through an Agreement with the Caribbean Exploratory Research Center at the University of the Virgin Islands (UVICERC), has initiated an assessment to determine the status of children in the US Virgin Islands post hurricanes Irma and Maria. The assessment, a project under the KIDS COUNT Initiative, will take place over the next 6 months and will include several best practice approaches to determine the health, education, human services, and housing status and needs of children and families in the US Virgin Islands during this post-hurricane period. It is expected that the community needs assessment will identify gap areas and priority issues which will translate into information about where the needs of children and the community are not being met.

This is a letter of invitation for you to participate by becoming a Community Needs Assessment Project Advisory Committee (PAC) member. Your input and knowledge of the community are valuable to this process. The purposes of this committee are to (1) promote the importance and benefits of strategic partnerships with public and private programs to ensure the health and well-being of children and families; (2) build on existing partnerships and develop new partnerships that ensure access to health, social and educational services for children and families before and after natural disasters; and (3) continue to build a strong network of collaborative partnerships that support health and well-being of children and families despite the negative impacts from climate-driven weather extremes.

This community needs assessment will provide an overview of the well-being and needs of children and families in the general population post-hurricanes, which can be used to reinforce the development of strategies, policies and interventions in support of a more resilient community. The methodologies that are anticipated to obtain detailed perspectives on the health status and needs of these populations include standardized survey instruments, focus group sessions with representatives of key stakeholder groups, key informant interviews, and community forums/town hall meetings. The time frame for collecting data and information available on education, health, human services and housing is March to July 2018.

We anticipate convening the first meeting of the Advisory Committee on Tuesday, April 10, 2018 from 8:30am to 12:30pm. Subsequent Advisory Committee meetings are projected for every three (3) weeks, through the end of the project. Dates for future meetings will be addressed as an agenda item at

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the PAC's inaugural meeting on April 10th. Thank you in advance for your consideration of this request. We look forward to a productive relationship and we thank you for taking this first step towards building a strong network of collaborative partnerships for the health and well-being of children and families in our community, especially those rebuilding lives in this post-hurricane period.

Due to the impact of the storms, we do not have a working land line at this time. As such, to indicate your willingness to participate in the Community Needs Assessment Project Advisory Committee, please contact Dr. Asha DeGannes, Project Coordinator at adegann@uvi.edu. Also, we ask that you indicate your availability to attend the PAC's inaugural meeting on Tuesday, April 10, 2018.

We look forward to receiving a favorable response to our request.

Sincerely,

Noreen Michael, Ph.D.
Research Director & Research Associate Professor

No. 2 John Brewers Bay • St. Thomas • U.S. Virgin Islands 00802• Voice (340) 693-1172 • Fax (340) 693-1148

Recipients of PAC Invitation Letters -1

Recipients of Letters of Invitation to Serve on the Project Advisory Committee

Name	*Organization*	Accepted/Proxy Named/Declined/No Response
Lily Alvarez	American Red Cross (ARC)	Accepted
Angela Belfon	Office of the Governor, Climate Change (OOG – CC)	Accepted
Felecia Blyden	VIDHS	Proxy Named
Faith Dane Boone	VIDE – STX Superintendent's Office	Accepted
Christina Chanes	CES-UVI – STT	Accepted
Sarah Dahl-Smith	CES-UVI – STX	Accepted
Michelle Davis	VIDOH	Proxy Named
John Duck	ARC	Proxies Named
E. Aracelis Francis	Association of Social Workers, VI Chapter	Accepted
Robert Graham	VIHA	Accepted
Daryl Griffith	VIHFA	No Response
Charlene Jones	ARC	No Response
Dina Simone LeRoy	OOG	Accepted

Recipients of PAC Invitation Letters -2

Name	*Organization*	Accepted/Proxy Named/Declined/No Response
Clema Lewis	Women's Coalition	Accepted
Shawn-Michael Malone	OOG – CC	Accepted
Sharon McCollum	VIDE	Proxy Named
Anita Roberts	OOG; OMB	Accepted
Wanda Ruben	JFL	Accepted*
Vivian St. Juste	Family Resource Center	Accepted
Gail Shearer	Court Appointed Special Advocate	Declined+
Moleto Smith	STEEMCC	Accepted
Masserae Sprauve Webster	FHC	Accepted
Junia John Straker	LSS	Declined++
Bernard A. Wheatley	SRMC	Accepted*

**Though invitation was accepted, there was no representation at PAC meetings.*
+Attended inaugural meeting of the PAC, but declined participation due to scheduling demands.
++Declined participation due to scheduling demands.

Project Advisory Committee Members-1

PROJECT ADVISORY COMMITTEE MEMBERS

Name	Role &/or Agency Affiliation
LaVerne Ragster, PhD	Co-Chair Senior Research Associate, UVI
Anna Scarbriel, PhD	Co-Chair Project Sponsor/Director of Grants and Programs, CFVI
Velma Abramsen	Administrative Specialist, UVI *[March – August 2018]* Project Coordinator, UVI *[August – December 2018]*
Lily Alvarez	Proxy, American Red Cross (ARC)
Natalie Bailey	VI DHS, Division of Family Assistance
Angela Belfon	Office of the Governor (OOG)
Deborah Brown, PhD	Research Associate, UVI
Gloria Callwood, PhD	CERC PI/Director; Research Associate
Tai Hunte-Ceasar	Proxy, VIDOH
Christina Chanes	CES-UVI, St. Thomas
Sarah Dahl-Smith	CES-UVI, St. Croix
Asha DeGannes, PhD	Project Coordinator, UVI [March – August 2018]
E. Aracelis Francis, PhD	ASW, VI Chapter
Nymka Frett	Proxy, VI DHS
Faith D. George	VIDE

Project Advisory Committee Members-2

Name	Role &/or Agency Affiliation
Robert Graham	VIHA
Kathleen Greenaway	Proxy, VIDOH - MCH
Dina LeRoy	OOG
Clema Lewis	Women's Coalition, St. Croix
Masikia Lewis	VIDHS, Head Start Program
Karole McGregor	Proxy, FHC
William E. Martin	Proxy, ARC
Noreen Michael, PhD	Project Director/PI, UVI
C. Patricia Penn	Proxy, STEEMCC
Derval Petersen	VI DOH - MCH
James Richardson	Proxy, VIDE - PRE
Anita Roberts, PhD	OMB
Vivian St. Juste	Family Resource Center, STT
Gail Shazar	Proxy, ARC
Moleto Smith	STEEMCC
Masserae Sprauve Webster	FHC, St. Croix
Janis Valmond, DrPH	Project Co-Director/Co-PI
Zelda Williams	Proxy, VIHA

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Appendix III: Select Data Collection Documents

Data Collection in Schools

Permission Letter to School Administrators

Permission Letter and Passive Consent Form for Parents

Administration Protocol & Student Assent

Data Collection at FQHCs – English/Spanish

Recruitment Flyer

Fact Sheet

Informed Consent Form

Brief Demographic Questionnaire

Qualitative Data Collection

Key Informant Interview Protocol

Focus Group Protocol

Town Hall Meeting Protocol

Secondary Data Collection

Sample Data Request Letter

List of Agencies Receiving Data Request Letters

Data Collection in Schools

Permission Letter – Parochial and Private School Administrators

Parent Permission Letter and Passive Consent Form

CTSQ Administration Protocol and Student Assent

CPSS Administration Protocol and Student Assent

Permission Letter – Parochial/Private School Administrators

University of the Virgin Islands

Historically American. Uniquely Caribbean. Globally Interactive.

Caribbean Exploratory NIMHD Research Center of Excellence *School of Nursing*

May 2018

Ref.: ***Permission to Collect Data at {name of school} in support of a post-Hurricane Irma and Maria Community Needs Assessment Project***

Dear Principal/Headmaster/Headmistress/Head of School:

This letter seeks your permission to include your school in a community needs assessment (CNA) project focused on *Understanding the Health, Education, Human Services, and Housing Needs of Vulnerable Children and Families in the US Virgin Islands Post Hurricanes Irma and Maria.*

The Community Foundation of the Virgin Islands (CFVI), through an Agreement with the University of the Virgin Islands (UVI), has engaged UVI's Caribbean Exploratory Research Center (UVICERC) to conduct the community assessment to determine the status of USVI children (and families) post hurricanes Irma and Maria. The CNA will assess health, education, human services and housing needs of children and vulnerable families in the USVI, describe gap areas and identify priority issues. It is anticipated that the findings of the CNA will translate into information that will be utilized by policy makers, funders, and other key stakeholders working together to promote resilience and improve outcomes for children and families in the Territory.

With the participation of your school, the Community Assessment Committee (CAC) from UVI can ensure broad representation of children across the Territory and provide the richest context and most meaningful information available about the status of children in the aftermath of Hurricanes Irma and Maria.

To facilitate your decision regarding our request, we have included the following for your review: 1) a Fact Sheet highlighting the project that would be shared with your school's administration and faculty; 2) the passive consent request to be sent to parents (with assistance from you and your teachers); 3) the assent form to be read to students for their verbal agreement prior to completing the surveys; 4) the instrument to be used for data collection from intermediate grade (4-6) students; and 5) the instrument to be used for data collection from secondary (7-12th grade) students. Additionally, it is important to note that prior to engaging in data collection from the schools, the research team must receive approval from the University's Institutional Review Board (IRB) – referenced in the letter to parents. Further, the research team will observe appropriate research practices to ensure the security and confidentiality of the data collected. The proposed time frame for collecting data in schools is June 4 - 9, 2018.

Thank you in advance for your consideration of this request as we endeavor to increase our understanding of priority health needs of children and identify gaps in service delivery related to their well-being in post-hurricane USVI. Please contact Dr. Asha DeGannes, Project Coordinator at adegann@uvi.edu or 340-693-1172 to confirm your school's participation. If you have questions about the study, please contact Project Director, Noreen Michael at 340-693-1172, Project Co-Director, Janis Valmond at 340-692-4275, or me, Gloria Callwood, Center Director, as 340-693-1291.

Sincerely,

Gloria B. Callwood

Gloria B. Callwood, Ph.D., RN, FAAN
Principal Investigator and Director
Caribbean Exploratory Research Center

No. 2 John Brewers Bay • St. Thomas • U.S. Virgin Islands 00802• Voice (340) 693-1172 • Fax (340) 693-1148

Parent Permission Letter and Passive Consent Form

University of the Virgin Islands

Historically American. Uniquely Caribbean. Globally Interactive.

Caribbean Exploratory NIMHD Research Center of Excellence *School of Nursing*

September 2018

Dear Parent or Guardian:

Your son/daughter has been invited to participate in a survey as part of a community needs assessment following Hurricanes Irma and Maria. The purpose of the survey is to gather information about students' health. Children in grades 4-12 enrolled in the public, private, and parochial schools on all three islands will be asked to complete the survey during the school day.

The Caribbean Exploratory Research Center at the University of the Virgin Islands is conducting this study on behalf of the Community Foundation of the Virgin Islands. This project has been approved by the Commissioner of Education and/or the principal/head master/ or head of school at your son's/daughter's school.

Please read the attached consent form. **You need to return this form only if you *do not* want your son or daughter to participate.** If you choose to allow your son/daughter to participate, simply keep the form for your own use.

Should you have any questions, please call Dr. Noreen Michael at 340-693-1172 or Dr. Janis Valmond at 340-692-4275. You may also call me, Dr. Gloria Callwood, at 340-693-1291.

Thank you for taking part in this important survey to promote the health of our children in the USVI!

Sincerely,

Gloria B. Callwood

Gloria B. Callwood, Ph.D., RN, FAAN
Principal Investigator and Director
Caribbean Exploratory Research Center

No. 2 John Brewers Bay • St. Thomas • U.S. Virgin Islands 00802• Voice (340) 693-1172 • Fax (340) 693-1148

COMMUNITY NEEDS ASSESSMENT STUDENT SURVEY
PARENT/GUARDIAN INFORMATION SHEET AND CONSENT FORM

1. **This information sheet is about surveys being conducted at your son's/daughter's school.** Your son/daughter is invited to take part in this survey being conducted by researchers at the Caribbean Exploratory Research Center (CERC) at the University of the Virgin Islands (UVI) on behalf of the Community Foundation of the Virgin Islands (CFVI). For this research project, Dr. Noreen Michael is the Project Director and Dr. Janis Valmond is the Project Co-Director. Dr. Gloria Callwood is the CERC Director.

2. The purpose of this survey is to gather information on overall health status of children in grades 4-12 in public, private and parochial schools in the USVI following Hurricanes Irma and Maria. The information collected is private and kept in a secure location at the University of the Virgin Islands. It is available only to scientists and their staff. The results of the study may be published, but will never mention any student or school by name. Only a number will be used to identify your child.

3. Your son/daughter will be asked to complete a student survey about his/her feelings following the two hurricanes. Trained research staff will administer the student survey.

4. Your child's involvement in this study will not cost you any money and it is completely **voluntary.** The total time your son/daughter will spend in the project is about 35 minutes. If your son/daughter does not participate he/she may do school work or be provided an activity sheet while participating students are completing the student survey and being measured.

5. You may refuse to have your son/daughter take part or you may withdraw your son/daughter from the project at any time. Doing so will neither change the services that are available to your son/daughter at his/her school nor affect his/her grades, extracurricular activities or overall standing in the school.

6. If you would like to meet a project staff member or if you have any questions or concerns, please contact Noreen Michael at 340-693-1172; Janis Valmond at 340-692-4275, or Gloria Callwood at 340-693-1291.

7. This study has been approved by the Institutional Review Board (IRB) at the University of the Virgin Islands, the Office of Planning, Research and Evaluation (PRE) within the Department of Education, and/or the principal, head master, or head of school at your child's school. If you have questions about your son's/daughter's rights as a research subject, please call Diahann Ryan at the UVI IRB at 340-693-1202 or the Department of Education PRE at 340-774-1000.

PLEASE TURN TO THE NEXT PAGE

DECISION ABOUT MY SON'S/DAUGHTER'S PARTICIPATION IN THE COMMUNITY NEEDS ASSESSMENT SURVEY

If you **WANT** your son/daughter to take part in the study simply **KEEP THIS SHEET** for your records.

We will assume that you would like your son/daughter to take part in the study unless you return the form below.

IF YOU **DO NOT** WANT YOUR SON/DAUGHTER TO PARTICIPATE, FILL OUT THIS FORM AND SEND IT TO HIS/HER TEACHER.

I, ______________________________, **DO NOT** want my child,
(PRINT-parent/guardian name)

______________________________, a student at ______________________
(Child's Name: Please Print Clearly_First, Last)

____,
(school's name)

to participate in the survey being conducted in the public, private and parochial schools by the Caribbean Exploratory Research Center at the University of the Virgin Islands on behalf of the Community Foundation of the Virgin Islands.

While I do not have to give a reason for my decision, I have chosen not to let my son/daughter take part because: (Write your reason below)

______________________ ______________________
Parent/Guardian Signature Date (mm/dd/yyyy)

If you have any questions or concerns about the project or your son's/daughter's participation, contact:

Noreen Michael, PhD, Project Director Caribbean Exploratory Research Center University of the Virgin Islands (340) 693-1172 nmichae@uvi.edu	Janis Valmond, DrPH, Project Co-Director Caribbean Exploratory Research Center University of the Virgin Islands (340) 692-4275 Janis.valmond@uvi.edu

IRB STATEMENT: This study has been reviewed by the Institutional Review Board of the University of the Virgin Islands. For any questions about research subject's rights, or to report a research-related issue, call Diahann Ryan at the UVI IRB at (340) 693-1202.

Thank you for your son's/daughter's participation.

Administration Protocols and Student Assents

School:___________________ Grade:_____ Teacher: ________________

COMMUNITY NEEDS ASSESSMENT – USVI
STUDENT ASSENT PROTOCOL/SCRIPT

For Elementary School Students Completing the Child Trauma Screening Questionnaire (CTSQ)

- Good morning/good afternoon, students. The University of the Virgin Islands (UVI) has asked our school to participate in a study. Our class will be participating in the study today by completing a survey. The survey asks you questions about your experiences since Hurricanes Irma and Maria.
- The UVI team is interested in finding out how the hurricanes have affected children in the Territory.
- If you agree, you will complete a survey with **10 questions** about how you have been feeling since the hurricanes. Completing the survey will take about 10 minutes.
- Taking part in the study by answering the questions is up to you. Your choice about taking part will not affect your grades in school or your ability to take part in any school activities. If you do not want to answer a question, you can skip it.
- Even if you agree to complete the survey (answer the questions), you may stop answering the questions at any time or skip a question you do not want to answer.
- If you agree to participate by answering the questions, I will read each question out loud and you will get a chance to circle your answer to each question.
- Do you want to complete the survey?
- By answering "Yes", you agree to take part in this project and I will give you a survey to complete.

(Note: Teacher distributes surveys only to students who verbally assented (said "YES") to participate in the study. The teacher will record the number of students who assented to complete the survey, as noted below.)

Number of students who agreed to participate: _______________
Name and signature of teacher/data collector: ______________________
Date of data collection: _______________

EACH TEACHER WILL RECORD ON THIS SHEET THE NUMBER OF STUDENTS IN A CLASS WHO RESPONDED IN THE AFFIRMATIVE. A SURVEY SHOULD BE GIVEN ONLY TO STUDENTS WHO VERBALLY ASSENT TO PARTICIPATE IN THE STUDY.

(Note: Number of surveys associated with this Assent Form must total the number of students who agreed to participate in the study.)

School:________________ Grade:_____ Teacher: ____________

COMMUNITY NEEDS ASSESSMENT –USVI
STUDENT ASSENT
For Secondary School Students Completing the Child PTSD Symptom Scale (CPSS)

- Good morning/good afternoon. We are researchers from the University of the Virgin Islands and we are asking you to take part in a research study.
- In this study you are being asked to answer questions about your experiences since Hurricanes Irma and Maria.
- No one at school or at home will see your answers.
- You will complete a survey with **24 questions** about how you have been feeling since the hurricanes.
- It will take about 10-15 minutes for you to answer the questions.
- Taking part in this project is up to you. Your choice about taking part will not affect your grades in school or your ability to take part in any school activities. If you do not want to answer a question, you can skip it.
- You may stop taking part in this project at any time.
- If you agree to participate in the study, you will be given the survey and you will complete the survey on your own.
- Are you willing to complete the survey?

By answering "Yes", you agree to take part in this project.

(Research team member records the number of students who assented to complete the survey, as noted below. Surveys are distributed to students who verbally agreed to participate in the study.)

Number of students who agreed to participate: _______________

Name and signature of data collector: ______________________

Date of data collection: _______________

(Note: Number of surveys associated with this Assent Form must total the number of students who agreed to participate in the study.)

EACH RESEARCH TEAM MEMBER WILL RECORD ON THIS SHEET THE NUMBER OF STUDENTS IN A CLASS WHO RESPONDED IN THE AFFIRMATIVE. SURVEYS WILL BE DISTRIBUTED ONLY TO STUDENTS WHO AGREE TO PARTICIPATE IN THE STUDY.

Data Collection at FQHCs

Recruitment Flyer

Fact Sheet

Informed Consent Form

Brief Demographic Questionnaire

Recruitment Flyer

VOLUNTEERS WANTED FOR A RESEARCH STUDY

VOLUNTEERS WANTED FOR A RESEARCH STUDY

COMMUNITY NEEDS ASSESSMENT: UNDERSTANDING THE HEALTH, EDUCATION, HUMAN SERVICES, AND HOUSING NEEDS OF VULNERABLE CHILDREN AND FAMILIES POST HURRICANES IRMA AND MARIA

Did you experience Hurricane Irma and/or Hurricane Maria? Do you or your children receive services from the Departments of Education, Health, and/or Human Services? Do you receive housing support from the Virgin Islands Housing Authority or the Virgin Islands Housing Finance Authority? If you answered "Yes" to any of those questions, Researchers at the University of the Virgin Islands are interested in speaking with you about your experiences with health, education, human services and/or housing needs and services since Hurricanes Irma and Maria. We would like you to participate in a survey that that asks you questions about your health and wellbeing since Hurricanes Irma and Maria.

Completing the survey will take 25 – 30 minutes. Your responses will be strictly confidential and your participation is 100% voluntary. If you agree to participate in the study, you will receive a gift card after you have completed the survey.

If you are interested in participating, contact Ms. Velma Abramsen at velma.abramsen@uvi.edu. This research is conducted under the direction of Dr. Noreen Michael, Research Director of the *Caribbean Exploratory Research Center* - University of the Virgin Islands. Funding for this research is provided by the Community Foundation of the Virgin Islands (CFVI).

COMMUNITY NEEDS ASSESSMENT STUDY
Contact Ms. Velma Abramsen
at velma.abramsen@uvi.edu

COMMUNITY NEEDS ASSESSMENT STUDY
Contact Ms. Velma Abramsen
at velma.abramsen@uvi.edu

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COMMUNITY NEEDS ASSESSMENT STUDY
Contact Ms. Velma Abramsen
at velma.abramsen@uvi.edu

Fact Sheet

CARIBBEAN EXPLORATORY (NIMHD) RESEARCH CENTER

UNIVERSITY OF THE VIRGIN ISLANDS

Funded by the Community Foundation of the Virgin Islands (CFVI) and Kids Count

CAC LEADERSHIP

Noreen Michael, PhD
Project Director

Janis Valmond, DrPH, CHES, Project Co-Director

Gloria Callwood, PhD, FAAN
PI & Director, CERC

LaVerne Ragster, PhD
Senior Research Associate

Deborah Brown, PhD
Research Associate

Velma Abramsen, MPA
Project Coordinator

Anna Scarbriel PhD
Director of Grants & Programs, CFVI

CARIBBEAN EXPLORATORY RESEARCH CENTER

No. 2 John Brewers Bay
St. Thomas, USVI 00802
RR1 Box 10000
Kingshill, St. Croix USVI 00850

Phone: 340-693-4275
340-693-1172
Email:
velma.abramsen@uvi.edu

United States Virgin Islands Community Needs Assessment

WHO? A team of researchers at the University of the Virgin Islands (UVI) is leading a post-hurricane Community Needs Assessment (CAC) in the US Virgin Islands (USVI).

WHAT? The Community Foundation of the Virgin Islands (CFVI), through an Agreement with the UVI, has engaged the Caribbean Exploratory Research Center (UVICERC) to conduct a community assessment to determine the health, education, human services, housing status and needs of children and families in the USVI during this post-hurricane period.

WHEN? The project commenced in February 2018 and is scheduled to continue through the end of December 2018.

WHERE? The Community Needs Assessment will take place across the Territory — in both districts: St. Croix and St. Thomas-St. John.

WHY? Natural disasters, such as hurricanes, are traumatic events that can have a substantial effect on survivors. Studies show that after a natural disaster psychological distress remains high for many for as long as one-year after the event. The work of this CNA is intended to increase our understanding of priority programmatic needs and identify gaps in service delivery related to programs for vulnerable children and families in the USVI in the aftermath of hurricane Irma and hurricane Maria.

HOW? The work of the CAC is being done under the guidance of a Project Advisory Committee (PAC) that includes researchers, policy-makers, and leaders from community-based organizations. The CAC will collect information from a wide range of data sources to provide the richest context and most meaningful information available to address key research questions and document the health, education, human services, and housing status of children and families post hurricanes Irma and Maria.

December 2018

CENTRO DE INVESTIGACIÓN EXPLORATORIA DEL CARIBE (NIMHD - SIGLAS EN INGLÉS)

UNIVERSITY OF THE VIRGIN ISLANDS

Fundado por la Community Foundation of the Virgin Islands (CFVI) y Kids Count

CAC– Liderazgo

Noreen Michael, PhD
Directora del Proyecto

Janis Valmond, DrPH, CHES,
Co-Directora del Proyecto

Gloria Callwood, PhD, FAAN
PI & Directora, CERC

LaVerne Ragster, PhD
Asociada Senior de la Investigación

Deborah Brown, PhD
Asociada de Investigación

Velma Abramsen, MPA
Coordinadora del Proyecto

Anna Scarbriel PhD
Directora de Fondos & Programa CFVI

CENTRO DE INVESTIGACIÓN EXPLORATORIO DEL CARIBE

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Phone: 340-693-1178
Fax: 340-693-1148
Email: nmichae@uvi.edu

Evaluación de las Necesidades de la Comunidad de las Islas Vírgenes de los Estados Unidos

¿Quién? Un equipo de investigadores de la Universidad de las Islas Vírgenes (UVI) está liderando una Evaluación de las Necesidades de la Comunidad (CAC – siglas en inglés) en las Islas Vírgenes de los Estados Unidos (USVI) después del huracán.

¿Qué? La Fundación para la Comunidad de las Islas Vírgenes (CFVI – siglas en inglés), a través de un acuerdo con la UVI, han solicitado al Centro de Investigación Exploratoria del Caribe (UVICERC – siglas en inglés) para llevar a cabo una evaluación de la comunidad para determinar la salud, educación, servicios humanos, y estado de vivienda y las necesidades de los niños y familias en las Islas Vírgenes durante este periodo después del huracán.

¿Cuándo? El proyecto comenzó en febrero del 2018 y está pautado a continuar hasta finales de noviembre del 2018.

¿Dónde? La Evaluación de las Necesidades de la Comunidad (ENC) se realizará a través de todo el Territorio – en ambos distritos: Santa Cruz y St. Thomas-St. John.

¿Por qué? Desastres naturales, como los huracanes, son eventos traumáticos que pueden tener efectos substanciales en los sobrevivientes. Los estudios demuestran que después de un desastre natural la angustia psicológica se mantiene elevada para muchos, tanto tiempo como un año después del evento. El propósito de esta ENC es para incrementar nuestro entendimiento de las necesidades programáticas prioritarias e identificar disparidades en la prestación de servicios relacionados a los programas para niños vulnerables y familias en las Islas Vírgenes (USVI) después del huracán Irma y el huracán María.

¿Cómo? El trabajo de la Evaluación de las Necesidades de la Comunidad (ENC) se está realizando bajo la dirección de un Comité Asesor de Proyectos que incluye investigadores, responsables políticos, y líderes de organizaciones de servicios a la comunidad. El CAC recopilará información de una amplia gama fuentes de datos para ofrecer el contexto más abundante, y la información más significativa disponible para responder a preguntas claves de la investigación y documentar el estado de la salud, educación, servicios humanos, y estatus de vivienda de los niños y familias luego de los huracanes Irma y María.

Octubre 2018

Informed Consent Form

Voluntary Consent—Your Agreement to Participate

We have shared information with you on the study and what we would like you to do, if you agree to participate.

What if I have other questions?

- If you have a research issue, you may contact Dr. Noreen Michael, PI, by email at nmichae@uvi.edu or at 340-693-1172.
- You may also contact Dr. Janis Valmond, at 340-692-4275 or by email at janis.valmond@uvi.edu.
- You may contact Ms. Diahann Ryan, UVI's Institutional Review Board representative, if you have questions about your rights as a participant in the Community Needs Assessment research project. She can be reached at 340-693-1202 or by email at dryan@uvi.edu.

What if I want to stop participating?

- You have the right to refuse to participate or to stop participating in this study.
- If you choose not to participate or if you decide to stop participating, you will not be treated differently by the agencies/organizations associated with this project or by UVI.

My Statement of Understanding:

- I understand what the study is about, what is being asked of me, and what I may gain from the study. I understand my options related to participation.

Voluntary Consent—Continued

- I understand that my signature means that I am willing to participate in the study at this time.

My signature confirming my voluntary participation:

Printed Name: ______________________________

Signature: ______________________________

Date: ______________________________

Name and signature of person obtaining consent:

Printed Name: ______________________________

Signature: ______________________________

Date: ______________________________

Source of support: Community Foundation of the Virgin Islands (CFVI)

COMMUNITY NEEDS ASSESSMENT

Principal Investigator (PI): Noreen Michael, PhD
Co-PI: Janis M. Valmond, MS, DrPH, CHES
Project Coordinator: Velma A. Abramsen, MA

Phone: 340-693-1172 [to reach PI]
Caribbean Exploratory Research Center
University of the Virgin Islands

COMMUNITY NEEDS ASSESSMENT

Informed Consent

Title:

Community Needs Assessment: Understanding the Health, Education, Human Services, and Housing Needs of Vulnerable Children and Families Post Hurricanes Irma and Maria

Tel: 340-693-1172

For Survey Data
Community Needs Assessment

What is Informed Consent?

Informed consent is about getting your permission to participate in a study after we share information about the study. This brochure provides information about the aims of the study and your rights.

Your participation is **voluntary**. We are asking you to participate in the study. However, you can refuse to participate or, if you agree to participate, and you change your mind at any time, you can stop participating.

What is the Community Needs Assessment (CNA) about?

- A study to look at the health, education, human services and housing needs of children and families after Hurricanes Irma and Maria.
- A study that will gather information to help plan for future natural disasters.
- A study to help the researchers and decision makers in the USVI understand the needs of children and families since the hurricanes.

What do I get or what will it cost me to participate in the study?

- You will not be paid for participating in the study. However, there will be a $15 grocery store gift certificate as an incentive for participants who complete the surveys with the research team.

What if I get ill or injured?

- We don't expect you to get ill or injured.
- If you do, though there will be no payment, the research team will assist you by providing referrals for counseling.

ACTIVITIES AND TIME COMMITMENT

What will I have to do and how much time will it take? You will:

- Participate in the CNA with the research team and complete survey questions on a tablet.
- It will take approximately 30 minutes to complete the collection of questions.

CONFIDENTIALITY

What information will be included about me in the study?

- No names, addresses, or other identifying information will be included in the data we collect from you.
- We will use numbers to code information you share to avoid linking it back to you.
- Information about the study may be reviewed by the UVI Institutional Review Board. This review is confidential.

What about when you share information about the study?

- We **will not** include your identity in any reports, presentations, or articles about this study.

RISKS AND BENEFITS

What are the risks for participating in the community needs assessment study?

- There is not likely to be any risks to you or your family.

What are some benefits for participating in the needs assessment study?

- Your participation in the study will provide you with an opportunity to talk about your experiences since the hurricanes.
- The information you provide will help to improve services to your child(ren) and your family.
- You will be helping the research team to better understand how to prepare for and respond to disruptions in the future. This information will give policy makers information about the needs of the community and help to improve programs for children and families.

COMMUNITY NEEDS ASSESSMENT

Principal Investigator (PI): Noreen Michael, PhD
Co-PI: Janis M. Valmond, MS, DrPH, CHES
Project Coordinator: Velma A. Abramsen, MA

Phone: 340-693-1172 [to reach PI]
Caribbean Exploratory Research Center
University of the Virgin Islands

Consentimiento Voluntario – Su acuerdo para participar

Hemos compartido información con usted sobre el estudio y lo que nos gustaría para usted hacer si acepta participar.

¿Y si tengo otras preguntas?

- Si tiene un problema con la investigación, puede contactar a la Dra. Noreen Michael, Principal Investigadora por e-mail a nmichae@uvi.edu o al 340-693-1172.
- También puede contactar a la Dra. Janis Valmond al 340-692-4275 o por e-mail a janis.valmond@uvi.edu.
- Si tiene preguntas sobre sus derechos como participante en el proyecto de la Evaluación de las Necesidades de la Comunidad, puede contactar a la Srta. Diahann Ryan, representante del Consejo de Evaluación Institucional de la UVI. Ella puede ser contactada al 340-693-1202 o por e-mail a dryan@uvi.edu.

¿Y si quiero parar de participar?

- Usted tiene el derecho de negarse a participar o de parar su participación en este estudio.
- Si usted elije no participar o si decide parar su participación, no será tratado diferente por las organizaciones/organizaciones asociadas a este proyecto o por la UVI.

Mi declaración de entendimiento:

- Yo entiendo de que se trata el estudio, que se está pidiendo de mí, y que puedo ganar de este estudio. Yo entiendo mis opciones relacionadas a participar.

Consentimiento Voluntario– continuado

- Yo entiendo que mi firma significa que estoy dispuesto a participar de este estudio en este momento.

Mi firma confirmando mi participación voluntaria:

Nombre impreso: ______________________

Firma: ______________________

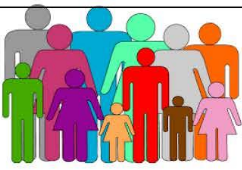
Fecha:: ______________________

Nombre y Firma de la persona obteniendo el consentimiento:

Nombre impreso: ______________________

Firma: ______________________

Fecha:: ______________________



Source of support: Community Foundation of the Virgin Islands (CFVI)

EVALUACIÓN DE LAS NECESIDADES DE LA COMUNIDAD

Investigadora Principal (PI): Noreen Michael, PhD
Co-PI: Janis M. Valmond, MS, DrPH, CHES

Teléfono: 340-693-1172 [para contactar PI]
Centro Exploratorio de Investigación del Caribe
University of the Virgin Islands

EVALUACIÓN DE LAS NECESIDADES DE LA COMUNIDAD

Panfleto del Consentimiento Informado

Título:

Evaluación de las Necesidades de la Comunidad: Entendiendo la Salud, Educación, Servicios Humanos, y Necesidades de Vivienda de Niños Vulnerables y Familias luego de los Huracanes Irma y María.

Tel: 340-693-1172

Data para el Cuestionario Evaluación de las Necesidades de la Comunidad

¿Qué es Consentimiento Informado?

Consentimiento informado se trata de obtener su permiso para participar de un estudio luego de que compartamos información con usted sobre el estudio. Este panfleto provee información sobre lo que se quiere lograr con el estudio y sus derechos.

Su participación es voluntario. Nosotros estamos solicitando su participación en el estudio. Sin embargo, usted puede negarse a participar, o si está de acuerdo a participar y usted cambia de idea en cualquier momento, usted puede parar su participación.

¿De qué se trata la Evaluación de las Necesidades de la Comunidad?

- Es un estudio para evaluar la salud, educación, servicios humanos y de vivienda de los niños y las familias luego de los Huracanes Irma y María.
- Es un estudio que obtendrá información para ayudar a planificar para futuros desastres naturales.
- Es un estudio que le ayudará a los investigadores y responsables políticos en las Islas Vírgenes entender las necesidades de los niños y sus familias desde los huracanes.

¿Qué me darán o cuánto me costará para participar en el estudio?

- No se le pagará por participar del estudio. Sin embargo, habrá un certificado de supermercado de $15 como incentivo para los participantes que completen la encuesta con el equipo de investigadores.

¿Qué pasa si me enfermo o me lesiono?

- No esperamos que se enferme o se lesione.
- Si así sería, aunque no habrá pago, el equipo de investigadores le asistirá ofreciéndoles referencias para consejería.

Actividades y Compromiso de Tiempo

¿Qué tendré que hacer y cuánto tiempo tomará? Usted:

- Participará en el CNA con el equipo de investigadores y completará las preguntas de la encuesta en una tableta.
- Le tomara aproximadamente 30 minutos para completar la colección de preguntas.

CONFIDENCIALIDAD

¿Qué información estará incluida sobre mí en el estudio?

- No se incluirá nombres, direcciones o cualquier otra información que le identifiquen en la data que colectemos de usted.
- Utilizaremos números para codificar la información que compartas para evitar que se vuelva a enlazar a usted.
- La información sobre el estudio puede ser revisada por el Consejo de Revisión Institucional de la UVI.

¿Qué pasará cuando usted comparta información sobre el estudio?

- No se incluirá su identidad en ningún reporte, presentación o artículos sobre el estudio.

RIESGOS Y BENEFCIOS

¿Cuáles son los riesgos de participar en el estudio de las necesidades de la comunidad?

- No es probable que hayan riesgos para usted o su familia?

¿Cuáles son los beneficios de participar en el estudio de las necesidades?

- Su participación en el estudio le proveerá con una oportunidad para conversar sobre sus experiencias desde los huracanes.
- La información que ofrezca le ayudará a mejorar los servicios de sus hijos and de sus familiares.
- Usted estará ayudando al equipo investigador a entender mejor como prepararse para y responder a las interrupciones en el futuro. Esta información ofrecerá a los creadores de políticas información sobre las necesidades de la comunidad y ayudará a mejorar los programas para niños y familias.

EVALUACIÓN DE LAS NECESIDADES DE LA COMUNIDAD

Investigadora Principal (PI): Noreen Michael, PhD
Co-PI: Janis M. Valmond, MS, DrPH, CHES

Tel: 340-693-1172 [para contactar PI]
Centro Exploratorio de Investigación del Caribe
University of the Virgin Islands

Brief Demographic Survey

SHORT DEMOGRAPHIC QUESTIONNAIRE

1. **Island**
   a. St. Croix
   b. St. John
   c. St. Thomas

2. **Age**

   a. 18-24
   b. 25-29
   c. 30-39
   d. 40-49
   e. 50-64
   f. 65+

3. **Race**
   a. American Indian or Alaskan Native
   b. Asian or Pacific Islander
   c. Black
   d. White

4. **Ethnicity**
   a. Hispanic
   b. Not Hispanic

5. **Marital Status**
   a. Single, never married
   b. Married
   c. Separated
   d. Divorced

6. **Education**
   a. Less than high school
   b. High school graduate
   c. Some college
   d. College graduate
   e. Graduate/professional degree

7. **Total number of persons in household**
   (enter number)

8. **Total number of children in household**
   (under age 18)
   (enter number)
   If you responded "0," skip to Question #10

9. **If you have children in the household, were any children sent away (out of the USVI) to live after the hurricane?**
   a. Yes
   b. No

9. **Employment Status** (**before hurricanes**)
   a. Employed for wages
   b. Homemaker
   c. Out of work, but looking for job
   d. Student
   e. Self-employed
   f. Retired
   g. Other (please specify)

10. **Living Arrangements** (**before hurricanes**)
    a. Own Home

b. Public housing
c. Renting
d. Living with Relatives
e. Living with Friends
f. Other (please specify)

11. Living Arrangements (after hurricanes)
a. Own Home
b. Public housing
c. Renting
d. Living with Relatives
e. Living with Friends
f. Other (please specify)

12. Employment Status (after hurricanes)
a. Employed for wages
b. Homemaker
c. Out of work, but looking for job
d. Student
e. Self-employed
f. Retired
g. Other (please specify)

13. Before the hurricanes, did you receive services from: (check all that apply)
a. SNAP
b. TANF
c. WIC
d. Head Start/Early Start
e. Other government funded services (explain)
f. Not Applicable (none)

14. After the hurricanes, did you receive services from: (check all that apply)
a. SNAP
b. TANF
c. WIC
d. Head Start/Early Start
e. Other government funded services (explain)
f. Not Applicable (none)

Qualitative Data Collection

Key Informant Interview Protocol

Focus Group Discussion Protocol

Town Hall Meeting/Community Forum Protocol

Key Informant Interview Protocol

KEY INFORMANT INTERVIEW PROTOCOL

COMMUNITY NEEDS ASSESSMENT: UNDERSTANDING THE HEALTH, EDUCATION, HUMAN SERVICES, AND HOUSING NEEDS OF VULNERABLE FAMILIES AND CHILDREN IN THE USVI POST HURRICANES IRMA AND MARIA

Step 1: Obtain informed consent [Informed Consent Form] prior to commencing Key Informant Interview

Introduction

Thank you for agreeing to participate in this study about the health status of children and families in the US Virgin Islands post-hurricanes Irma and Maria. As noted in the Consenting process, your participation is ***voluntary*** and you may choose not to answer any of the questions posed. Your decision will in no way negatively impact your affiliation with the Community Foundation of the Virgin Islands (CFVI) or the University of the Virgin Islands (UVI).

We are researchers from the Caribbean Exploratory Research Center (CERC) located at the University of the Virgin Islands (UVI). As mentioned, we are interested in gathering information on the type of services you and/or your organization/agency provide to children and their families, specifically after the passage of Hurricanes Irma and Maria. We are conducting this study to get a better understanding and make an assessment of the health, education, human services, and housing needs and the availability and accessibility of services. We also seek to provide information that will identify gap areas requiring priority attention to address the needs of children and families in the Territory.

We anticipate that the focus group session will take approximately 60-75 minutes. We are asking to audiotape the session for easy transcription and to ensure accuracy in our representation of the information shared. Do we have your consent to record the interview? [If “Yes”: “Thank you for agreeing to have us audiotape the interview”; If “No”: Thank you for agreeing to speak with us. We will honor your request not to audiotape and will ensure that our notes accurately reflect what you share with us.”]

KEY INFORMANT INTERVIEW PROTOCOL – CONT'D

Core Opening Questions:

1. Can you tell us the service that you provide to children and families in the USVI?

2. How would you describe the population you serve? *{age distribution; SES; income levels; catchment area; employment?}*

3. Since the hurricanes, has there been any changes in the population you serve? *{number served? Presenting problems/issues? Others?}*

4. Since the hurricanes, have there been any changes in the demand for the service you provide? *{Please describe/elaborate.}*

5. Did your agency/facility sustain damage as a result of the hurricanes? If "yes", how has this affected your ability to provide services to your clients/customers/students?

6. Did your agency have any interagency agreements prior to the hurricanes? If "yes", could you describe the current status of those agreements? Have services to clients/students been affected? If so, in what way(s)?

Questions for Hospital CEOs/FQHC EDs/Commissioner of Health:

7. What would you say were the most serious health problems your facility treated prior to Hurricane Irma and/or Maria?

    a. Children? i.------------------------ ii.-----------------------------

    b. Families? i. ------------------------ ii. ----------------------------

8. What would you say are the most serious health problems your facility treated ***since*** Hurricane Irma and/or Maria?

    c. Children? i.------------------------ ii.-----------------------------

    d. Families? i. ------------------------ ii. ----------------------------

9. Considering your post-storm interactions with children and families in the USVI, what do you think are the most immediate health needs of the:
    a. Children?
    b. Families?
    c. Elderly?

10. Are you seeing evidence of health condition(s) with your clientele that you feel require additional support?
    a. If "Yes", what are these conditions?
    b. What additional support do they need/would you recommend?
    c. In what ways, if any, do you try to help your patients acquire the additional support they need?
    d. What do you view as the barriers, if any, to acquiring this additional support?

KEY INFORMANT INTERVIEW PROTOCOL – CONT'D

Questions for Commissioner of Education:

11. What do you consider as the major issues facing the Department of Education following the hurricanes of fall 2017?
12. What interventions or initiatives have been put in place to support the recovery and success of students following the experiences of hurricanes Irma and Maria?
13. Are there special initiatives in place for children with disabilities?
14. How does the Department of Education identify the needs and issues being faced by students and teachers in the schools in the period following the Hurricanes?

Questions for Commissioner of Human Services:

15. What do you consider as the major issues facing the Department of Human Services following the Hurricanes of fall 2017?
16. Following the Hurricanes, what services provided by the DHS have been most used by the children and families served by the Department?
17. Can you share with us some of the services that have been disrupted as a result of the hurricanes? How are your clients being served? Are there any areas in which service disruptions still exist (as a result of the hurricanes)?
18. Have there been additional services that your agency has been able to make available to clients, due to the hurricanes? If "Yes", please describe.
19. Have there been any noticeable changes in the behavior or requests from children and families that experienced Hurricanes Irma and Maria?

Questions for VIHA ED:

20. What would you identify as the major issues facing the VIHA and its clients following the experiences of Hurricanes Irma and Maria?
21. What services and assistance have been put in place to support the recovery of the children and families served by the VIHA following the Hurricanes of 2017?
22. What challenges make serving the children and families more difficult following hurricanes Irma and Maria?
23. In the wake of Hurricanes Irma and Maria, what does resilience mean for VIHA?
23. How does the VIHA propose to address/improve resilience for future disruptions?

Questions for VIHFA ED:

24. What would you identify as the major issues facing the VIFHA following hurricanes Irma and Maria?
25. How are the requests for assistance from the VIFHA different following the hurricanes?
26. In what ways has the VIHFA focused on vulnerable children and families following hurricanes Irma and Maria? *{Please cite specific examples}*

Core Closing Questions:

1. What types of data does your agency/unit/area routinely collect? What is the status of these data/information following the hurricanes of 2017?
2. Would you like to share anything else with us regarding your work with children and families in the Territory?

Focus Group Discussion Protocol

PROTOCOL FOR FOCUS GROUP DISCUSSION

[TEACHERS, COUNSELORS, SCHOOL NURSES]

COMMUNITY NEEDS ASSESSMENT: UNDERSTANDING THE HEALTH, EDUCATION, HUMAN SERVICES, AND HOUSING NEEDS OF VULNERABLE FAMILIES AND CHILDREN IN THE USVI POST HURRICANES IRMA AND MARIA

Step 1: Obtain informed consent [Informed Consent Form] prior to commencing Focus Group Discussions

Introduction

Thank you for agreeing to participate in this study about the health status of children and families in the US Virgin Islands post-hurricanes Irma and Maria. As noted in the Consenting process, your participation is ***voluntary*** and you may choose not to answer any of the questions posed. Your decision will in no way negatively impact your affiliation with the Community Foundation of the Virgin Islands (CFVI) or the University of the Virgin Islands (UVI).

We are researchers from the Caribbean Exploratory Research Center (CERC) located at the University of the Virgin Islands (UVI). As mentioned, we are interested in gathering information on the type of services you and/or your organization/agency provide to children and their families, specifically after the passage of Hurricanes Irma and Maria. We are doing this study to get a better understanding and make an assessment of the health, education, human services, and housing needs and the availability and accessibility of services. We also seek to provide information that will identify gap areas requiring priority attention to address the needs of children and families in the Territory.

We anticipate that the focus group session will take approximately 60-75 minutes. We are asking to audiotape the session for easy transcription and to ensure accuracy in our representation of the information shared. Do we have your consent to record the interview? [If "Yes": "Thank you for agreeing to have us audiotape the interview"; If "No": Thank you for agreeing to speak with us. We will honor your request not to audiotape and will ensure that our notes accurately reflect what you share with us."]

FOCUS GROUP DISCUSSION QUESTIONS

CORE QUESTIONS [OPENING]

1. How long have you been serving the community as an educator/a health provider/emergency responder/ member of the staff of Housing Authority/member of the staff of the healthcare system? [*Probing questions, as needed*]
2. What do you feel are some of this community's strengths with respect to responding to the healthcare needs [educational needs] [human services needs] [housing needs] of children and families after hurricanes have damaged the community? [*Probing questions, as needed*]
3. What are some ways in which improvements could be made to positively impact health outcomes/educational outcomes/housing outcomes for children and families after a natural disaster like a hurricane?
4. What can you tell us about the history of health/DOE's or the district's/human services/housing services preparation to meet the needs of children and families after a hurricane damages the territory?

STAFF from the DEPARTMENT OF EDUCATION and Private and Parochial Schools [Teachers, Counselors, Nurses]

1. How does your [school/district] office/program serve children and families following a natural disaster like a hurricane?
2. What, if anything, is different about the interactions with children and their families following the hurricanes?
3. Can you share any of the challenges that appear to be uniquely associated with impacts of the hurricanes on families and children?
4. Are you aware of any unmet needs of the children and families that interact with your [district/school] office/program?
5. Do you have any ideas about what could be done to improve the services received by the children and families that you normally see in your [district/school] program or office?

CORE QUESTIONS [CLOSING]

1. We have shared with you the purpose for this interview and the CNA. Is there anything else you would like to share that you think will help us develop the most relevant program/responses and research for the territory that would support [positive educational outcomes] good health for children and families?
2. In closing, can you identify for us key personnel within your community/agency you think would be able to provide information on [educational issues] health issues and programs that are important to the [education] health of children and families following a natural disaster like a hurricane?

Town Hall Meeting/Community Forum Protocol

PROTOCOL FOR COMMUNITY NEEDS ASSESSMENT
TOWN HALL MEETINGS/ COMMUNITY FORUMS

Introductory statement by Research Team as to the purpose of the Community Needs Assessment. Thank members of the audience for attending. Begin meeting/forum …

1. Have you or your children experienced health problems since the storm that were not present before the storms?
2. Have your or your children's existing health conditions worsened after the storm? If so, have you been able to get adequate healthcare in the community?
3. Let us start by talking about things you have done to take care of yourself (to cope) since the hurricanes.
4. First consider how you were feeling initially (i.e., how you felt right after the hurricanes)? How are you feeling now?
5. Throughout the recovery period, what have been (were/are) your major concerns?
6. How would you describe your ability to take care of yourself before the hurricanes? How would you describe your ability to take care of yourself now following the hurricanes?
7. Have you or anyone in your family or circle of friends sought help from a health professional to address emotional or mental health issues since the hurricanes? {*Probes: If so, did you get the assistance you needed? What additional assistance do you or family members/friends need at this time? If not, do you need this type of assistance for you or other family members?*}
8. What services (disaster relief, social services, informal support) did you receive from faith-based, community-based, and government organizations (local or national) after hurricanes Irma and/or Maria?
9. What service/s do you need now that you are not receiving?
10. Do you feel prepared for the 2019 hurricane season? What assistance do you need to be better prepared?
11. What else would you like to share with us about your experiences with Hurricanes Irma and/or Maria?

Note: Stenographers will be asked to record the proceedings to assist with analysis of data (themes).

Secondary Data Collection

Sample Letter Requesting Secondary Data

List of Agencies from which Secondary Data were Requested

Sample Letter Requesting Secondary Data

University of the Virgin Islands

Historically American. Uniquely Caribbean. Globally Interactive.

Caribbean Exploratory NIMHD Research Center — *School of Nursing*

August 6, 2018 — *VIA E-MAIL ONLY*

Sharon Ann McCollum, PhD
Commissioner
VI Department of Education
St. Thomas, VI 00802

Email: sharon.mccollum@vide.vi

Ref.: Letter requesting Secondary Data

Dear Commissioner McCollum:

The Community Foundation of the Virgin Islands (CFVI), through an Agreement with the Caribbean Exploratory Research Center at the University of the Virgin Islands (UVI-CERC), has initiated a community needs assessment to determine the status of children in the US Virgin Islands post hurricanes Irma and Maria. As the lead agency on education in the territory, we are contacting you to request access to administrative data and policy documents from the Department of Education related to the education status of children and community members pre- and post-hurricanes Irma and Maria. Data from the Department of Education is critical to the development of this needs assessment. Please see the following page for a list of specific data and reports.

The assessment, a project under the KIDS COUNT Initiative, will take place over the next three months and will include several best practice approaches to determine the health, education, human services, and housing status and needs of children and families in the US Virgin Islands during this post-hurricane period. It is expected that the community needs assessment will identify gap areas and priority issues which will translate into information about the status and needs of children.

Our research team aims to obtain detailed perspectives on the education status and needs of children by utilizing other data sources such as standardized survey instruments, focus group sessions with representatives of key stakeholder groups, key informant interviews, community forums/town hall meetings, and secondary data obtained from local and federal institutions and organizations.

Please indicate your willingness to share the requested data (and if you have any questions) by contacting Dr. Asha DeGannes at adegann@uvi.edu. We look forward to receiving a positive response to our request, at your earliest convenience, but ideally on or before Monday, August 13, 2018.

Sincerely,

N Michael — J. Valmond

Noreen Michael, PhD
Project Director

Janis Valmond, DrPH
Project Co-Director

Email copy: Gloria Callwood, PhD, Director, CERC

No. 2 John Brewers Bay • St. Thomas • U.S. Virgin Islands 00802• Voice (340) 693-1172 • Fax (340) 693-1148

Page 2

In order to assess the impact of Hurricanes Irma and Maria on children and families in the USVI, we are requesting the de-identified data below. Your data will support our analyses on the effect of the hurricanes in the Territory. We are requesting data for the **period of 2016 to present** (unless otherwise noted). Kindly see the list (below) of requested de-identified data. Remember to omit names or other identifying data from all datasets. Please submit administrative data in an Excel file (or similar format). Please alert us, if any of the requested data is publicly available on your website. We are asking if you would be kind enough to send your data by Monday, August 13, 2018. If you have any questions are concerns, please contact Dr. Asha DeGannes at adegann@uvi.edu.

VI Department of Education

1. Student enrollment (by district, school and grade)
2. Official withdrawals (by district and grade)
3. Graduation rates by district (2016, 2017 and 2018)
4. School/building closings due to damage
5. Reports on recovery plans for the upcoming 2018-2019 academic year
6. Staff turnover (by district)
7. Programs and services currently available for students (by district and schools)
8. Programs and services suspended after the hurricanes (by district and schools)

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List of Agencies from which Secondary Data were Requested

Agencies Receiving Request for Secondary Data

Agency	Contact
American Red Cross	Mr. John Duck, ED
Family Resource Center	Ms. Vivian St. Juste, ED
Frederiksted Health Care, Inc.	Ms. Masserae Sprauve Webster, ED
Juan F. Luis Hospital and Medical Center	Ms. Wanda Reuben, CEO Ms. Dyma Williams, CEO
Lutheran Social Services	Ms. Junia John Straker, CEO
Schneider Regional Medical Center	Dr. Bernard Wheatley, CEO
St. Thomas East End Medical Center, Corp.	Moleto A. Smith, Jr., ED
Virgin Islands Department of Education	Dr. Sharon Ann McCollum, Commissioner
Virgin Islands Department of Health	Dr. Michelle Davis, Commissioner
Virgin Islands Department of Human Services	Ms. Felecia Blyden, Commissioner
Virgin Islands Housing Authority	Mr. Robert Graham, CEO
Virgin Islands Housing Finance Authority	Mr. Daryl Griffith, CEO
Women's Coalition of St. Croix	Ms. Clema Lewis, ED

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Appendix IV: List of Participating Schools

Parochial and Private Schools

St. Croix District

St. Thomas-St. John District

Public Schools

St. Croix District

St. Thomas-St. John District

Parochial and Private Schools

Participating Private and Parochial Schools

ST. CROIX DISTRICT
Church of God Holiness Academy
Free Will Baptist Christian School
Reading Rainbow School
St. Croix Christian Academy
St. Croix Montessori School
St. Joseph High School
St. Mary's Catholic School
St. Patrick Catholic School
School of the Good Shepherd Inc.
St. Croix Seventh Day Adventist School
ST. THOMAS-ST. JOHN DISTRICT
All Saints Cathedral School
Calvary Christian Academy
Gifft Hill School
Memorial Moravian School
New Testament Academy
St. John Christian Academy
STT-STJ Seventh Day Adventist School
V.I Montessori School and Peter Gruber International Academy
Wesleyan Academy

Participating Public Schools

ST. CROIX DISTRICT
Alexander Henderson Elementary School
Alfredo Andrews Elementary School
Claude O. Markoe Elementary School
Eulalie Rivera Elementary School
Juanita Gardine Elementary School
Lew Muckle Elementary School
Pearl B. Larsen Elementary School
Ricardo Richards Elementary School
ST. THOMAS – ST. JOHN DISTRICT
Bertha C. Boschulte Middle School
Joseph Gomez Elementary School
Joseph Sibilly Elementary School
Julius E. Sprauve School
Leonard Dober Elementary School
Lockhart Elementary School
Ulla F. Muller Elementary School
Yvonne E. Milliner-Bowsky Elementary School

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Appendix V: The Child PTSD Screening Scale – Detailed Results

Results of the Child PTSD Screening Scale by Gender

RESPONSES TO 17-ITEM CPSS SURVEY BY GENDER						
	SURVEY SUB-SCALES/ITEMS	PERCENTAGE (%) BY GENDER				p
	RE-EXPERIENCING	2-4 times per week		5 or more times		
		M	F	M	F	
1	Having upsetting thoughts or images about the hurricanes that came into your head when you didn't want them to	57.4	42.6	43.8	56.3	.42
2	Having bad dreams or nightmares	38.2	61.8	28.6	71.4	.***
3	Acting or feeling as if the hurricane was happening again (hearing something or seeing a picture about it and feeling as if I am there again)	31.3	68.8	14.4	55.6	.*
4	Feeling upset when you think about it or hear about the hurricanes (for example, feeling scared, angry, sad, guilty, etc)	36.6	63.4	20.7	79.3	.***
5	Having feelings in your body when you think about or hear about the hurricane (for example, breaking out into a sweat, heart beating fast)	42.3	57.7	23.1	76.9	.24
	AVOIDANCE					
6	Trying not to think about, talk about, or have feelings about the hurricanes	50.0	50	40.5	59.5	.37
7	Trying to avoid activities, people, or places that remind you of the traumatic hurricane event	45	55	26.7	73.3	.38
8	Not being able to remember an important part of the upsetting hurricane event	62.1	37.9	38.9	61.1	.29
9	Having much less interest in, or doing, things you used to do	58.3	41.7	37.8	62.2	.*
10	Not feeling close to people around you	34.4	65.6	42.9	57.1	.*
11	Not being able to have strong feelings (for example, being unable to cry or unable to feel happy	51.4	48.6	56.5	43.5	.39
12	Feeling as if your future plans or hopes will not come true (for example, you will not have a job or getting married or having kids)	43.2	56.8	48.6	51.4	.83
	HYPER-AROUSAL					
13	Having trouble falling or staying asleep	38.2	61.8	44.8	55.2	.21
14	Feeling irritable or having fits of anger	37.7	62.3	46.0	54.0	*
15	Having trouble concentrating (for example, losing track of a story on the television, forgetting what you read, not paying attention in class)	45.8	54.2	42.6	54.2	.13
16	Being overly careful (for example, checking to see who is around you and what is around you)	44.6	55.4	40.4	59.6	.47
17	Being jumpy or easily startled (for example, when someone walks up behind you)	48.9	51.1	23.9	76.1	***

*p<.05; ***p<.001

Appendix VI: Centers Closed in the Aftermath of Hurricanes Irma and Maria

St. Croix District

St. Thomas-St. John District

Centers Closed in the Aftermath of Hurricane Maria 2017 St. Croix District

Name	Service(s) Provided
Lighthouse Mission	After School Program
Superior Court Rising Stars Steel Orchestra	After School Program
Above and Beyond	Day Care
Bianca's Group Home I	Day Care
Bianca's Group Home II	Day Care
Above and Beyond Day Care	Group Home
Ty's Angelic Touch I	Group Home
Ty's Angelic Touch II	Group Home
DHS, Estate Profit Center I	Head Start
DHS, Estate Profit Center II	Head Start
DHS, Campo Rico Center	Head Start
DHS, Marley	Head Start

Centers Closed in the Aftermath of Hurricane Irma 2017 St. Thomas-St. John District

Name	Program
Center for Reading	After School
Christ Church Methodist Church, STT	After School
DSPR, Joseph Aubain Ball Park, STT	After School
DSPR, Emile Griffith Ball Park, STT	After School
DSPR, Alvin McBean Ball Park, STT	After School
DSPR, Winston Raymo Center, STT	After School
DSPR, Winston Wells Ball Park, STJ	After School
JD, Juvenile Wrap Around Program	After School
Lutheran Church of the Reformation, STT	After School
Parents for Better Youth, Inc., STT	After School
Stepping Stones	After School
VI Resource Center for the Disabled, STT	After School

Centers Closed in the Aftermath of Hurricane Irma – St. Thomas-St. John District

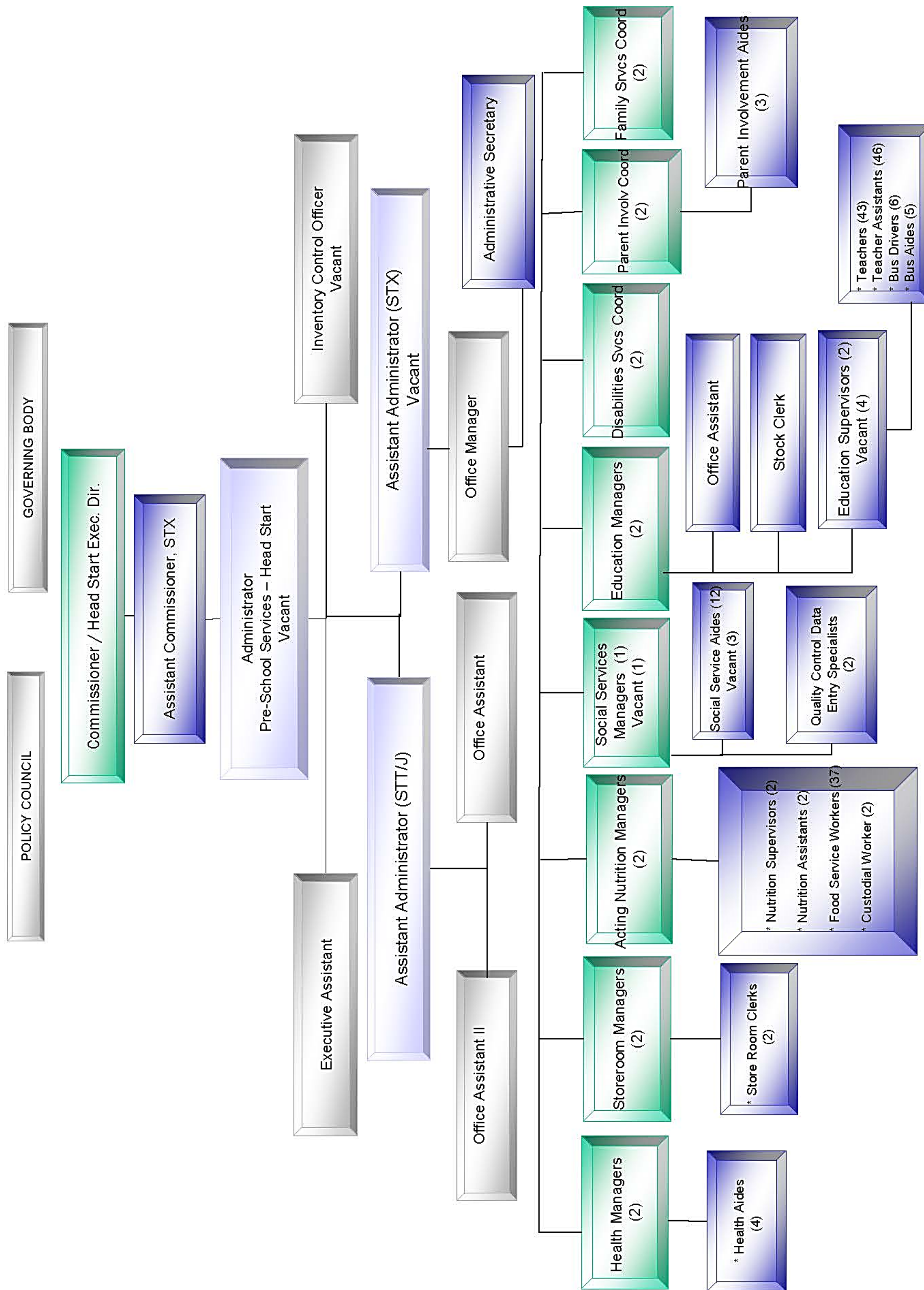
Name	Program
U-Excel	After School
Unique Harvest	After School
Weed & Seed, STT	After School
Youth Arise	After School
Youth Development Academy	After School
Bright Stars	Day Care Center
Care Bears, STJ	Day Care Center
Little Blossom	Day Care Center
Pride and Joy	Day Care Center
Rise & Shine, Sugar Estate	Day Care & Pre School
College Preparatory Learning Center	Day Care & Pre School
Rise & Shine, Bovoni	Day Care & Pre School
DHS, Cruz Bay Head Start Center	Head Start
Moravian Comenius House	Residential Living
Great Minds	Tutoring Service

Appendix VII: Organizational Charts

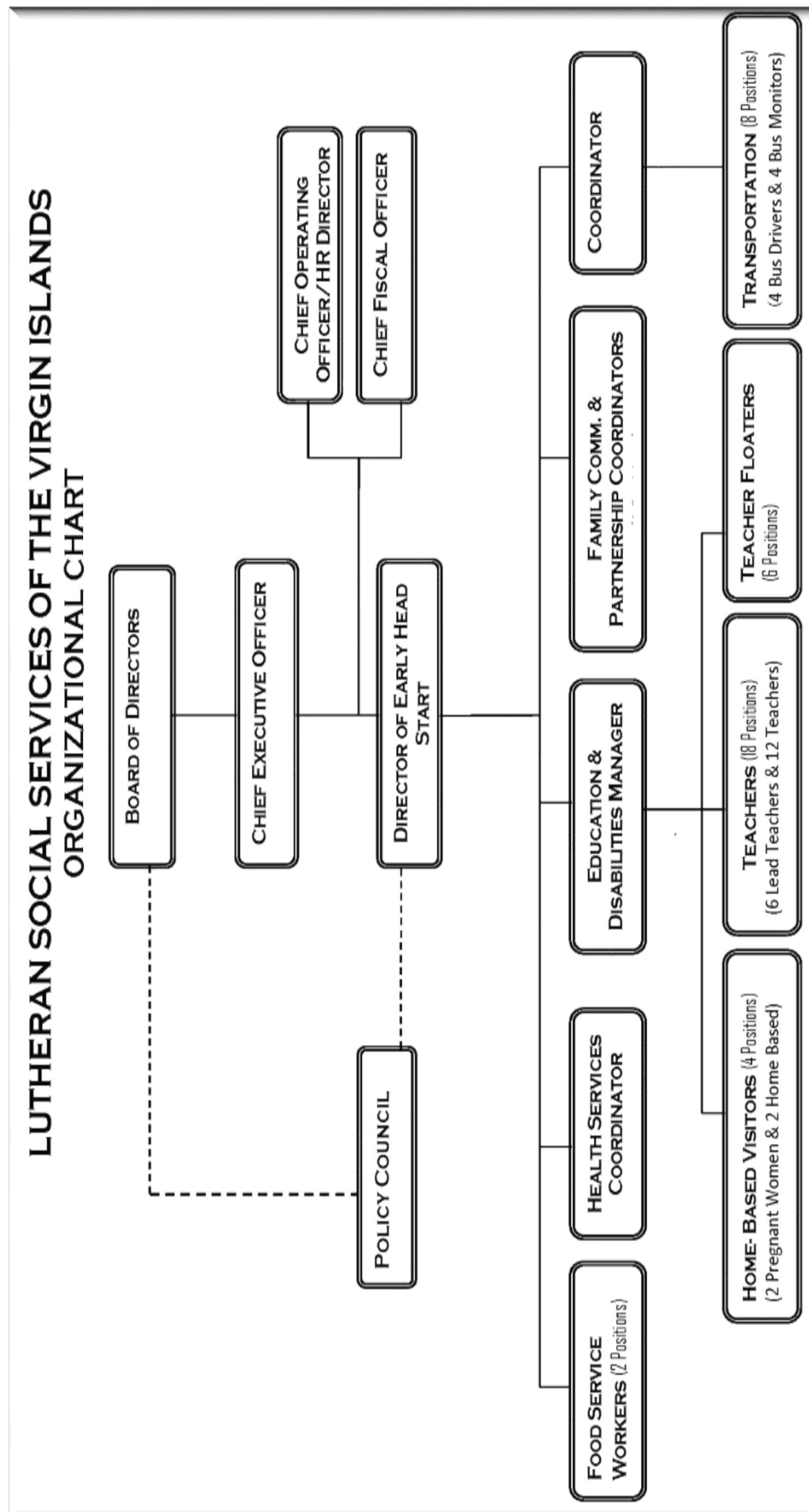
Head Start Organizational Chart

Early Head Start Organizational Chart

Head Start Organizational Chart



Early Head Start Organizational Chart



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