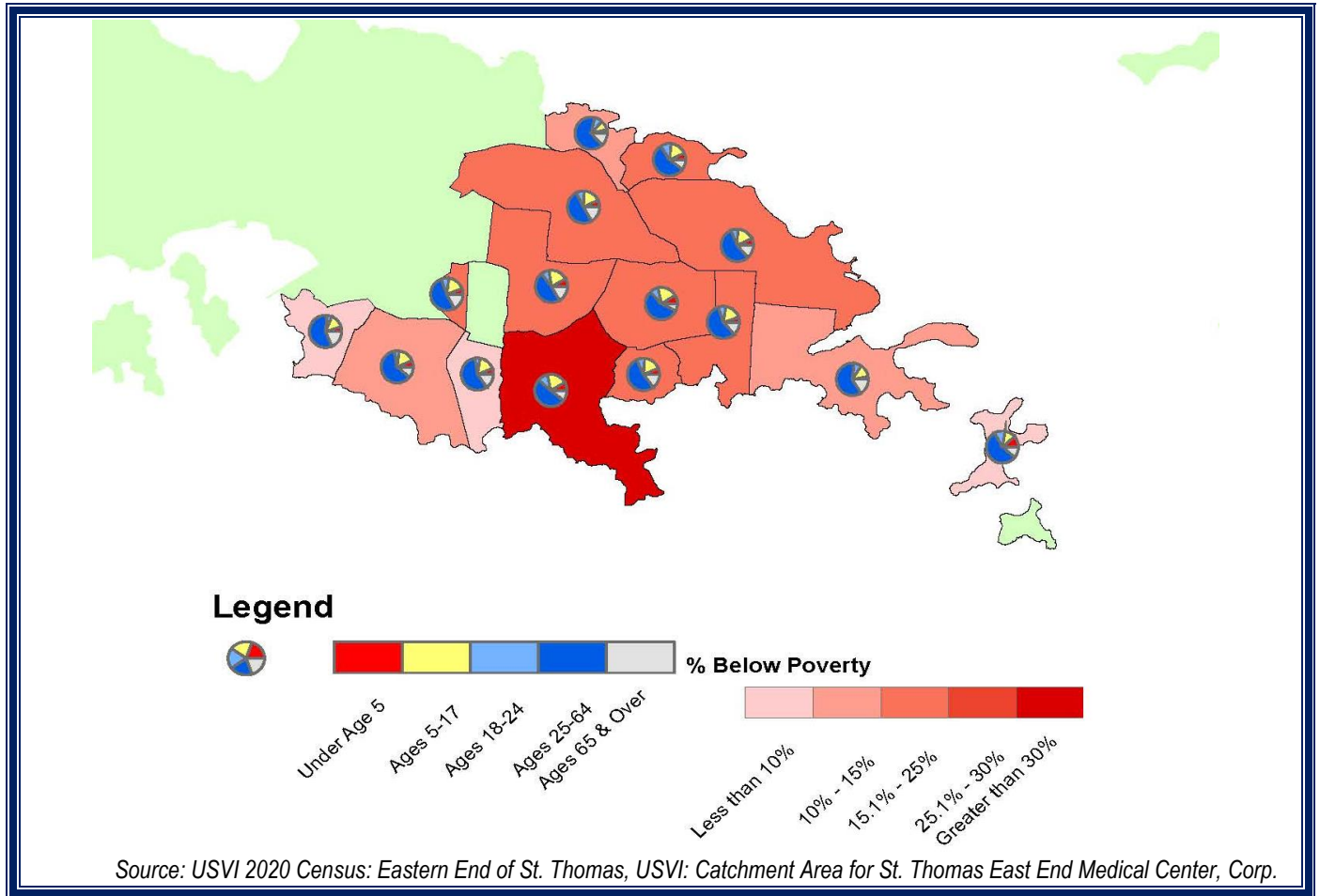


**STEEMCC 2020
COMMUNITY
HEALTH NEEDS
ASSESSMENT
FINAL REPORT**

St. Thomas East End
Medical Center
Corporation, Inc.

ST. THOMAS EAST END MEDICAL CENTER CORPORATION

2020 COMMUNITY HEALTH NEEDS ASSESSMENT FINAL REPORT



Submitted to
St. Thomas East End Medical Center Corporation, Inc.

Submitted by the
**Caribbean Exploratory Research Center
University of the Virgin Islands**

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DISCLAIMER

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ABBREVIATIONS AND ACRONYMS

	ABBREVIATION/ ACRONYM	DESCRIPTION	PAGE <i>[of 1st mention]</i>
A	ACA	Affordable Care Act	2
	ACF	Administration for Children and Families	2
B	BMI	Body Mass Index	28
	BRFSS	Behavioral Risk Factor Surveillance System	17
C	CDC	Centers for Disease Control and Prevention	17
	CERC	Caribbean Exploratory Research Center	2
	C ² HNA	Comprehensive Community Health Needs Assessment	x/2
	CHNA	Community Health Needs Assessment	2
D	DHHS	Department of Health and Human Services	2
E	EHS	Early Head Start	2
F	FHC	Frederiksted Health Care	1
	FQHC	Federally Qualified Health Center	1
G	GVI	Government of the Virgin Islands	1
H	HRSA	Health Resources and Services Administration	1
	HS	Head Start	2
	HSRP-VI	Human Services Research Partnership-VI	2
M	MAP	Medical Assistance Program	16
	MCH	Maternal and Child Health	15
	MOA	Memorandum of Agreement	15
	MUA	Medically Underserved Area	15
N	NAC	Needs Assessment Committee	19
	NCD	Non-Communicable Diseases	11
	NIAAA	National Institute on Alcohol Abuse and Alcoholism	33
P	PAC	Project Advisory Committee	19
	PH	Public Housing	xii/13
S	SON	School of Nursing	2
	SRMC	Schneider Regional Medical Center	1
	STEEMCC	St. Thomas East End Medical Center Corporation	1
T	TANF	Temporary Assistance for Needy Families	2
U	UDS	Uniform Data Set	16
	US	United States	8
	USVI	United States Virgin Islands	1
	UVI	University of the Virgin Islands	2
V	VICS	Virgin Islands Community Survey	x/3
	VIDE	Virgin Islands Department of Education	12
	VIDHS	Virgin Islands Department of Human Services	1
	VIDOH	Virgin Islands Department of Health	1
	VIHA	Virgin Islands Housing Authority	19
W	WHO	World Health Organization	63
Y	YRBS	Youth Risk Behavior Survey	17

EXECUTIVE SUMMARY

To ensure the provision of optimal care and services to clients, federally qualified health centers (FQHCs) are required to complete community health needs assessments periodically. STEEMCC engaged CERC to complete a Comprehensive Community Health Needs Assessment (C²HNA) in 2015. The current Community Health Needs Assessment (CHNA) updates the initial work and provides information that will inform STEEMCC's efforts in the areas of enhancing services to clients, determining health priorities, identifying gaps that need to be addressed, and embracing opportunities to collaborate with other providers to improve health outcomes for clients. The current CHNA sought to address seven key areas:

1. Key population information on current residents of the USVI (based on the most current Virgin Islands Community Survey [VICS]).
2. A description of the social and economic context of the USVI.
3. Information on households and families.
4. Documentation of the education, health, nutrition, and social services needs of children and families in the STEEMCC catchment area.
5. Documentation of the economic, social, educational, health, and environmental factors that impact eligible children and families in the STEEMCC catchment area.
6. Documentation of resources available to serve children and families in the district and catchment areas; and,
7. Delineation of the gaps, strength, and opportunities of the community and of STEEMCC.

APPROACH

To complete the STEEMCC 2020 CHNA, STEEMCC leadership agreed that the 2020 CHNA would be grounded in administrative and secondary data. Thus, the project team completed an assessment of administrative and secondary data sources that would be most relevant for addressing the purpose and scope of the STEEMCC 2020 CHNA. Key data sources included the 2015 Virgin Islands Community Survey (VICS), published in 2018; the USVI 2016 BRFSS; the 2017 YRBS study completed by CERC for the VIDOH; 2018 behavioral health assessment data collected for a community needs assessment completed in the aftermath of Hurricanes Irma and Maria; STEEMCC UDS data reports; other needs assessments completed for various programs across the Territory; and enrollment and dropout data published by the V.I. Department of Education.

THE COMMUNITY – DEMOGRAPHIC PROFILE

The information included in the Needs Assessment is intended to strengthen the understanding of the context within which STEEMCC operates to meet the needs of vulnerable families in the St. Thomas-St. John District, broadly, but more particularly, its largest client pool, which comes from its catchment area.

The Territory

Based on the 2015 Virgin Islands Community Survey (VICS) the following is a snapshot of the Territory's residents:

Population

- The Territory's predominantly Black, multiracial, and multiethnic population has been declining (100,728 in 2015) compared to 106,405 in 2010.
- The population has been aging since the 2010 Census evidenced by a median age of 44.5 in 2015 compared to 39.2 in 2010.

Family Structure

- The predominant family composition (58%) is that of a single-female head of household.
- Single-female headed households account for 50% of households living below the poverty level in the USVI in 2015.

Selected Economic Characteristics

- Fifty percent (50%) of the households in the Territory reported earning at or below the median income level of \$33,964.
- Twenty percent (20%) of the Territory's population reported having no medical insurance.

The St. Thomas-St. John District

Key socio-demographic factors of note for the St. Thomas-St. John District include:

- St. Thomas-St. John District residents account for 52% of the Territory's population.
- Fifty-five percent (55%) are female and residents are predominantly *Black* (African Caribbean or African American).
- Twenty percent (20%) of residents speak a language other than English at home and 22% of residents were categorized as living below the poverty level.
- Twenty-five percent (25%) of residents are uninsured and 60% of persons with health insurance were covered by private insurance.

The STEEMCC Catchment Area

- The eastern third of St. Thomas and the populated centers of St. John coincide with STEEMCC's catchment area and represent densely populated low to moderate income areas.
- STEEMCC's target population can best be described as the low income, medically underserved and unserved, and uninsured or underinsured vulnerable children and families who live below the poverty line.
- Maps of damages and losses to structures from the hurricanes of 2017 show great impacts and challenges in the catchment area of STEEMCC clients, including the destruction of a public housing community in Tutu, which resulted in the relocation of all residents.

KEY FINDINGS

BRFSS 2016

Based on the Territory-wide 2016 BRFSS, data related to overall health status, health-related quality of life, health status and chronic conditions, social determinants of health and other key health outcomes were captured for this report.

- More than one-third (37%) of Virgin Islanders described their overall health status as "Good" and 42% described their general health status as "Excellent" or "Very Good".
- Fifty-seven percent (57%) of participants reported that in the past 30 days, there were no days when they felt their physical health was not good.
- Almost two-thirds of the respondents (65%) indicated that there were no days, in the past 30 days, when physical or mental health illness restricted their usual activities.

Health Status with Respect to Chronic Health Conditions

- Almost seven in ten respondents have had tests for high blood sugar or diabetes within the past three years; and 17% have been told they have pre-diabetes.
- Only three percent (3%) of the participants reported ever been told they had a myocardial infraction.

Healthcare Access and Quality

- Eighty-one percent (81%) have access to coverage for healthcare, with one half (51%) of the respondents reporting that Medicare provides their health insurance coverage.
- Six in ten respondents (62%) indicated that they have a usual source of healthcare, and 74% shared that they visited the doctor for a routine checkup within the past year.
- With respect to cost, 16% of respondents reported that cost contributed to them having to delay needed care and visits to the doctor; and nine percent (9%) reported that there was a time in the past 12 months when they did not take medication due to cost.

Health Screenings

- Eight of every 10 participants reported that they did not receive the flu shot or flu vaccine in the past 12 months; only 20% reported taking the flu shot.
- Less than one-half of the respondents (49%) self-reported ever been tested for HIV.
- For diabetes screening, nearly seven in ten (69%) reported ever having blood sugar tests in the past three years.
- Having a mammogram for breast cancer screening, 81% reported in the affirmative to that survey question, while the findings show that nine of every ten respondents shared that they have had a Pap test for cervical cancer screening.
- With regards to colon cancer screening, only 56% of Virgin Islanders have ever had a sigmoidoscopy/colonoscopy.

Other Health-related Behaviors and Outcomes

- Territory-wide, approximately one in three adults (32.2%) were classified as obese and just over one-third (36.6%) were classified as overweight. Sixty-five percent (65%) of men were classified as overweight (39.8%) or obese (25.2%). That percentage was higher for women, with 71.2% of women classified as overweight (34.6%) or obese (36.6%).
- Fifty-five percent (55%) of the respondents reported visiting a dentist in the past 12 months, and an additional 14% visited the dentist more than one year but less than two years ago.
- Alcohol and tobacco use may lead to major health risks when used alone and together. Almost one in five (19%) indicated that they have smoked at least 100 cigarettes in their lifetime and 40% of the respondents self-reported having 2 – 3 drinks per day in the past 30 days.
- Seventy-six percent (76%) of participants reported engaging in physical activities, beyond their regular job during the past month.
- Ninety-three percent (93%) of respondents reported that they “always” or “nearly always” wear a seatbelt when driving or riding in a car.

YRBS 2017

Health Behaviors

- While very few public-school students in the St. Thomas-St. John District reported ever having tried cigarette smoking (6.6% - high school; 7.1% middle school), almost one in four (24.2%) high school students and 16.6% of middle school students reported having ever used an electronic vapor product.
- More than half (57.4%) of middle school students and 40.6% of high school students reported never having had a drink of alcohol. For those reporting having had a drink of alcohol, about three in 10 (30.2%) middle school students had their first drink at 12 or younger and more than one in three (37.3%) high school students reported having their first drink of alcohol at age 13 or older.

- While 40.3% and 44.6% of middle and high school students, respectively reported eating breakfast every day in the seven days prior to completing the YRBS, 22.8% of high school students reported not eating a fruit and 55.6% reporting not eating a green salad in the seven days prior to completing the YRBS.
- Though just over three in 10 high school students (31.7%) and 24.2% of middle school students said that they do not watch TV on an average school night, 36.8% of high school students and 46.8% of middle school students reported spending five or more hours a day playing video or computer games not related to completing school work.
- Almost one in four high school students (24.3%) and one in five middle school students (21.2%) reported that they had not been physically active for at least 60 minutes any day during the seven days prior to completing the survey.

Physical Environment

- About one in four high school students (24.6%) and three in 10 middle school students (29.7%) reported not feeling safe at school.
- More than four in 10 high school students (42.2%) and middle school students (43.8%) indicated that there was gang activity at their schools.
- While 17.5% of high school students reported being bullied at school, twice that proportion, 35.1% of middle school students reported being bullied at school.

Sexual Behaviors

- While approximately three in 10 high school students (29.1%) reported ever having had sexual intercourse, fewer than two in 10 middle school students (15.8%) reported ever having had sexual intercourse.
- While 9.5% of middle school students reported having had sexual intercourse for the first time when they were 12 or younger, the largest proportion (15.7%) of high school students who reported having had sexual intercourse indicated being 15 or older when they first had sexual intercourse.

Depression and Suicide Ideation and Behaviors (SIB)

- More than one-third of high school students (36.8%) and middle school students (33.9%) reported that during the past 12 months they felt so sad or hopeless every day for two weeks or more in a row that they stopped doing some usual activities.
- Just over one in five middle school students (21.3%) responded in the affirmative regarding seriously considering attempting suicide in the past 12 months compared to 17.3% of high school students.
- With respect to making a plan about attempting suicide in the past 12 months, 13.6% of high school students and 14.5% of middle school students responded affirmatively.
- While middle and senior high school students acknowledged seriously considering suicide and even making a plan, 92.6% and 88.7% of middle school and high school students, respectively indicated that they had never attempted suicide.

Behavioral Health Assessment 2018

Children and Youth

Elementary School Students

Over 1150 elementary school students enrolled in grades 4th through 6th in eight public schools and nine private and parochial schools in the St. Thomas-St. John District completed the 10-item CTSQ, with questions anchored in students' experiences with Hurricanes Irma and Maria. Some key findings are noted below.

- Over half of the students (52%) answered "Yes" to the question, "Do you feel or act as if the hurricanes are about to happen again?" and 54% responded "Yes" to the question, "Do you have lots of thoughts or memories about the hurricanes that you don't want to have?"
- For four of the 10 items, there was a statistically significant difference in the number of girls who answered "Yes" to the questions compared to boys. Two of the questions were: "Do you feel or act as if the hurricanes are about to happen again?" and "Do you feel upset by reminders of the hurricanes?"
- For nine of the 10 items, there was a statistically significant difference in the affirmative responses of children by grade level, with more 4th graders responded affirmatively to items than 5th or 6th graders.

Secondary School Students

A total of 375 7th to 12th graders attending private and parochial schools in the St. Thomas-St. John District completed the 24-item Child PTSD Screening Scale (CPSS). Approximately 52% identified as female and 52% of the students were 7th or 8th graders. The mean age was 13.7 (SD=1.84). Some key findings are noted below.

- Based on students' responses, one in three students – 33.4% – may be at risk for PTSD.
- The findings reveal a significant negative relationship between PTSD scores and age, with younger students having higher PTSD scores than older students.
- The findings also revealed a significant positive relationship between PTSD scores and Functional Impairment scores, with students having higher PTSD scores having higher Functional Impairment scores, signaling that youth more likely to be at risk for PTSD are more likely to have challenges in certain areas of their lives.

Adults

Highlights of findings based on adults' responses to a battery of instruments used to collect data on their behavioral health in the aftermath of Hurricanes Irma and Maria. Key findings are noted below.

- Using the CESD-10 to assess depression, 54.7% of adults could be classified as having depressive symptoms.
- Based on a measure of PTSD, the PCL, 58% of adults had scores higher than 30, suggesting possible PTSD symptoms.

- With respect to stress, based on responses to the Perceived Stress Scale, 81.7% of respondents could be classified as having moderate stress and 10.2% as having high stress.
- Based on responses to the General Self-Efficacy scale, 59% of respondents could be classified as having moderate to high self-efficacy.
- With respect to resilience, as measured by the Brief Resilience Scale, 17.4% could be classified as having low resilience, 68.6% as having normal resilience, and 14% as having high resilience.

STEEMCC HRSA-UDS 2016 - 2019

The District-level and center-level data provide an even clearer picture of the overall health status, to include health-related quality of life, health status and chronic conditions, social determinants of health and other key health outcomes of Virgin Islanders. The data show that:

- STEEMCC served 7388 total patients in 2019, with the patients in the 18 – 64 age group consistently making up the largest category of those treated annually between 2016 and 2019.
- There is an increasing number of patients being treated at the health center who are not native English language speakers. The percentage of patients best served in a language other than English has increased from nine percent in 2016 to 16% in 2019.

Health Status of STEEMCC Clients with Respect to Chronic Health Conditions

- Between 2016 and 2019, there was a dramatic increase (64%) in the number of patients presenting with hypertension and a 47% increase in those presenting with diabetes during the same period.
- The number of patients presenting with persistent asthma treated with pharmacological intervention fluctuated, during the period under review. Similarly, there were fluctuations in the total number of patients treated at the health center between 2016 and 2019, a 19.8% decrease between 2016 and 2017; a 6.5% increase from 2017 to 2018, and a 13.8% increase from 2018 to 2019.
- The number of diabetic patients with poorly controlled hemoglobin A1C or no test during the year ranged from 136 in 2016 to 195 in 2018, before declining to 178 in 2019.
- For symptomatic/asymptomatic HIV patients, 2019 saw the highest number of total patients (76) being treated at STEEMCC. The 2019 totals reflect a 36% increase over the 2016 HIV patient load.

Healthcare Access and Quality and Other Health Outcomes

- An increasing number of patients are receiving dental and mental health services at the health care center. The percentage change between 2016 and 2019 for dental and mental services is 64% and 1147% respectively.

- An average of 98% of STEEMCC patients are at or below 200% of Federal Poverty Guideline resulting in more than one half of the clients served at STEEMCC relying on Medicaid or CHIP for insurance coverage for health care. Uninsured patients comprise the second largest group of patients served at the health center.
- Among pregnant women, 55% to 65% of those receiving perinatal service at the Center accessed care in their first trimester.

Client Satisfaction

STEEMCC administers patient satisfaction surveys to ascertain client satisfaction with services and to use responses to improve service delivery. Key findings from the 2019 Patient Satisfaction Survey are noted below.

- Ninety-six percent (96%) of respondents reported being satisfied or very satisfied with the overall care received at STEEMCC (4.67 on a 5-point Likert scale). Likewise, 96% of respondents reported that the operating hours are convenient for them.
- Ninety-seven percent (97%) of clients indicated that they would refer their family and friends to the Center for health care services.
- Providers (nurses, physicians, dentists, psychologist, and physician assistant) received the highest rating with respect to client satisfaction – 4.72 on a 5-point Likert scale.
- Clients were least satisfied with the wait time (including waiting in the waiting or exam room, waiting for procedures and results) they had before receiving services.

PRIORITY HEALTH AND PROGRAMMATIC ISSUES

Priority health issues emerged from the secondary and administrative data reviewed are noted below, while the priority programmatic issues emanate primarily from the Patient Satisfaction Survey findings, Case Managers and Outreach Workers focus group discussion findings, and priority programmatic focus areas documented by the STEEMCC leadership. Key priority health and programmatic issues are noted below.

Priority Health Issues

- Needed health education for adults in the areas of health screenings, dental health, and weight management.
- Needed health education for adolescents around nutrition, sedentary behavior, and unprotected sex.
- Needed health education for pregnant women around the importance of accessing prenatal care in the first trimester.
- Need to address behavioral health issues particularly around depression and PTSD for adults, adolescents, and children.
- Need to address reduction of non-academic-related screen time for adolescents.
- Need to address physical environment for adolescents in school settings with respect to reported gang presence in USVI public middle and high schools.

- Increasing access to secondary and tertiary cancer treatment particularly for clients who are uninsured, underinsured, and those insured through Medicaid.

Priority Programmatic Issues

- Continued expansion of behavioral health providers and services to STEEMCC clients, to include children and adolescents.
- Expansion of current collaborations by establishing targeted collaborations with VIDE to address risky health behaviors, behavioral health issues, and safety considerations associated with the physical environment of public secondary schools in the St. Thomas-St. John District.
- Formalization of collaboration agreements/understandings with VIDHS and other key government agencies for Case Managers and Outreach Workers to be able to timely and effectively assist clients needing support.
- Explore options for identification of financial support for uninsured and underinsured clients needing secondary and tertiary care, based on laboratory and other test results.
- Provide targeted training for Case Managers and Outreach Workers to be able to optimally support clients within the context of COVID-19, to include consideration of the need for social distancing and facilitate increased use of Telehealth services.
- Mitigate wait-time for clients with respect to appointments and improve clients' overall experience during visits to the Center.

STRENGTHS, GAPS, AND OPPORTUNITIES

Strengths

- Responsiveness to recommendations of 2016 C²HNA as evidenced by the addition of a separate, dental health unit which provides dental services to pediatric and adult clients.
- Ongoing, incremental expansion of behavioral health providers and services available to clients.
- Expansion of non-clinical staff – Case Managers and Outreach Workers – to support clients as they navigate challenges and access needed secondary and tertiary care and related services.
- Expansion of pharmacy and laboratory services for clients.
- Providing care for an increased number of clients after disruptions associated with hurricanes in 2017 and despite difficult conditions of the recovery.
- Availability of services and informational campaigns supporting an increase in screenings for colorectal cancer and cervical cancer.
- Maintenance and expansion of agreements with key agencies within the V.I. Government and other medical facilities within and outside the Territory in support of mission fulfillment.

- Sought and successfully obtained grant funding and community support for improving staff and services, including outreach and transportation services for clients needing targeted support.

Gaps

- Insufficient staff with language skills to meet growing communication needs of diverse client pool.
- Need for targeted programs to address patient support for management of key chronic illnesses, to include obesity, hypertension, HIV, cancer, and overall wellness.
- Minimally targeted services for adolescents.
- Clients' complaints regarding wait-time may signal the need for added providers.
- Because of COVID-19 and social distancing requirements, current space does not allow for the provision of targeted clients services by Case Managers and Outreach Workers at the Health Center.
- Insufficient programs to provide special information and support needed for disease-management and wellness of children and adolescents and geriatric clients (ages 65 and older).

Opportunities

- Targeted collaboration with the public education system in the St. Thomas-St. John District to address identified health priorities for children and adolescents, particularly around behavioral health issues, the physical school environment for middle school and high school students, and nutrition education.
- New or expanded MOAs and collaborations associated with funding in support of hurricane recovery and resilience and climate change impact mitigation, especially focused on public health issues.
- Expansion of telehealth, outreach, and case management to mitigate negative impacts of COVID-19 impacts on clients' health.
- Expansion of physical space at Health Center to accommodate new realities associated with COVID-19.
- Consideration of revisiting appointment scheduling or increase of providers to reduce client wait-time while at Health Center to see providers.
- The modification of training for outreach personnel and providers to include bilingual communication and consideration of conversational English classes for clients based on the demographic shifts in populations served by STEEMCC.

CONCLUSIONS AND RECOMMENDATIONS

The contextual information and findings presented in this needs assessment provide a solid foundation upon which the STEEMCC leadership can continue to build and expand the

services provided to clients as well as the continued growth and development of both clinical providers and other support personnel that are part of the Center. The findings affirm the diversity and complexity of the context within which STEEMCC operates, but also demonstrates the systematic increase of the Center's capacity and purposeful, data-driven approach to meeting clients' medical, dental, and psycho-social needs through integrated services and partnerships with a range of entities and providers within and outside STEEMCC's catchment area, the St. Thomas-St. John District, and the Territory.

The findings affirm clients' continued satisfaction with the services received through the Center. The findings also reveal that, despite the significant disruption in infrastructure, educational, healthcare, and other areas of the Territory generally, and the St. Thomas-St. John District, more particularly, in the aftermath of Hurricanes Irma and Maria, STEEMCC, some three years later, has not only been able to expand services in the areas of behavioral health, case management and outreach, laboratory, and pharmaceutical services to clients, but has been able to build back the number of clients served to numbers close to pre-hurricane levels.

Five recommendations are offered:

- First, STEEMCC needs to recognize what it does well and build on this, particularly around the provision of high-quality care and services to clients, as evidenced from client satisfaction survey results.
- Second, STEEMCC should incorporate, within its strategic priorities, addressing the health and programmatic priorities noted, and addressing areas where indicators related to client health outcomes fall short of Healthy People 2020 targets.
- Third, STEEMCC should embrace and act on the opportunities enumerated, particularly around increased collaboration to expand its reach to support clients.
- Fourth, within the current realities of COVID-19, STEEMCC should make the needed investment to ensure that optimal telehealth services are provided to clients and that opportunities are provided to supplement telehealth services with face-to-face services to ensure that the Center's most vulnerable clients do not fall through the cracks.
- Fifth, STEEMCC should continue to anchor decisions around service expansion, collaboration, and overall priorities in the best data available so that clients most critical medical, dental, and behavioral health care needs can be met, thereby improving the health and well-being of as many STEEMCC clients as possible, on an ongoing basis.

INTRODUCTION

OVERVIEW

The St. Thomas East End Medical Center Corporation (hereinafter STEEMCC) is one of two federally qualified health centers (FQHCs) in the U.S. Virgin Islands (USVI) and the only FQHC in the St. Thomas-St. John District. Established in 2000 as a private, non-profit corporation, STEEMCC as a National Health Services Corps site ensures the availability of primary healthcare to the residents of the St. Thomas-St. John District, regardless of age, educational level, primary language, citizenship status, or economic status, through the use of a discounted/sliding scale fee schedule. Though STEEMCC has clients from all geographic locations across the St. Thomas-St. John District, the FQHC's catchment area comprises three census sub districts on St. Thomas, namely, East End, Tutu, and Southside, and all census sub districts on St. John. Together, the census sub districts encompass 111 estates – 64 on St. Thomas and 47 on St. John.

Based on the number of clients served through its delivery of comprehensive primary healthcare services, STEEMCC is recognized as one of the largest service providers in this sector in the St. Thomas-St. John District. STEEMCC has collaborative agreements with the Virgin Islands Department of Health (VIDOH), the Virgin Islands Department of Human Services (VIDHS), and the Schneider Regional Medical Center (SRMC) which operates the only public hospital in the St. Thomas-St. John District. With respect to funding, STEEMCC is a Health Center Program grantee under 42 U.S.C. 254b and is deemed a Public Health Service employee under 42 U.S.C. 233(g)-(n). STEEMCC also receives funding from the Government of the Virgin Islands (GVI).

BACKGROUND

The Caribbean Exploratory Research Center (herein after CERC or CERC-UVI) is a part of the School of Nursing (SON) at the University of the Virgin Islands (UVI). CERC and STEEMCC have collaborated in a number of projects over the years, with STEEMCC actively engaged as a partner over a five-year period while CERC lead the Human Services Research Partnerships: U.S. Virgin Islands (HSRP-VI), a project funded by the Administration for Children and Families (ACF) within the Department of Health and Human Services (DHHS). The project brought key community partners together to look at Head Start (HS), Early Head Start (EHS), and the Temporary Assistance for Needy Families (TANF) and how families were being served through these programs to improve their overall outcomes.

Additionally, CERC completed a comprehensive community health needs assessment (C²HNA) for STEEMCC between April 2015 and February 2016, which provided critical information on gaps and opportunities that informed efforts by STEEMCC to improve and expand services, particularly in the areas of dental health services and behavioral health services. More recently, CERC completed an evaluation of a public education and awareness program that STEEMCC conducted to increase community awareness and health literacy regarding the effects of climate change on the health of U.S. Virgin Islands (USVI) residents. Within this framework, STEEMCC engaged CERC UVI to conduct a community health needs assessment (CHNA), to update information reported in the 2016 C²HNA.

PURPOSE AND SCOPE

STEEMCC's mission is to "promote comprehensive, high quality, affordable, and cost-effective primary health care services, through integrated clinical practices, education, community outreach and research." With its recognition that to fulfill its mission, there is a need to ground decisions regarding care and resource allocation in the most current data, STEEMCC engaged CERC to conduct its 2019-2020 Community Health Needs Assessment.

The CHNA, completed within the framework of the social determinants of health addresses and reports on the following:

1. Key population information on current residents of the USVI (based on the most current Virgin Islands Community Survey [VICS]).
2. A description of the social and economic context of the USVI.
3. Information on households and families.
4. Documentation of the education, health, nutrition, and social services needs of children and families in the STEEMCC catchment area.
5. Documentation of the economic, social, educational, health, and environmental factors that impact eligible children and families in the STEEMCC catchment area.
6. Documentation of resources available to serve children and families in the district and catchment areas; and,
7. Delineation of the gaps, strength, and opportunities of the community and of STEEMCC.

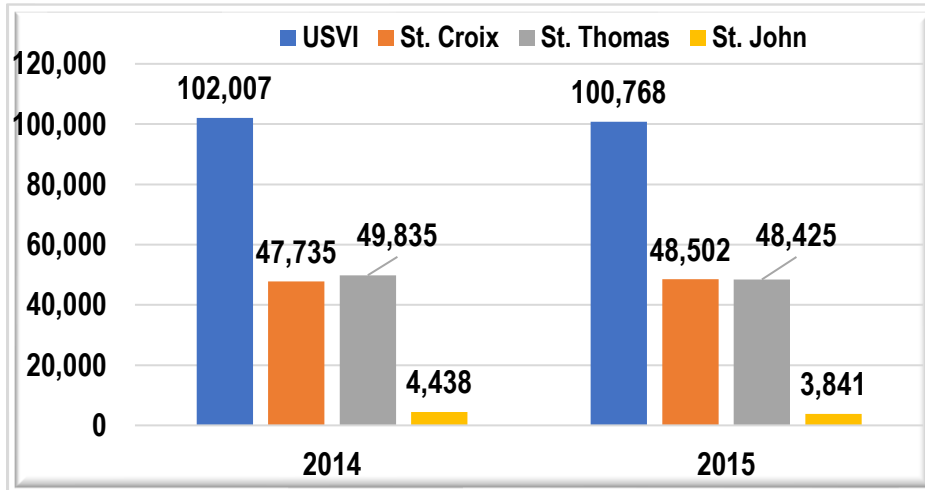
COMMUNITY DEFINED: POPULATION AND DEMOGRAPHIC PROFILE

This section of the CHNA provides key population information on current residents of the USVI, primarily based on the most current Virgin Islands Community Survey [VICS], published in 2018, but based on data collected in 2015. As such, when used as a source, reference will be made to the 2015 VICS. Additionally, this section of the CHNA provides a description of the social and economic context of the USVI, paying attention to factors that impinge on the Territory's economic stability. The information also provides an understanding of the community context of Territory's and the St. Thomas-St. John District. Finally, this section provides information on the composition of households/families in the Territory. This information provides an understanding of the context within which STEEMCC operates to meet the needs of vulnerable families in the St. Thomas-St. John District, broadly, but more particularly, its largest client pool, which comes from its catchment area.

Population

The population of the USVI continues to be a multiracial, multiethnic diverse group, living on the three major islands of the Territory. The population has continued to decline, Territory-wide. However, a review of Figure 1 reveals a slight increase in the population on St. Croix from 2014-2015, while there were declines on both St. John and St. Thomas (which included Water Island).

Figure 1. Population: Territory and Islands – 2014 and 2015



The population of the USVI has been reported as declining from the 106,405 reported in 2010 (US Census) to 102,007 in 2014 (VI Community Survey) to 100,768 in 2015 (VI Community Survey). (Figure 1). In 2016 the USVI Bureau of Economic Research provided a non-census report estimating the population to be 97,373, continuing the decline seen since 2008. There is no official single estimate of the extent of the population decline in 2017 due to the two Category 5 Hurricanes – Irma and Maria, but all three main islands appeared to lose people based on informal and recovery counts, especially with respect to estimates based on economic activity or school populations. Post hurricane needs assessments reported reductions in school enrollment from 13,194 in SY2016-2017 to 10,886 in SY2017-2018 (Michael, et al., 2019) that could be used as indications of population changes. Data from the 2020 Census process are expected to answer questions regarding volatility and trends in the population following the 2017 hurricanes and to some extent the impact of the COVID-19 pandemic.

In 2015 the US Virgin Islands was characterized as approximately 50% female, 80% *Black* (African American or African Caribbean), 11.5% *White* and 8.5% *Other Races* with 16% of the population reporting Hispanic roots in the VICS 2015. (Figure 2). On the island of St. Croix, as has been reported in the past, approximately 1 in 4 individuals identify as having Hispanic roots, the highest percentage in the Territory. On St. Thomas and St. John, the population is approximately ten percent and twenty-one percent Hispanic, respectively. The economic and

health challenges of the Territory are exacerbated by the requirements and stresses of living with hurricane recovery and COVID-19 conditions.

The 2015 VICS reported that the numerically declining USVI population was also an aging population with the median age of 44.5, a five-year increase from the median age of 39.2 reported in 2010 (U.S. Census Bureau 2010). The data indicate that before the additional impacts of the hurricanes and the pandemic, 62% of the population was older than 35 years of age while only 20% was 19 years old or younger. As the USVI population continues to change, the recognition that at least 41% of the population is over 50 years of age will require focused attention on emerging needs and changes in healthcare, education, the workforce, public housing, especially while addressing the requirements for adaptation to climate impacts, disaster preparation and disease outbreaks.

Figure 2. USVI Population by Ethnicity: Territory and Islands, 2014 and 2015

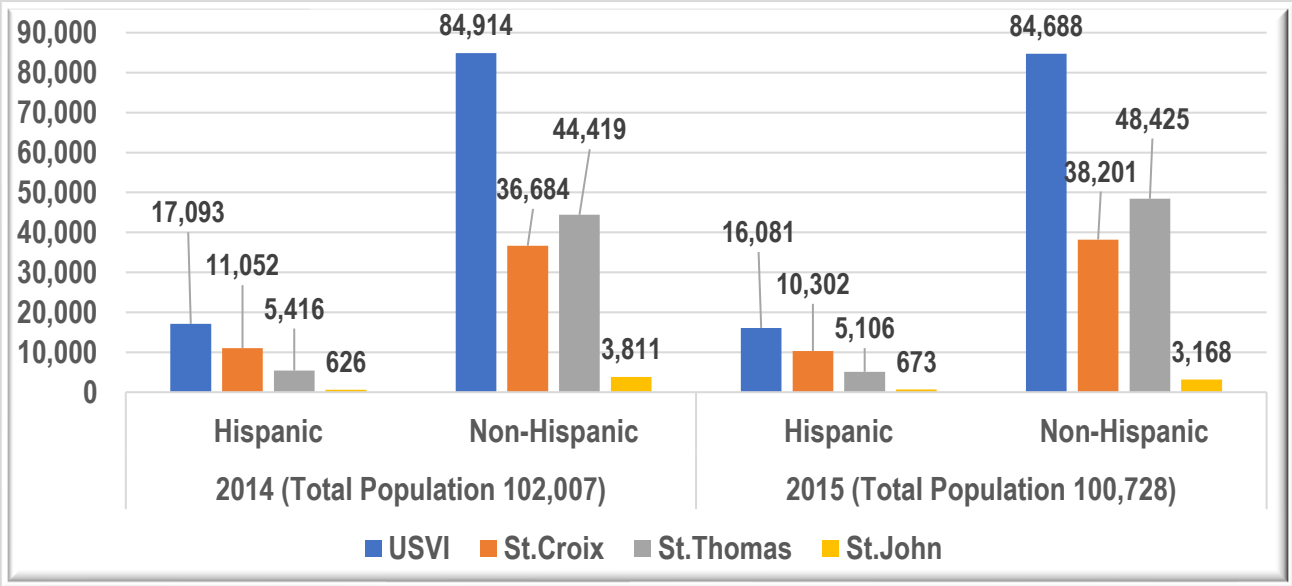
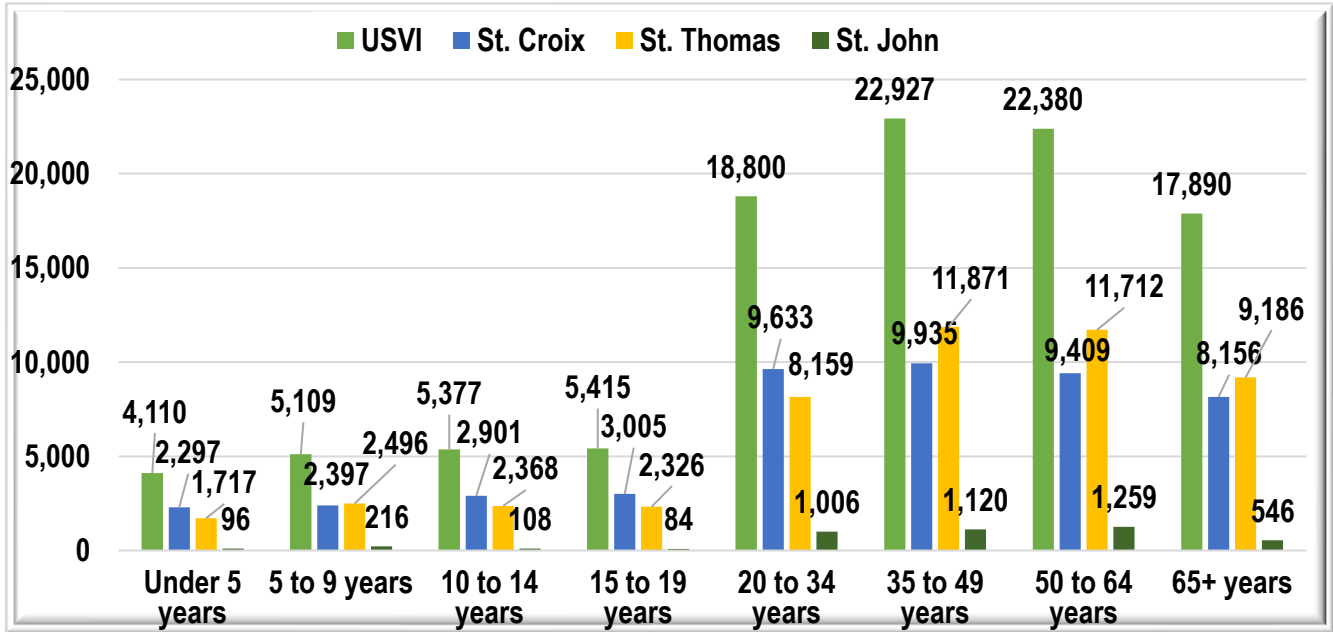


Figure 3. USVI 2015 Population by Age Group: Territory and Islands



Source: VICS 2015

The decline in the USVI population over the last 2 decades has not decreased the diversity of the communities on the three major islands. The population of the USVI comprises various size groups of people from many places, with the largest groups associated with the island-states and territories of the Caribbean and states of the US. In both the 2014 and 2015 VICS, individuals from Canada, Europe, Central and South America, India, the Middle East, China, and African countries are classified in the *Elsewhere* category. The 2015 VICS reports the largest group of residents born outside of the USVI come from the island-states of the Caribbean, with English and French Creole speakers from Dominica contributing 15% and Spanish speakers from the Dominican Republic adding 14% to this group.

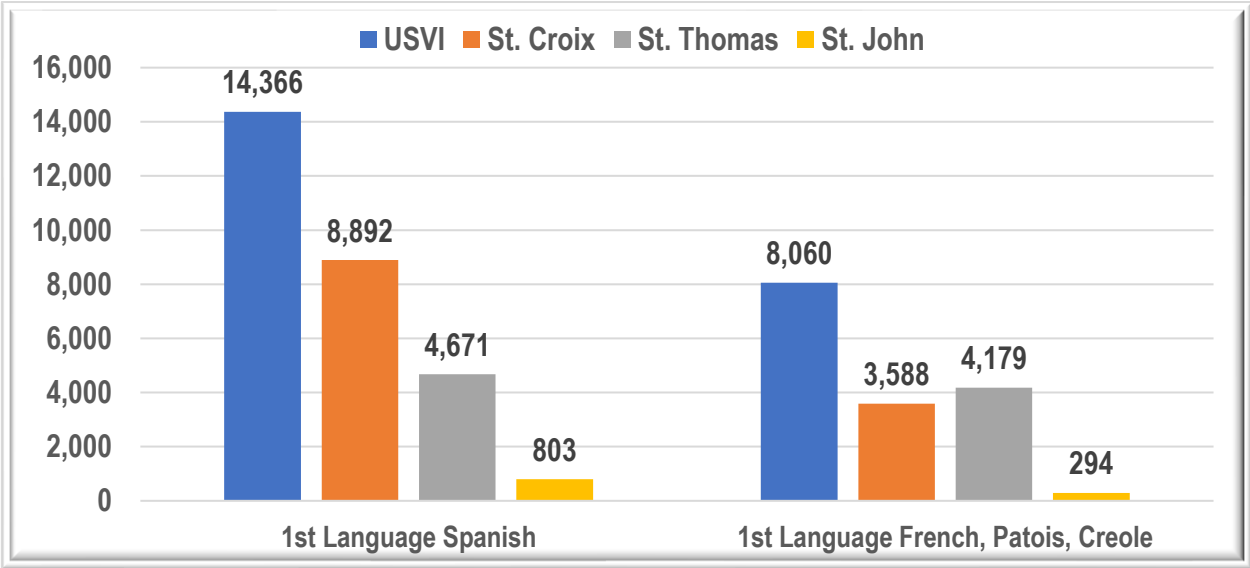
Primary Language Spoken at Home

Across the Territory, 24.7% of individuals over 5 years of age reported speaking a second language in the home, while in the St. Thomas-St. John District, 21% indicated a second language was spoken at home. Although English is the primary language spoken in the US Virgin Islands, on each of the three main islands everyday life requires the integration and

recognition of various aspects of the diverse cultures and ethnicities in the population as a part of community-building.

The 2015 VICS reports Spanish and French Patois or Creole as the two most prevalent non-English languages spoken by individuals over 5 years old in the USVI (Figure 4). Across the Territory, sixty percent of the second language speakers are conversing in Spanish that may reflect the dialects and vocabulary of the Latin cultures represented in the community, including Puerto Rico, the Dominican Republic, Cuba and South American countries.

Figure 4. First Language Spoken at Home for Persons over 5 Years Old: Territory and Islands, 2015



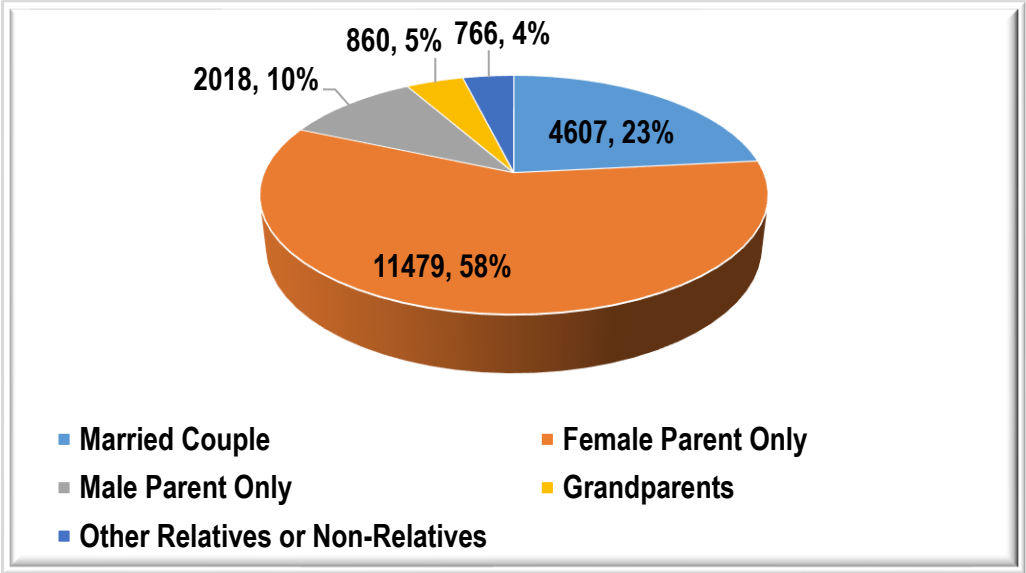
Source: VICS 2015

Family Structure

Families in the USVI are also diverse in structure, yet it is common to find them characterized by the sharing of a special type of kinship that comes in different forms but focuses on support and decision-making critical to producing engaged, productive community members. The dominant family structure in the USVI is the single female as head of the household with at least one child. In 2015 the US Census Bureau reports 23% of United States (US) families as having a single female as the head of the household, in comparison to 58% of families in the USVI having a single female as the head of the household. Figure 5 presents the

USVI population by family composition based on 2015 VICS data. Single-female households made up 50% of households living below the poverty level in the Territory in 2015.

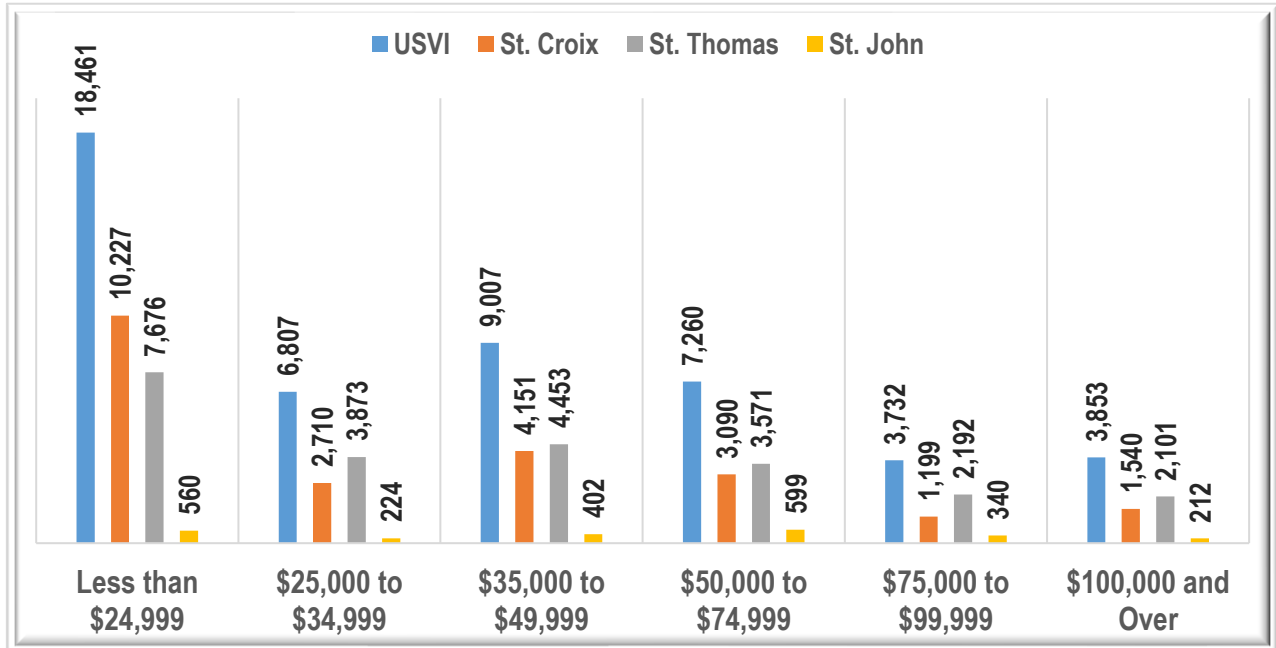
Figure 5. USVI 2015 Population by Family Composition



Selected Economic Characteristics

The USVI, like other small island groups, must address the challenges associated with the economic costs of being physically isolated from the US mainland and large markets by over a thousand miles of ocean, limited natural and institutional resources, and vulnerability to natural hazards like hurricanes and earthquakes, within the constraints of limited human resources because of size. Employment and economic activities in the USVI have been in a weakened state since 2008 beginning with the economic contraction due to the *Great Recession*, the added stress in 2012 when the oil refinery on St. Croix closed, and the economic impacts of recovery from hurricane devastation in 2017. (USVI Bureau of Economic Research). These conditions have negatively impacted the standard of living and quality of life of Virgin Islands residents and their families through downturns in employment and an increased need for migration.

Figure 6. USVI Household Income Levels: Territory and Islands, 2015



The most recent negative impacts on the USVI economy and the standard of living in the Territory came from Hurricanes Irma and Maria in 2017 and the COVID-19 pandemic that began to be evident in this region in March 2020. The USVI Bureau of Economic Research reported unemployment levels in 2016 at 11.5%, shrinking of the Territorial GDP by 1.7% in 2017 as a consequence of the category 5 hurricanes, unemployment at approximately 10.5% for 2 years as recovery efforts unfolded under conditions of a smaller workforce and decreased economic activity, and a spike to over 13% in unemployment associated with forced lockdowns and closures in response to the COVID-19 pandemic.

The short to medium-term future of the USVI will be characterized by recovery from economic downturns and Category 5 hurricanes and require attention be given to the 20% (5,197) of the families in the Territory that are living below the Federal Poverty Line (2015 VICS), especially the 49.5% (2,594) of these families that have single-female householders. Part of the challenge can be seen in Figure 6 which shows that 22,356 households (49.8%) are earning at or below the median income level of \$33,964, disqualifying some households from receiving assistance even though they are not earning enough to fully address the costs of living with their income. These difficult economic conditions and disruptions in patterns of

life are increasing stress levels and resulting in escalated signals that the Territory may have to address PTSD as a part of its community development and public health plans going forward (Michael, N. et.al. 2019).

The St. Thomas-St. John District

The St. Thomas-St. John district, the location of and most immediate area served by STEEMCC, was reported in the 2015 VICS as having 52% of the Territorial population. The St. Thomas-St. John population, much like the entire Territory was 55% female, predominantly *Black* (African Caribbean or African American) and aging. The median age of the St. Thomas-St. John population was 45.2 years of age, more than a year and a half older than the St. Croix population median age of 43.6. The decline in total population number reported at the territorial level is mirrored in the St. Thomas – St. John district. The diversity of the St. Thomas-St. John district was reflected in the VICS 2015 report indicating 20% of the population speaking a language other than English at home, mostly French Creole or Patois and Spanish, but it was lower than the 28% of the population on St. Croix that did not speak English as the first language at home. The impacts of Hurricanes Irma and Maria in 2017 and the COVID-19 pandemic in 2020 include fluctuations in the population size and composition that should be documented in the 2020 Census reports, along with changes in median age and levels of diversity in the population.

The 2015 VICS reported 20% of the USVI population living below the poverty level as compared to 13.5% of the entire US living below the line. This socio-demographic parameter highlights one of the differences between the islands in the St. Thomas - St. John district. On St. John, 12% of families were reported as living below the poverty line, with 36% of this group having children younger than 18 years old. In contrast, on St. Thomas, 22% of families were categorized as living below the poverty line, with 49% of this group including children in the family younger than 18 years old. The high poverty level in the Territory has been exacerbated and partially fueled by high levels of unemployment over the last 10 years. The VI Bureau of Economic Research reported improvements in economic activity in the Territory

had decreased unemployment to 8.6% in the St. Thomas-St. John district at the end of 2018 as the recovery from Hurricanes Irma and Maria increased economic activity, but in the spring of 2020 the efforts to contain the spread of COVID-19 in the Territory resulted in a spike of unemployment to 13.5%.

The cost of health care services and managing the high levels of non-communicable diseases (NCDs) in the USVI are significant community challenges, especially with one in five individuals lacking health insurance. In the St. Thomas-St. John district the last Community Survey in 2015 reported 25% of the district population as uninsured. By 2016 eligible families and children were benefiting from the increase in the Medicaid Cap in the USVI, allowing many that were previously uninsured to seek medical services on a more regular basis. Sixty percent of the individuals with medical insurance in the St. Thomas-St. John district received coverage under an employer like the VI Government or business (2015 VICS).

The STEEMCC Catchment Area

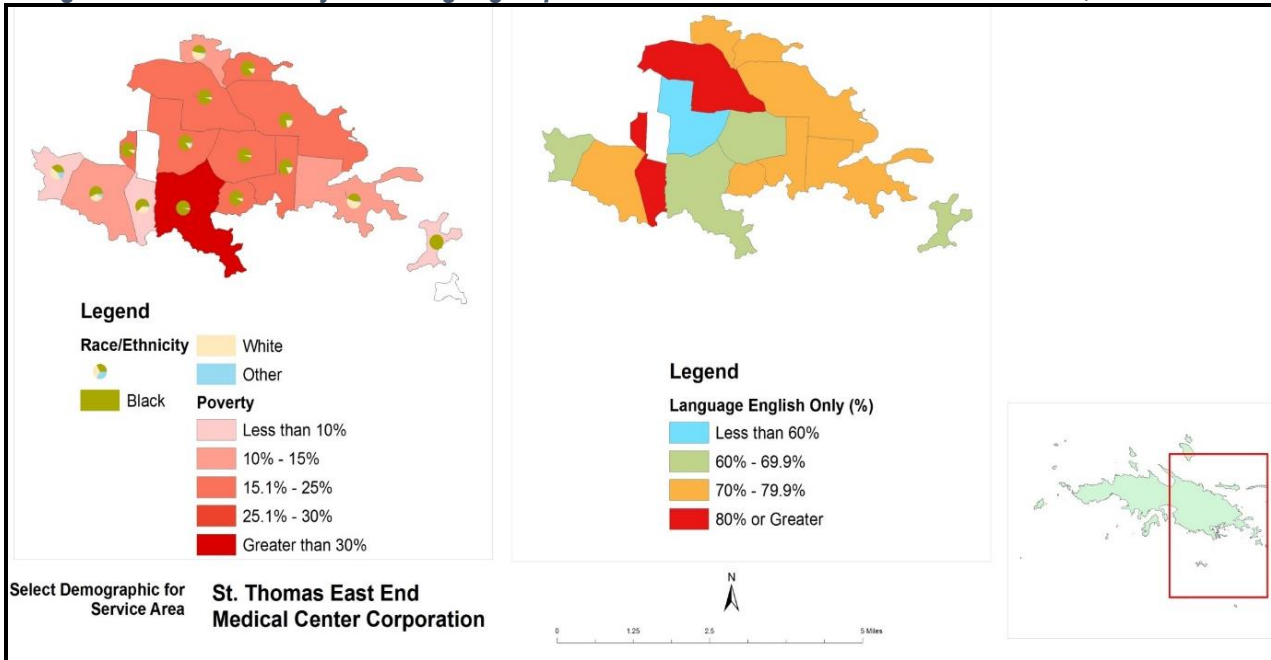
As described on its [website](#), STEEMCC serves persons from all zip codes across the Territory who need preventative primary healthcare, dental services, and related healthcare services. However, the STEEMCC's target population can best be described as the low income, medically underserved and unserved who live below the poverty line.

The STEEMCC catchment area was reported as predominantly *Black*, low to moderate income, and ethnically diverse, characteristics that reflect the St. Thomas-St. John district, but at higher levels than the entire district (US Census 2010).

The communities on St. Thomas and St. John and the specific catchment area that STEEMCC serves portray some unique characteristics when compared to the Territory in general. The eastern third of St. Thomas and the populated centers of St. John coincide with the catchment areas of STEEMCC and fall in densely populated low to moderate income areas. Figures 7 and 8 illustrate the level of poverty, health insurance status and languages spoken at

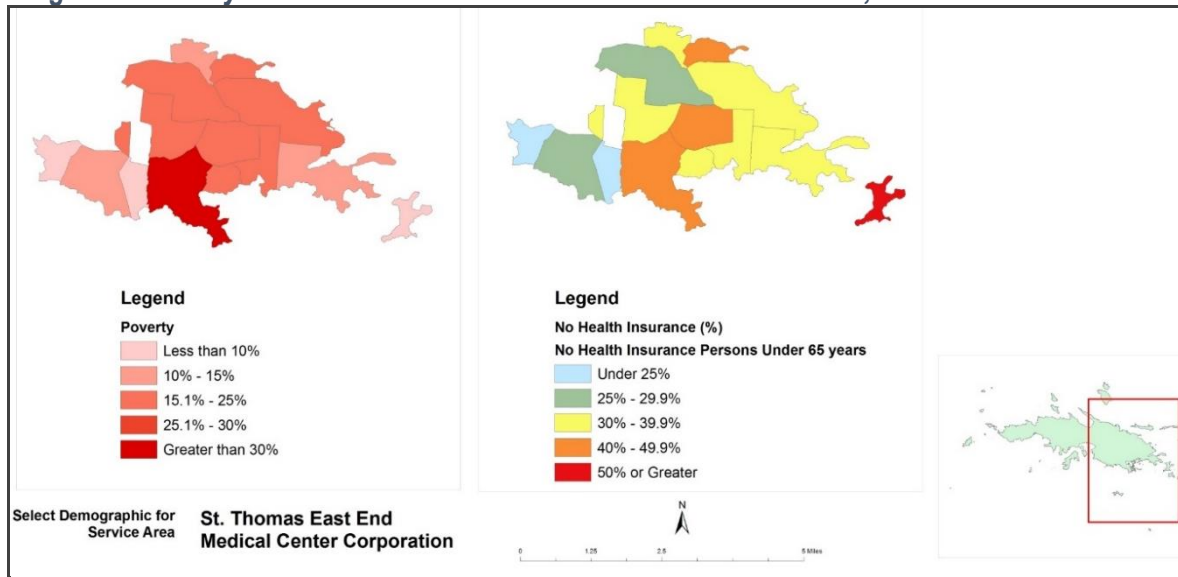
home for the multiracial and multi-ethnic residents in the STEEMCC catchment area (US Census 2010).

Figure 7. Race/Ethnicity and Language Spoken at Home: STEEMCC Catchment Area, 2010



Source: Eastern Caribbean Center (ECC)

Figure 8. Poverty and Insurance Status: STEEMCC Catchment Area, 2010

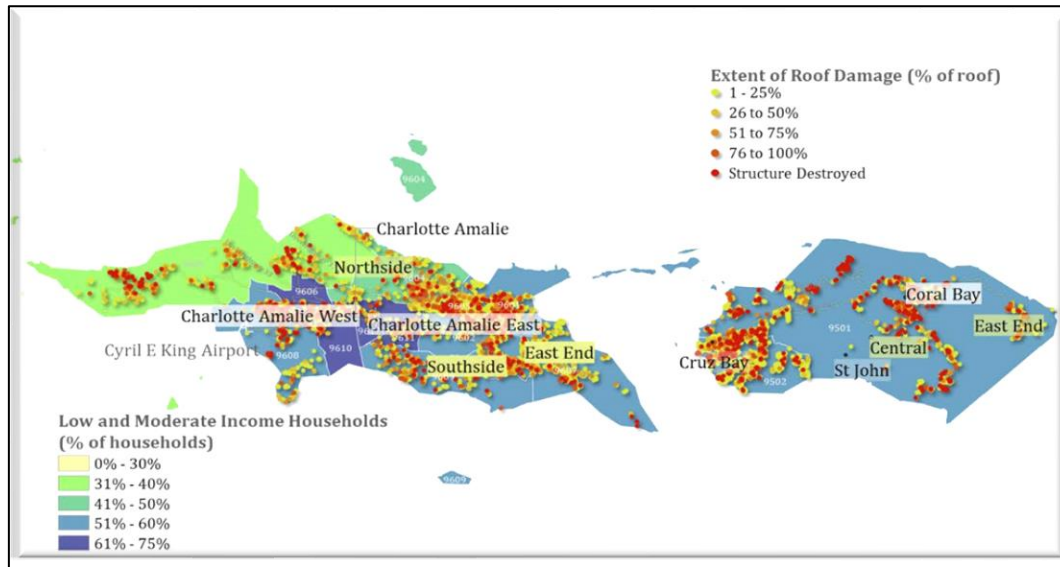


Source: Eastern Caribbean Center (ECC)

The hurricanes of 2017 devastated the Territory, especially communities on the islands of St. Thomas and St. John. The maps of damages and losses to structures show great impacts and challenges in the catchment area of STEEMCC clients, including the destruction of an

entire public housing (PH) community in Tutu (Figure 9). The same community was also required to help the students of one school that was destroyed by the storm adjust to the merging of two schools during the recovery. Economic downturn and recovery challenges produce additional stressors that may negatively impact health of the population.

Figure 9. Housing Units Damaged and Severity of Damage - STEEMCC Catchment Areas



OTHER HEALTH SERVICES AVAILABLE IN THE ST. THOMAS-ST. JOHN DISTRICT

Table 1. Healthcare Services Available in the St. Thomas-St. John District, 2020

Name of Healthcare Provider/Facility	Ages Served	Payment Options	Hours	Specialty Care
Ambulatory Care Clinic	All Ages	●★▲	M-F: 8 AM-5 PM S: 9 AM-3 PM	Family Medicine
Caribbean Chiropractic Center	Children and Adults	●★	M-T: 7:30 AM-5 PM F: 7 AM-3:30 PM	Chiropractic
Caricare Family Health Services LLC	All Ages	●★	M-F: 9:30 AM- 6:30 PM W: 9:30 AM- 5 PM	Family Medicine
Carolyn Jones MD	All Ages	●★	M-F: 8 AM-4 PM	Family Medicine
Chiropractic Health Center	All Ages	●★	M, W, F: 8 AM-6PM T, T: 9 AM-5 PM S: 9AM- 12 PM	Chiropractic
COG Restore	All Ages	●★▲	M-F: 7 AM- 6PM	Physical Therapy
Community Health Clinic	All Ages	●★▲+	M-F: 8:30 AM-11:30 AM M-F: 1 PM- 4 PM	Primary Care
Cruz Bay Family Practice	All Ages	●★▲✚	M-F: 9 AM- 4 PM	Family Medicine Internal Medicine
Island Health & Wellness Center	All Ages	●★	M-F: 10 AM- 3 PM	Primary Care
Morris F. deCastro Clinic	All Ages	●★	M-F: 8 AM- 5PM	Primary Care
Partners 4 Kids	0- 18 Years	●★▲	M-F: 8 AM- 5 PM	Pediatrics
Red Hook Family Practice	All Ages	●★▲✚	M-F: 8 AM- 5PM	Family Medicine Internal Medicine
Schneider Regional Medical Center	All Ages	●★▲	Open 24 hours	Clinical Services
St. Thomas Community-based Outpatient Clinic- VA	18 Years and Older Veterans	●★▲■	M-F: 7:30 AM- 4:30 PM	Primary Care
St. Thomas East End Medical Center Corporation	All Ages	●★▲+	M-F: 8 AM- 5 PM	Family Medicine
St. Thomas Radiology Associates LLC	Adults	●★	M-F: 8 AM- 5 PM S: 9 AM- 12 PM	Radiology
Therapy Works LLC	All Ages	●★▲	M, W, F, S: 8 AM- 5 PM T, T: 9 AM- 6 PM	Physical Therapy
VI Dental Center	All Ages	●★	M-F: 9 AM- 6 PM	Orthodontics
VI Neurological Medical Group	2 Years and Older	●★	Appointment Only	Neurology
Virgin Islands Orthopedics and Sports Medicine P C Clinic	Children, Adults, Seniors	●★▲	M-F: 7 AM- 5 PM	Orthopedics
Virgin Island's Center for Integrative Medicine	All Ages	●★	N/A	Family Medicine
Virgin Islands Ear, Nose & Throat	All Ages	●★▲✚	M-F: 9 AM-5 PM	Otolaryngology
Virgin Islands Oncology & Hematology PC	Adults	●★	M-F: 9 AM- 5 PM	Oncology and Hematology
Virgin Islands Urological Center Inc.	Adults	●★	Appointment Only	Urology
Vision Center	6 Months-Seniors	●★▲	M-F: 9 AM- 4:30 PM	Ophthalmology
Yacht Haven Family Practice	All Ages	●★▲✚	M-F: 8 AM- 4 PM	Family Medicine Internal Medicine

Legend [Payment Types]:

★ Private Insurance
▲ Medicare

● Self-pay
✚ Equicare
■ Medicaid

✚ Sliding Fee Scale
◆ United Healthcare

Though STEEMCC's catchment area comprises primarily the eastern end of St. Thomas and the island of St. John, STEEMCC's clients represent all census sub districts of St. Thomas.

Additionally, over the past few years, STEEMCC has documented clients who list their island of residence as St. Croix. Thus, Table 1 captures other health care service providers and services available in the St. Thomas-St. John District. The table captures key information relative to insurance accepted, hours of service, specialty providers, and the range of ages served. Figures 10 and 11 below, provide a visual representation of the location of these

Figure 10. Healthcare Sites: St. John, 2020
services on St. John and St. Thomas, respectively.

As depicted in Figure 10, there are three healthcare sites on the island of St. John, all are in Cruz Bay, the westernmost part of the island. As the smallest and least populated of the three main islands that comprise the USVI, the limited number of healthcare facilities on St. John is notable.

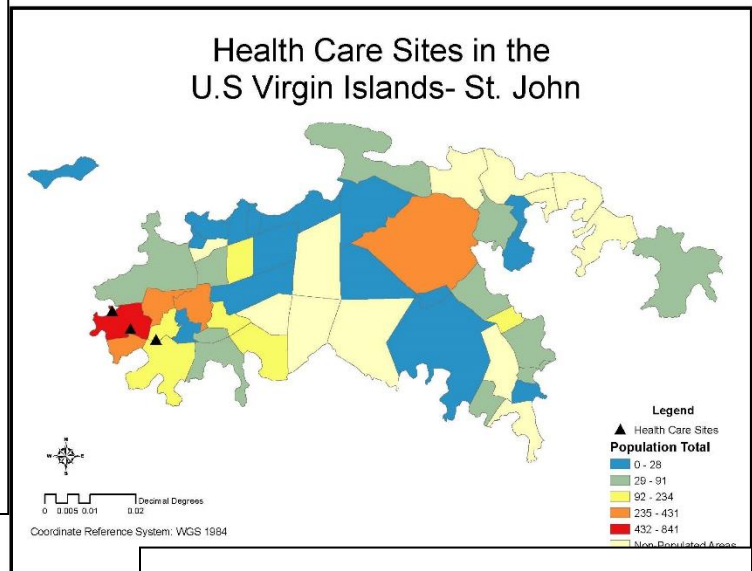
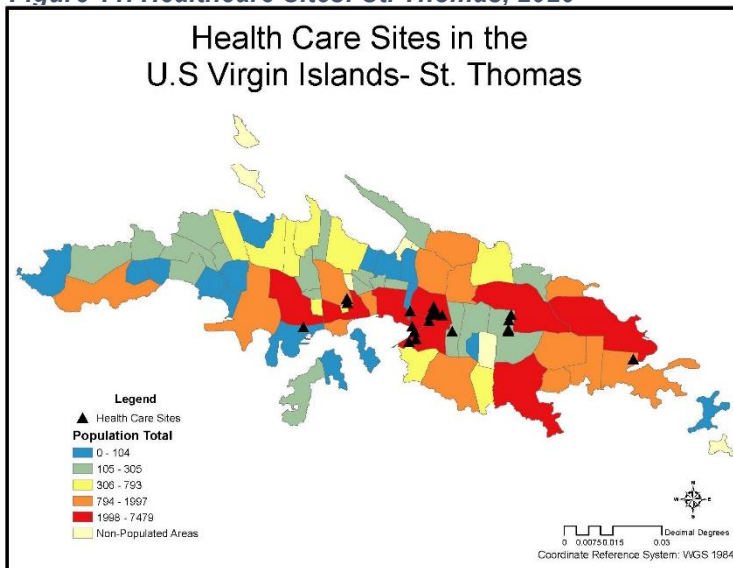


Figure 11. Healthcare Sites: St. Thomas, 2020



As can be observed in Figure 11, unlike St. John, healthcare sites on the island of St. Thomas are more dispersed, yet, there are clear healthcare deserts on the island, with no healthcare sites on the western end of the island or in the northern part of the island. While there are a few healthcare sites in the STEEMCC catchment area, most are in Charlotte Amalie or about three miles west of Charlotte Amalie (MCH clinic and some private providers).

APPROACH TO 2020 CHNA

Given the extensive nature of the 2016 Comprehensive Community Health Needs Assessment (C²HNA) that CERC completed on behalf of STEEMCC, for the 2020 CHNA, STEEMCC indicated that the use of administrative and secondary data would be acceptable in terms of data sources to establish current community health needs relevant for STEEMCC's consideration. To that end, the research team completed an assessment of data sources that would be most relevant for ensuring that the purpose and scope of the STEEMCC 2020 CHNA would be appropriately addressed.

Since the completion of the 2016 C²HNA, CERC had the opportunity to conduct several studies that resulted in data that have been included in this CHNA. Further, a 2015 Virgin Islands Community Survey, published in 2018, was completed by UVI's Eastern Caribbean Center (herein after referenced as 2015 VICS) as well as annual UDS data submitted to HRSA by STEEMCC. The information presented previously in the section "Community Defined" is based primarily on the 2015 VICS.

Below is a description of the administrative and secondary data included in the CHNA which portrays adults, adolescents, and children in the St. Thomas-St. John District, where STEEMCC operates. Additionally, the approach used to analyze the data presented is also addressed.

ADMINISTRATIVE AND SECONDARY DATA AND DATA ANALYSIS

As previously noted, data for the STEEMCC 2020 CHNA was based primarily on existing administrative and secondary data. These data included primary data collected for previous needs assessments conducted between 2018 and 2020, inclusive, as well as administrative data collected and reported by STEEMCC and made a part of HRSA's UDS which captures a range of data elements for all federally qualified health centers (FQHC). Additional secondary data included the 2016 BRFSS Territorial data as well as 2017 YRBS data collected in all public junior high/middle, and secondary senior high schools across the

Territory. Brief descriptions are provided of the various data sets or data sources used in this CHNA.

It should also be noted that the secondary and administrative data that serve as the anchors for the STEEMCC 2020 CHNA are broader in scope than the primary data collected and presented in the STEEMCC 2016 C²HNA. While the primary data collected for the 2016 C²HNA targeted the STEEMCC catchment area, the 2020 CHNA includes data that encompass the Territory (BRFSS) and the wider St. Thomas-St. John District (YRBS). Behavioral health data collected in 2018 are also included, with child and adolescent data reflecting the St. Thomas-St. John District, broadly, while the adult data represent the STEEMCC catchment area and clients. The final data source is the annual UDS reports based on data submitted by each FQHC. Thus, these data represent the narrowest scope of the sources used to inform the 2020 CHNA. For all data analyses, only descriptive statistics are presented.

Finally, though administrative and secondary data served as the foundation and pillars for the development of this CHNA, upon the request of the funders, the CERC team conducted a focus group discussion that included case managers and outreach workers. All team members coded the focus group discussion transcript and key themes are presented after all administrative and secondary findings are presented.

Adults

BRFSS

Described by the CDC, as “the nation’s premier health system of health-related telephone surveys”, the Behavioral Risk Factor Surveillance System ([BRFSS](#)) was established in 1984. The surveillance system is built on state-level data generated from surveys of adults on chronic health conditions, health-related risk behaviors, and use of preventive services. The BRFSS is structured into three major parts – a set of core questions; various modules that states can elect to add to the core questions, and additional state-selected questions, unique to each

jurisdiction. Survey results are utilized by jurisdictions to target and build health promotion activities. The most current BRFSS data available for the USVI is the 2016 data.

Battery of Behavioral Instruments

While the survey associated with the BRFSS focuses on chronic health conditions, health-related risk behaviors, and the use of preventive services, the battery of behavioral instruments used in a 2018-2019 community needs assessment sought to assess behavioral health issues experienced by adults across the Territory in the aftermath of two category five hurricanes. Instruments used included the CESD-10, which assesses symptoms of depression in the general population; the Perceived Stress Scale (PSS), a 10-item instrument which captures persons' self-assessment of their ability/capacity to deal with particular situations; the Post-traumatic Stress Disorder Checklist (PTSD PCL), a self-report instrument that assesses whether an individual has symptoms of post-traumatic stress disorder; the Brief COPE, a 28-item instrument that assesses the coping strategies of both adolescents and adults; the General Self-efficacy Scale (GSES), a 10-item instrument that assesses individuals' personal capacity to deal with a variety of stressful situations; the Brief Resilience Scale (BRS), a six-item instrument that assesses resilience; and the Emotion Regulation Questionnaire (ERQ), a 10-item instrument that asks individuals questions about how they control and manage their emotions. All instruments used have acceptable reliability.

STEEMCC UDS Data: FY2016 – FY2019

The final data source used in reporting information on adults in this CHNA is the UDS reports that each FQHC must submit to HRSA annually. Four years of data are considered, in part to document trends with respect to chronic health issues, healthcare access, disease management, and other indicators of interest in understanding and addressing various healthcare gaps and needs for STEEMCC's clients, as well as persons in the narrower catchment area and current clients dispersed more broadly across St. Thomas and those who reside on St. Croix.

Adolescents and Children

YRBSS

As described by the CDC, developed in 1990, the Youth Risk Behavior Surveillance System ([YRBSS](#)) was established to monitor health behaviors that are known to contribute to disability, social problems, and the leading causes of death among youth and adults in the U.S. Given the purpose of the surveillance system, questions are focused on six major categories of behaviors that have long-term health effects and also contribute to the leading causes of death: behaviors that contribute to unintentional injuries and violence; sexual behaviors related to unintended pregnancies and STIs, alcohol and other drug use, tobacco use, unhealthy dietary behaviors, and inadequate physical activities. YRBSS also monitors the prevalence of asthma and obesity.

CPSS and CTSQ

The Child PTSD Symptom Scale (CPSS) is a 24-item, self-report measure of the presence and frequency of PTSD symptoms (17 items) after youth have experienced a traumatic event. The instrument includes a seven-item functional impairment scale that assesses the degree to which PTSD symptoms interfere with youths' functioning.

Finally, the Child Trauma Screening Questionnaire (CTSQ), a 10-item, self-report questionnaire assesses the risk of the likely onset of PTSD and assesses traumatic stress reactions in children after a potentially traumatic event. Both the CPSS and the CTSQ have acceptable reliability.

STEEMCC UDS Data: FY2016 – FY2019

Since STEEMCC provides services to clients across the lifespan, some UDS data will also be reported in this CHNA for children and youth that receive primary care, dental, and behavioral health services.

COMMUNITY ENGAGEMENT ACTIVITIES

As an FQHC, STEEMCC has standing MOAs and MOUs with various government entities to support access to healthcare for vulnerable children and families in the St. Thomas-St. John District, generally, and residents in its catchment area, more particularly. These entities include the V.I. Department of Health (VIDOH), the V.I. Department of Human Services (VIDHS), the V.I. Department of Education (VIDE), and Frederiksted Health Care, Inc. (FHC), the only FQHC in the St. Croix District. Collaborations and formal and informal agreements are also maintained with the SRMC and the Virgin Islands Housing Authority (VIHA). For the completion of the 2015 C²HNA, a Project Advisory Committee (PAC) was convened to provide feedback on the CHNA and to contribute to the prioritization of health and programmatic issues.

For the STEEMCC 2020 CHNA, a PAC was also formed and convened to again weigh in on the prioritization of health issues as well as to contribute to the ensure that the gaps and opportunities identified are also reflective of the realities of the St. Thomas-St. John community being served by STEEMCC. PAC members for the STEEMCC 2020 CHNA included representation from the VIDOH, VIDHS, the STEEMCC catchment area community, clinical and policy personnel from STEEMCC and the UVI project team.

Additionally, to expand the span of stakeholder feedback, a link was provided on both the CERC microsite as well as the STEEMCC website inviting stakeholders to review the draft and provide comments/feedback. The window for feedback was five calendar days and stakeholders were provided a response sheet, which was optional for use (*See Appendix I*).

FINDINGS

The findings focus primarily on the health status of adults, adolescents, and children in the Territory, St. Thomas-St. John District, and the STEEMCC catchment area. Findings for adults, based on the 2016 BRFSS, are organized in two broad categories, health outcomes and social determinants of health. With respect to health outcomes, areas of focus include overall health status, health-related quality of life, health status with respect to chronic conditions, and other key health outcomes, to include obesity and oral health. With respect to health determinants, areas of focus include healthcare access and quality, healthcare costs, health behaviors, and demographics and the social environment. Key behavioral health status information for adults is also presented.

For adolescents, health status, health behaviors, and risky behaviors are presented, based on 2017 YRBS data collected at all public middle schools and junior and senior high schools across the Territory. Additionally, behavioral health status is provided based on data collected in 2018 from students in grades 7 – 12 at private and parochial schools across the Territory. Behavioral health status for children is also shared and is based on data collected in 2018 from children in grades 4 – 6 enrolled in public, private, and parochial schools across the Territory.

Finally, health status, needs, and outcomes for STEEMCC clients are presented through trend data for the period FY2016-FY2019, based on HRSA reporting.

BRFSS 2016

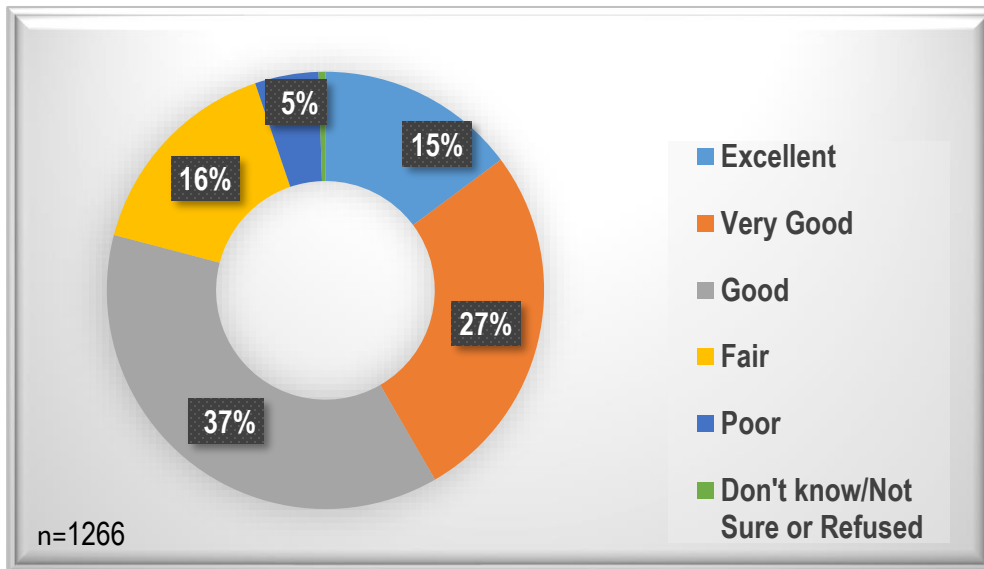
The findings to be presented reflect 2016 BRFSS data collected from a sample of adults in the U.S. Virgin Islands across both the St. Croix District and the St. Thomas-St. John District. Findings are organized into two major categories: health outcomes for adults and health determinants.

Health Outcomes for Adults

Health Status of Adults

A summary of the USVI sample population who participated in the 2016 BRFSS reveals that 62% were females. Forty-two percent of the participants self-reported that they were married while 23% reported that they have never been married. Of the 1266 participants who participated in the survey more than one-third of the respondents (37%) described their health as “Good” and 42% described their general health status as “Excellent” or “Very Good”, while only 5% self-reported being in “poor” general health (Figure 12). Less than 1% responded “Don’t know/Not sure” or refused to answer the question.

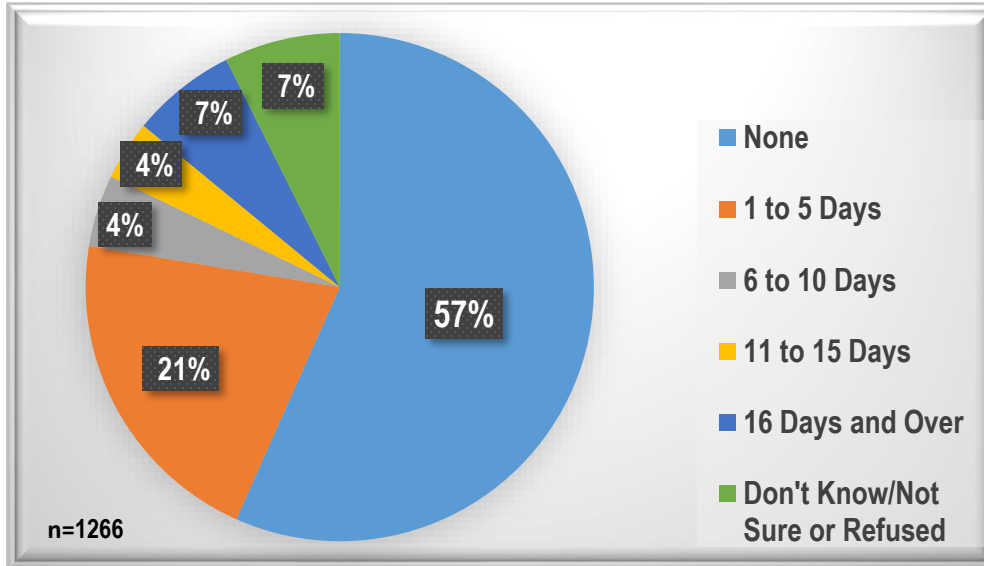
Figure 12. General Health Status



Health-Related Quality of Life

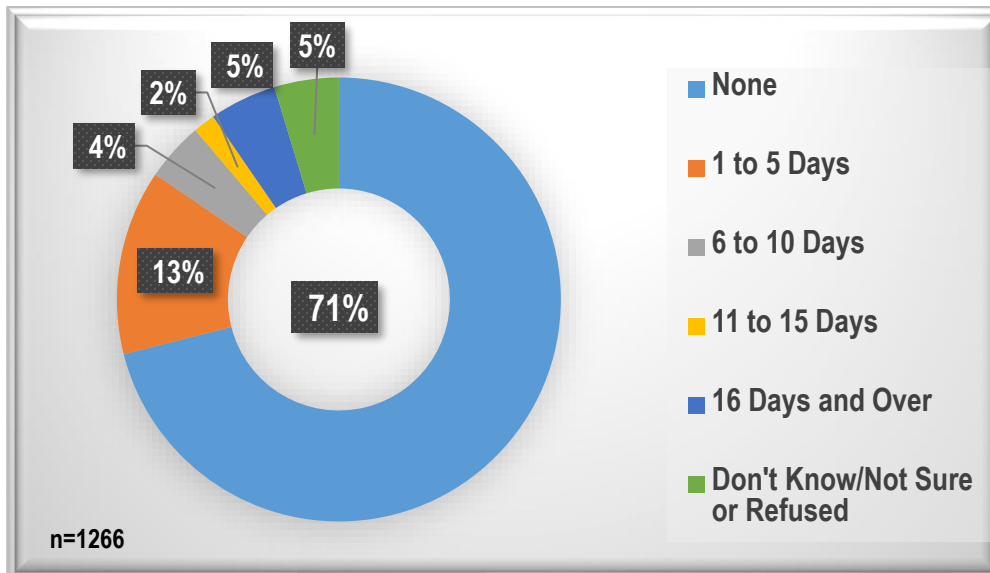
The findings from the BRFSS study reveal that 57% of participants reported that in the past 30 days, there were no days when they felt their physical health was not good. However, one in five reported having bad physical health approximately one to five days in the last month (Figure 13).

Figure 13. Number of Days of Bad Physical Health - Past 30 Days



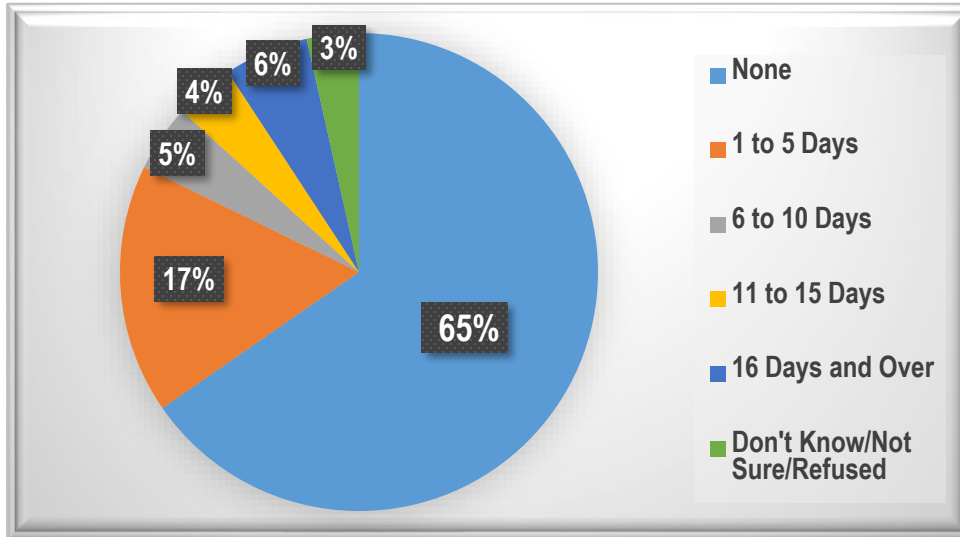
When asked about their mental health, 71% of participants reported experiencing no mental health issues, such as depression and stress, in the past 30 days (Figure 14).

Figure 14. Number of Days of Bad Mental Health - Past 30 Days



Further, the participants were asked how many days in the past 30 days their mental or physical health had restricted them from undertaking their usual activities, and almost two-thirds of the respondents (65%) indicated that there were no days when physical or mental health illness restricted their activities. However, one in ten self-reported 11 days or more, in the past 30 days when poor physical or mental health restricted their activities (Figure 15).

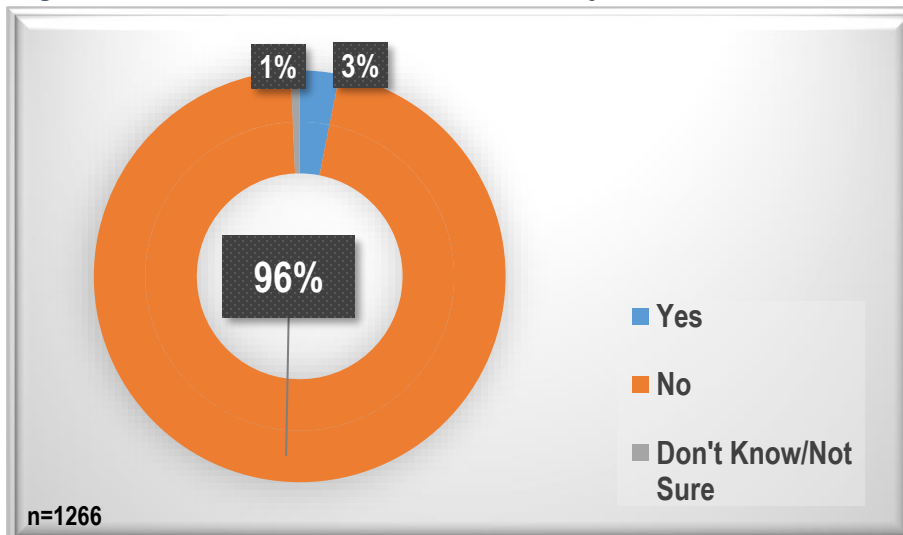
Figure 15. Number of Days Poor Mental or Physical Health Restricted Usual Activities



Health Status with Respect to Chronic Health Conditions

A heart attack, also called a myocardial infarction, happens when a part of the heart muscle does not get sufficient blood. Several health conditions, such as one's lifestyle, age and family history can increase the risk for heart disease and heart attack. These are called risk factors. About half of all Americans have at least one of the three key risk factors for heart disease: high blood pressure, high blood cholesterol, and smoking (CDC). Based on the BRFSS 2016 findings, three percent of the participants reported having been told they had a myocardial infarction (Figure 16).

Figure 16. Ever Told You had a Heart Attack/Myocardial Infarction



Diabetes is a chronic (long-lasting) health condition that affects how your body turns food into energy. In the last 20 years, the number of adults diagnosed with diabetes has more than doubled making diabetes the seventh leading cause of death in the United States and one in five of them do not know they have it. Because people presenting with diabetes may not notice any symptoms, it is important that they get their blood sugar tested to determine if they are at risk (CDC). In the U.S. Virgin Islands, almost seven in ten participants in the BRFSS have had tests for high blood sugar or diabetes within the past three years (Figure 17); and 17% have been told they have pre-diabetes (Figure 18). With prediabetes, blood sugar levels are higher than normal, but not high enough yet to be diagnosed as Type 2 diabetes (CDC).

Figure 17. Had a Test for High Blood Sugar or Diabetes in the Past Three Years

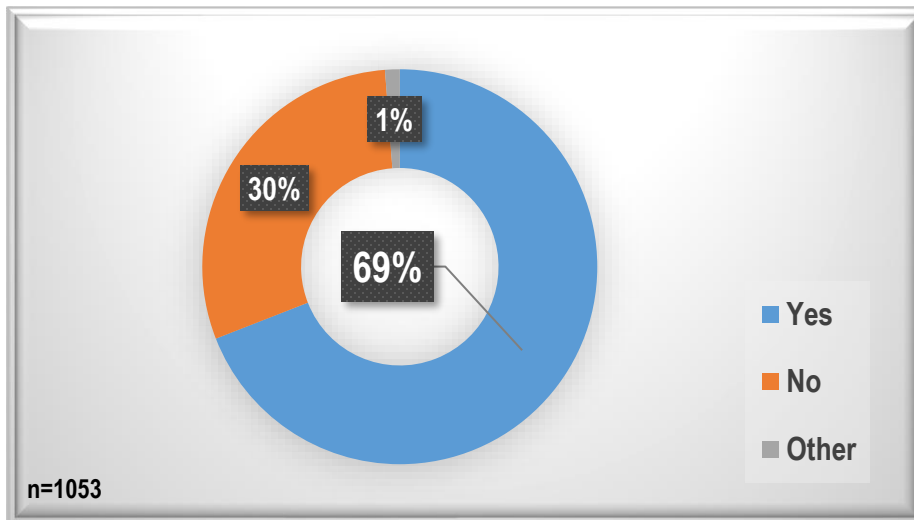
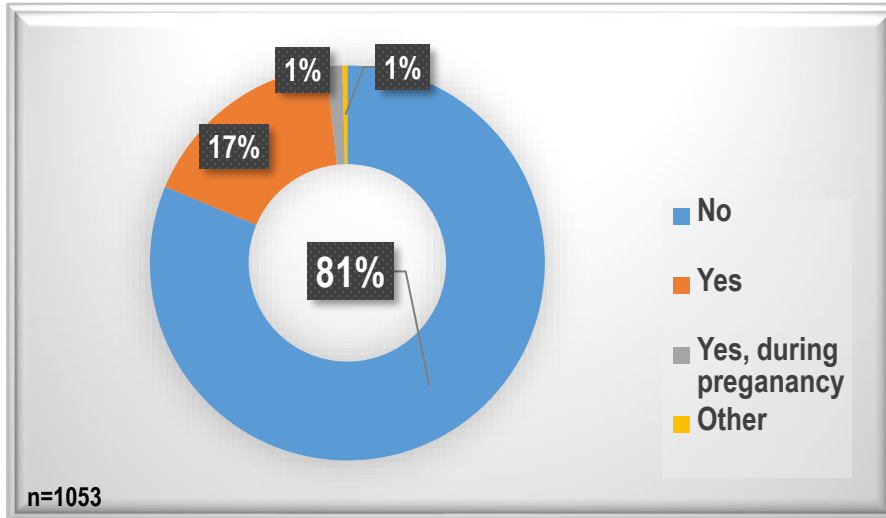


Figure 18. Ever been told you are Pre-diabetic



For other health conditions, 25% of respondents in the 2016 BRFSS survey reported having some form of arthritis (Figure 19), while fewer than 10% reported having ever been told they had asthma (Figure 20) and 5% reporting ever having been told they had a depressive disorder (Figure 21).

Figure 19. Ever been told you have some form of Arthritis

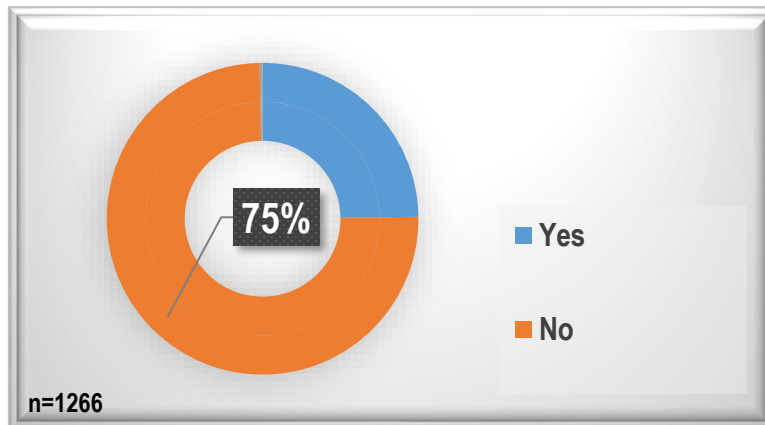


Figure 20. Ever been told you had Asthma

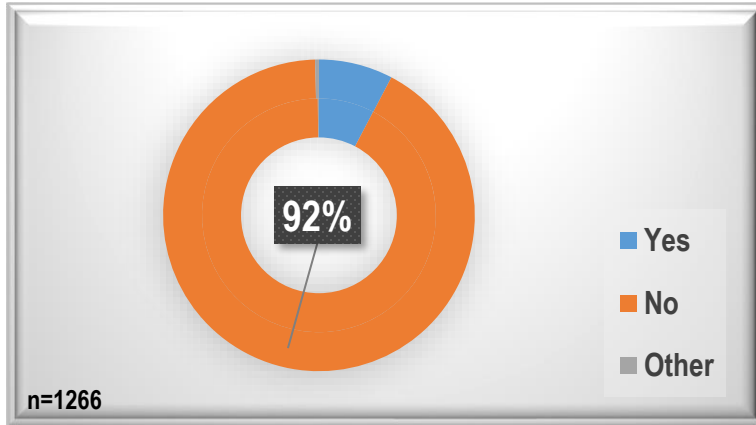
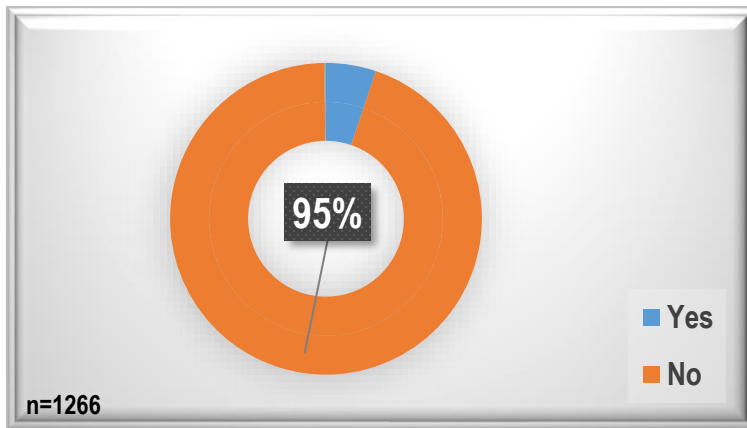


Figure 21. Ever been told you have a Depressive Disorder



Other Health Outcomes

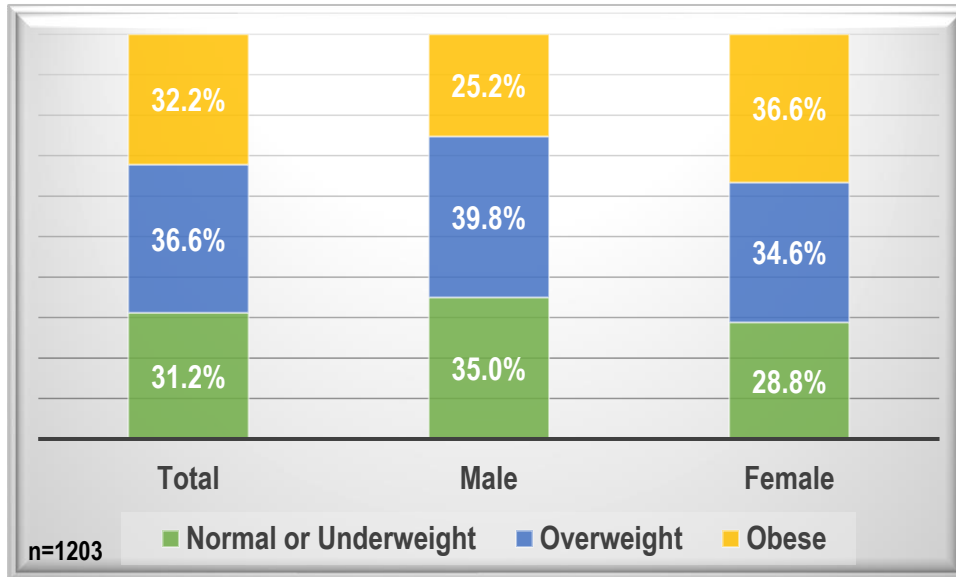
Overweight and Obesity

According to the [Centers for Disease Control and Prevention](#) (CDC) if your body mass index (BMI) is 18.5 to <25, it falls within the normal range, however if your BMI is 25.0 to <30, it falls within the overweight range, and if your BMI is 30.0 or higher, it falls within the obese range. Overweight and obesity have implication for several chronic illnesses and increases individuals' for poor health outcomes. BMI is calculated using a person's weight in kilograms divided by the square of the person's height in meters.

As can be observed from Figure 22, approximately 31% of participants in the 2016 BRFSS were classified as underweight or being normal weight, *while approximately 37% were classified as overweight; and just under one-third (32%) were classified as obese*. While these

percentages are for a Territorial sample, they are very similar to the proportion of adults in the 2015 BRFSS data collected for adults specifically in the STEEMCC catchment area, where approximately 69% of the respondents were identified as overweight or obese.

Figure 22. Body Mass Index by Sex

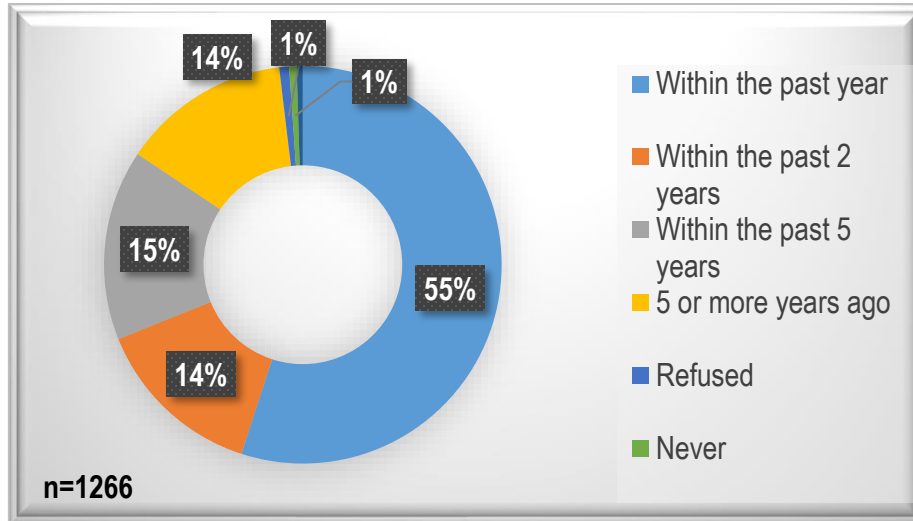


When considering weight status by sex, a review of Figure 22 reveals that *65% of male respondents could be classified as overweight or obese*, while *71% of female respondents could be classified as overweight or obese (emphasis added)*. While for male respondents a larger percentage fell into the overweight category, for female respondents, a larger percentage fell into the obese category. Again, these percentages are very similar to the results for the more targeted group in STEEMCC's catchment area, based on data collected in 2015 (Michael & Valmond, 2016). These findings reveal that overweight and obesity remain health outcomes of concern for the adult population in the St. Thomas-St. John District, and by extrapolation, likely also of concern for the adult population in STEEMCC's catchment area.

According to the WHO, oral health also has an effect on other chronic diseases and oral diseases are the most common of the chronic diseases and are important public health problems because of their prevalence, their impact on individuals and society, and the expense of their treatment. The failure to tackle the social and material determinants of oral health results in millions who suffer intractable toothache and poor quality of life and end up with

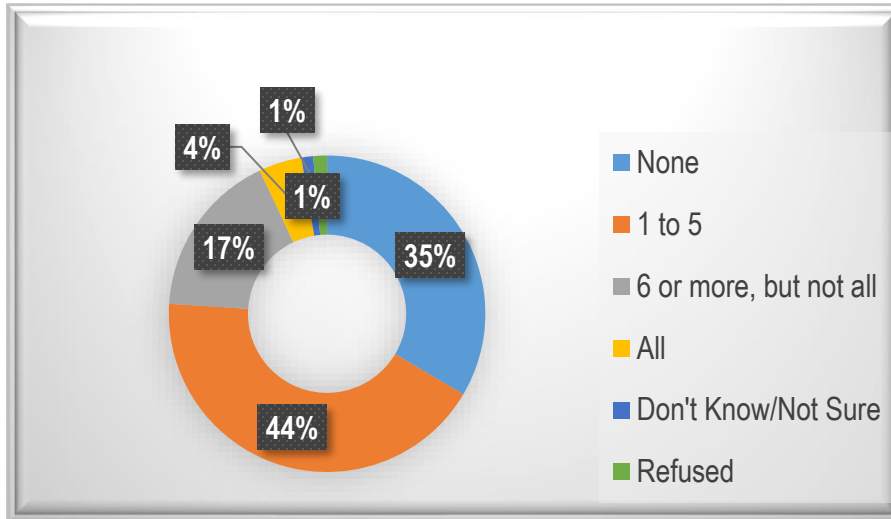
few teeth (Sheiham, 2005). The 2016 BRFSS data for the USVI show that more than one half of the respondents visited a dentist in the past 12 months of the survey date and an additional 14% last visited the dentist more than one year but less than two years ago (Figure 23).

Figure 23. Last Visited a Dentist or Dental Clinic



Notwithstanding the self-reported frequent annual dental visits, only 35% of respondents indicated that they have all their permanent teeth intact while four percent reported losing all their permanent teeth. More than two-fifths of participants (44%) reported having at least one tooth and up to five permanent teeth removed due to tooth decay or gum disease; and an additional 17% reported having six or more, but not all, their teeth removed. (Figure 24).

Figure 24. Number of Permanent Teeth Removed



Health Determinants for Adults

In addition to considering health outcomes, it is important that a CHNA focuses on health determinants, which, according to the CDC (2013) fall into four major categories: healthcare (access and quality); health behaviors; demographics and social environment; and the physical environment. Information on each of these four categories is highlighted below.

Healthcare Access and Quality

Coverage for healthcare and access to health insurance, prepaid plans or governmental plans is of paramount importance. A majority of the participants (81%) acknowledged having access to coverage for healthcare (Figure 25); just a little more than one half (51%) of the respondents reported that Medicare provides health insurance coverage for them (Figure 26)

Figure 25. Have Access to Insurance/Healthcare Coverage

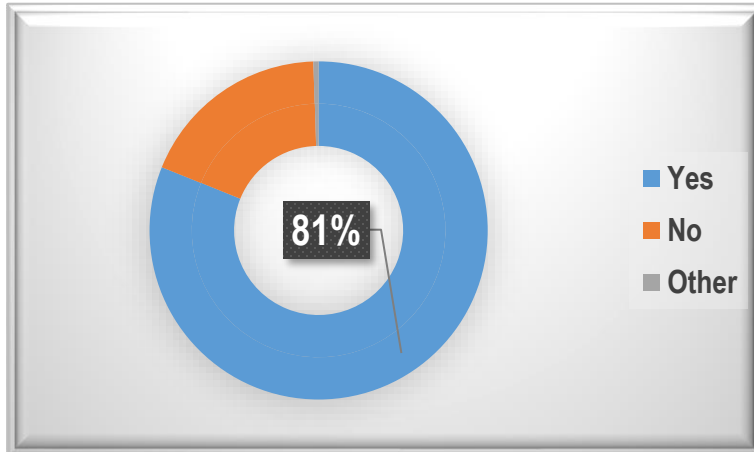
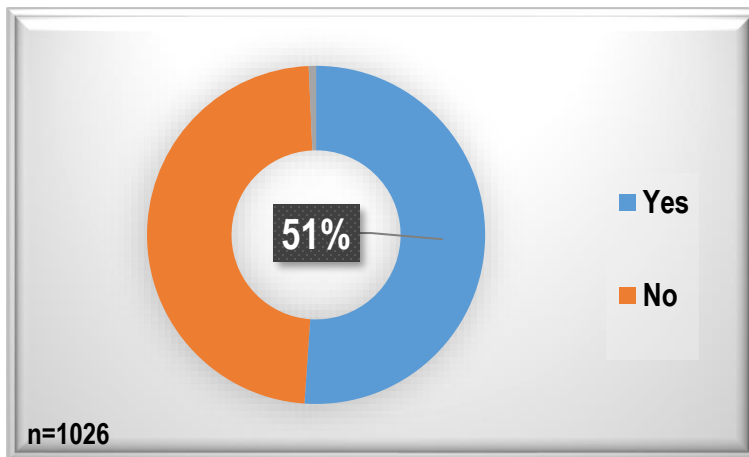


Figure 26. Insured by Medicare?



According to [Healthy People 2020](#) access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity. For the 2016 BRFSS, Figure 27 shows that nearly one in four Virgin Islanders reported having no identified health care provider, while 62% indicated that they have access to one personal doctor or primary care physician. Further, 74% of respondents shared that they visited the doctor for a routine checkup within the past year and one in ten admitted to visiting their primary healthcare provider for a checkup within the past 2 years (more than 1 year but less than 2 years ago) (Figure 28).

Figure 27. Do you have a personal doctor/usual source of care?

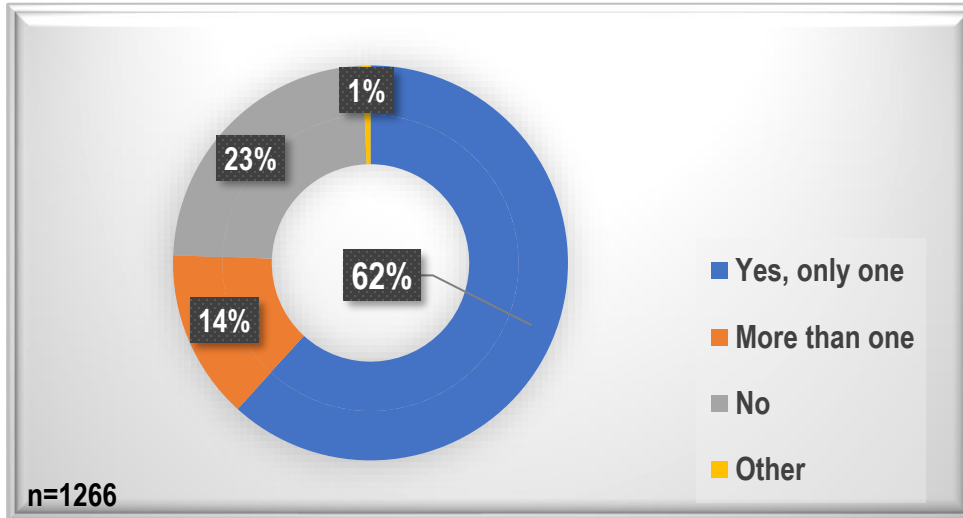
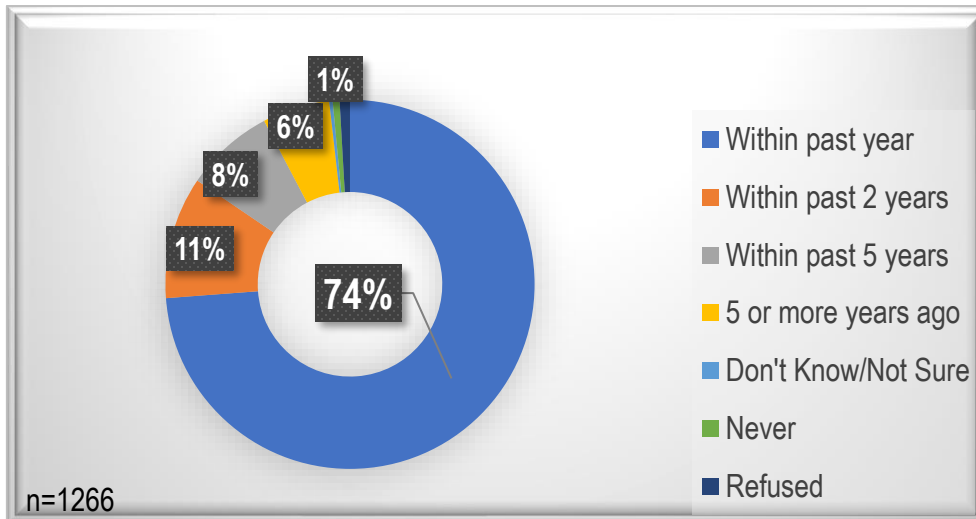


Figure 28. Last Doctor's Visit for a Routine Checkup



Healthcare Costs/Provider Rates

According to a patient survey conducted by the Physicians Foundation in 2016, patients are increasingly fearful that they will not be able to afford necessary care as medical costs continue to grow (*cited in* Branning & Vater, 2016). The BRFSS found that 16% of the respondents reported that cost caused them to delay needed care and visits to the doctor (Figure 29). In a similar vein, when participants were asked if there was a time in the past 12 months when they did not take medication due to cost, nine percent of the participants responded in the affirmative (Figure 30).

Figure 29. Deferment of Medical Visit because of Cost

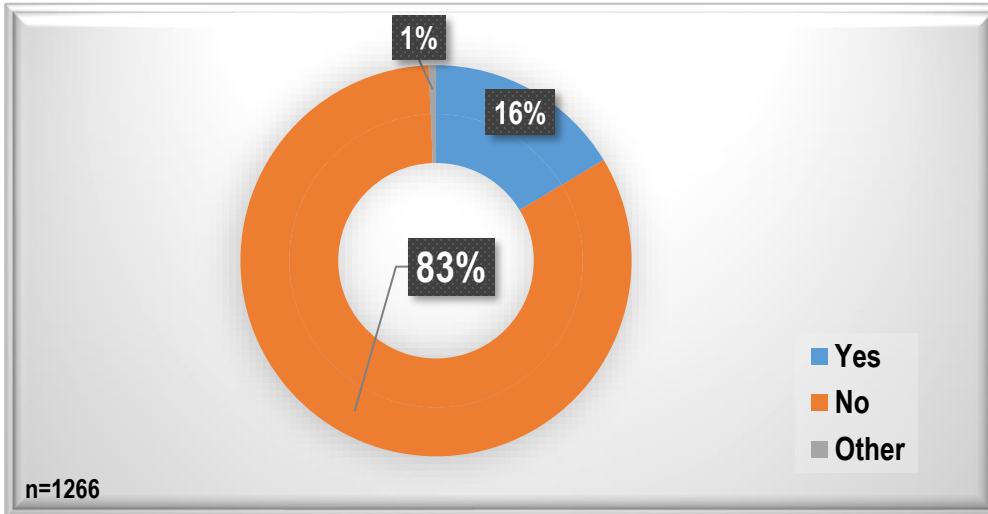
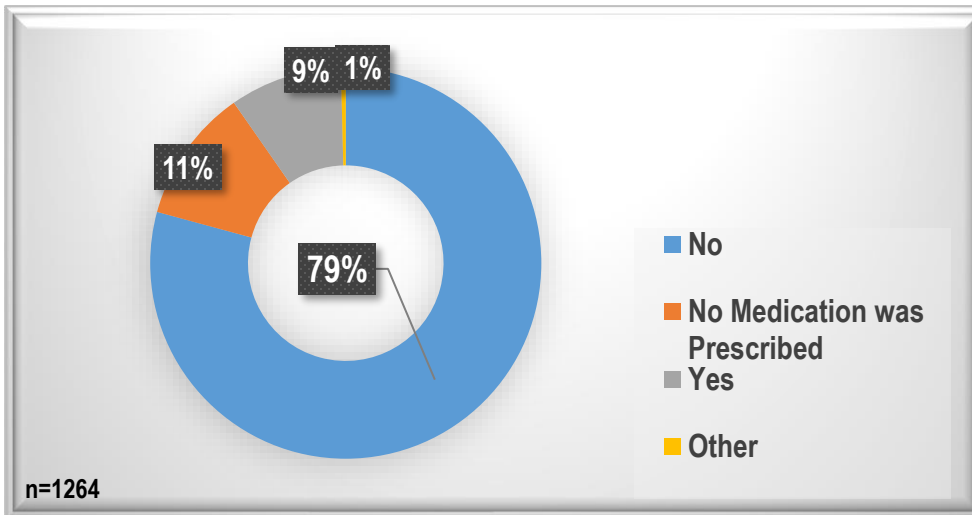


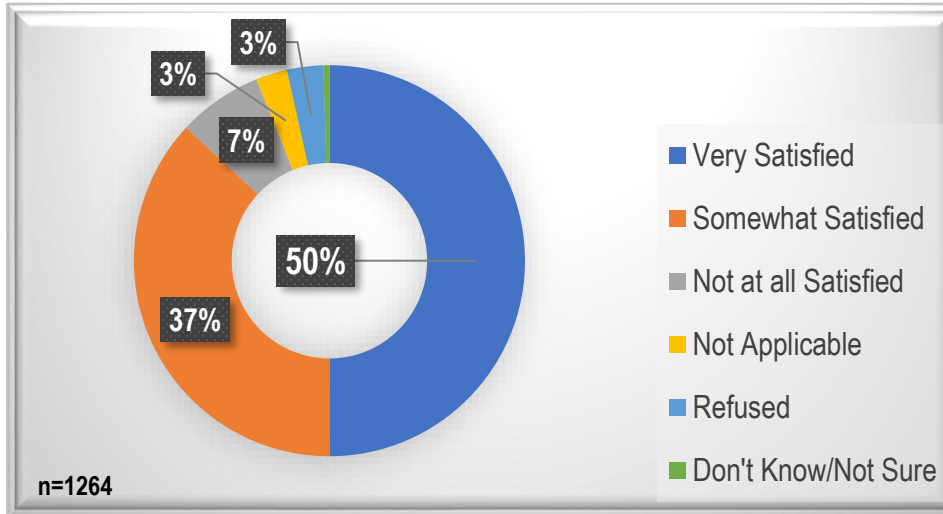
Figure 30. In past 12 months, deferred taking prescription medication because of cost



Client Satisfaction

Five of every ten respondents reported that the health care received is very satisfactory and an additional 37% indicated that the care they receive is “somewhat” satisfying to them (Figure 31).

Figure 31. Level of Satisfaction with Healthcare Received

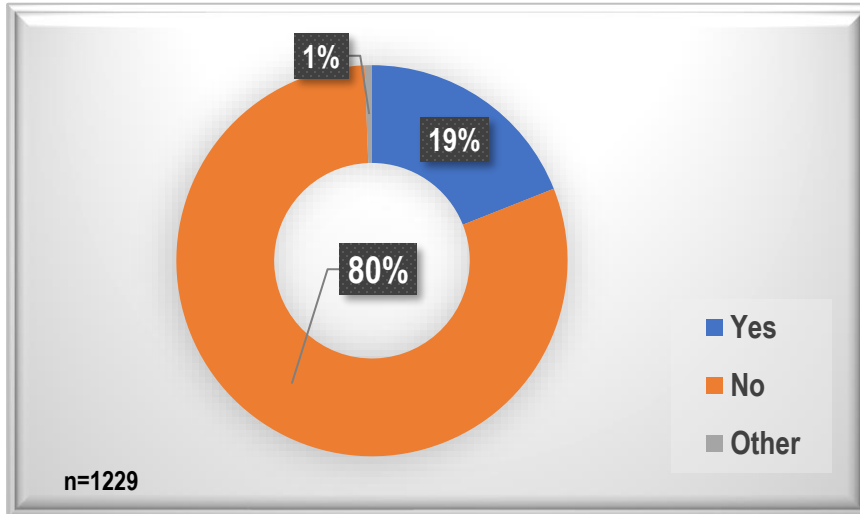


Health Behaviors

According to the NIH's National Institute on Alcohol Abuse and Alcoholism's (NIAAA's) alcohol and tobacco use may lead to major health risks when used alone and together. These behaviors can result in traumatic death and injury. Alcohol is associated with chronic liver disease, cancers, and cardiovascular disease. Smoking is associated with lung disease, cancers, and cardiovascular disease. Significantly, the NIAAA's reports that evidence suggests that the substances involved with these behaviors might be especially dangerous when they are used together, as alcohol and tobacco combined dramatically increase the risk of certain cancers.

The following four graphics examine substance abuse/ alcohol and tobacco use in the USVI. The BRFSS results show that while 80% of respondents reported to have not smoked 100 cigarettes in their lifetime, almost one in five indicated that they have smoked as least 100 cigarettes in their lifetime (Figure 32).

Figure 32. Smoked at least 100 Cigarettes in Lifetime



When the participants were asked how many days in the past 30 days, they had at least one alcoholic beverage, more than one half of the respondents (55%) reported having no alcoholic drinks in the period (Figure 33). Forty percent of the respondents reported having 2 – 3 drinks per day in the past 30 days (Figure 34). Further questioning regarding how many drinks are consumed in a single sitting in the past 30 days resulted in 30% of respondents indicating that they consume only one drink in a single sitting. However, 37% reported consuming between three to six drinks in a single sitting in the past 30 days (Figure 35).

Figure 33. Days in the past 30 days had at least one alcoholic beverage

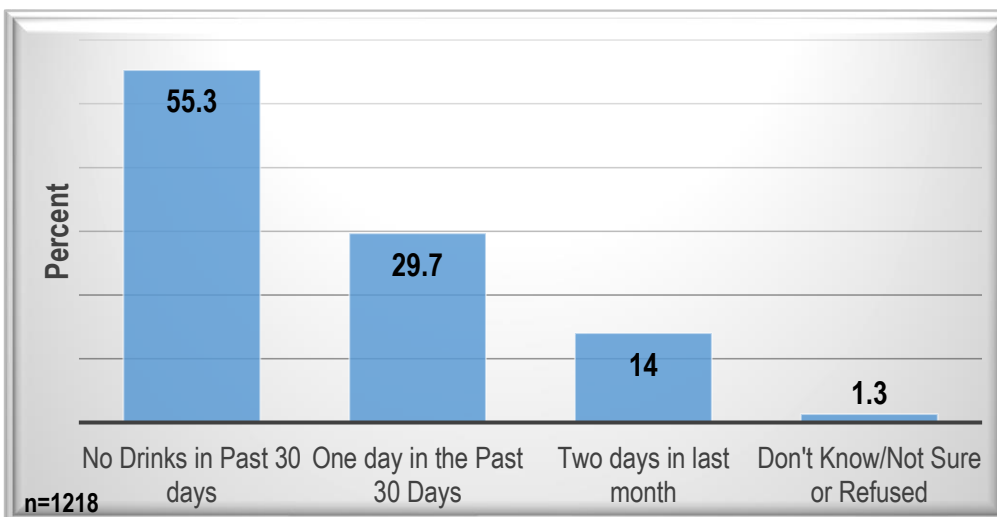


Figure 34. Average number of alcoholic drinks per day in last 30 days

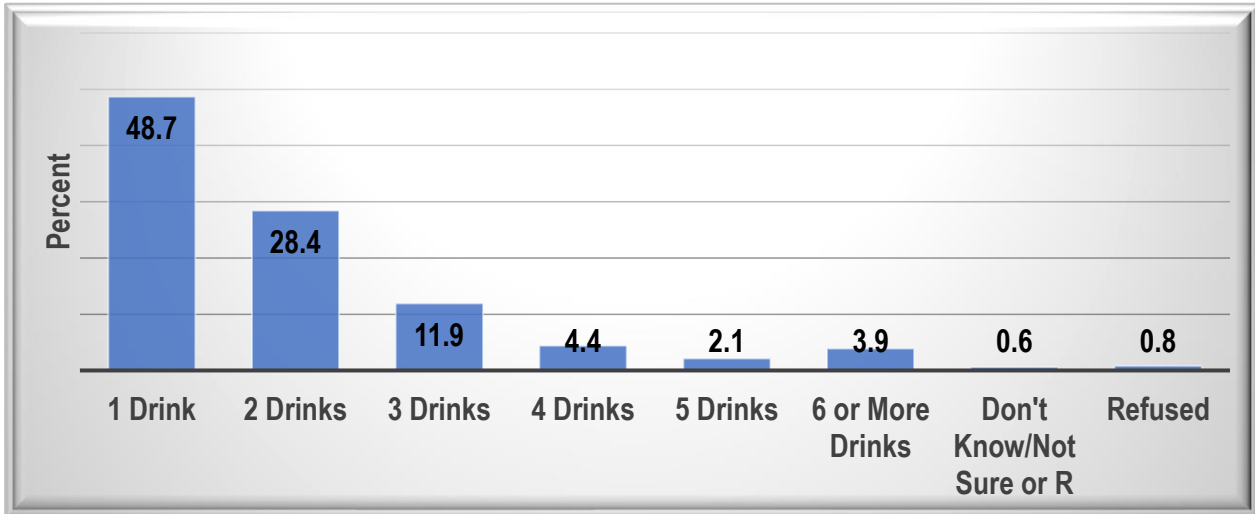


Figure 35. Number of drinks on a single occasion - past 30 days

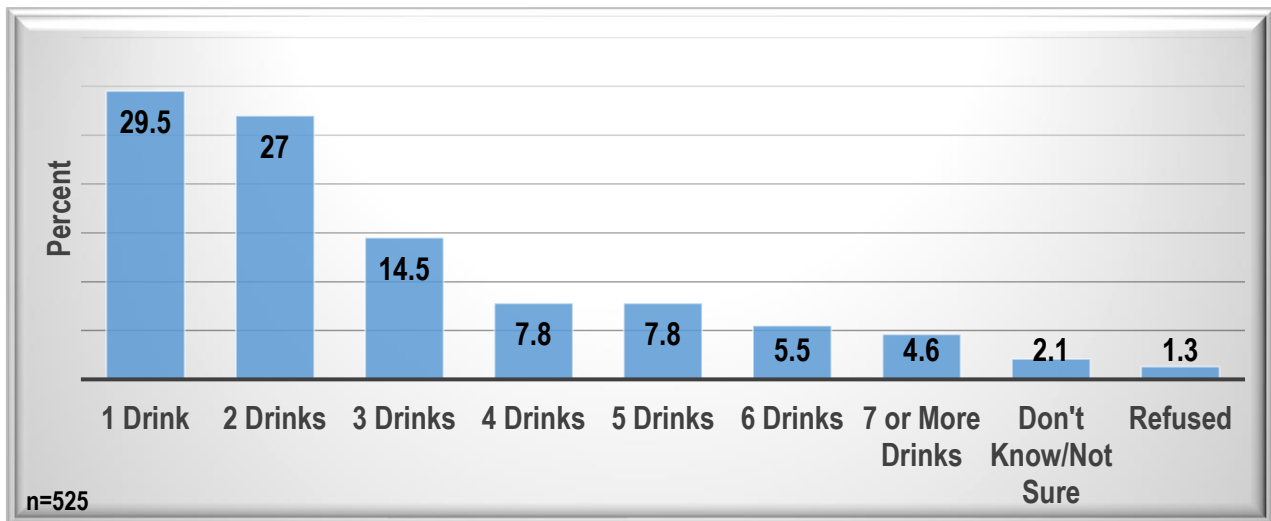
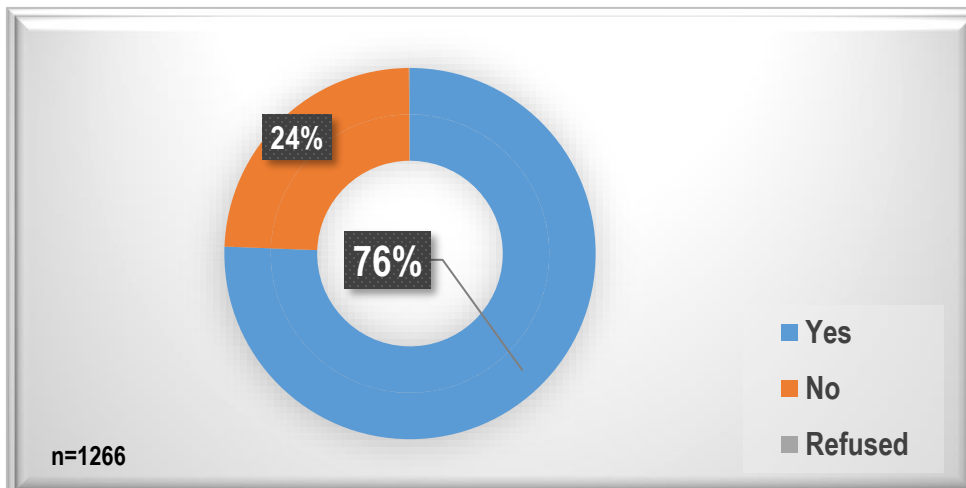


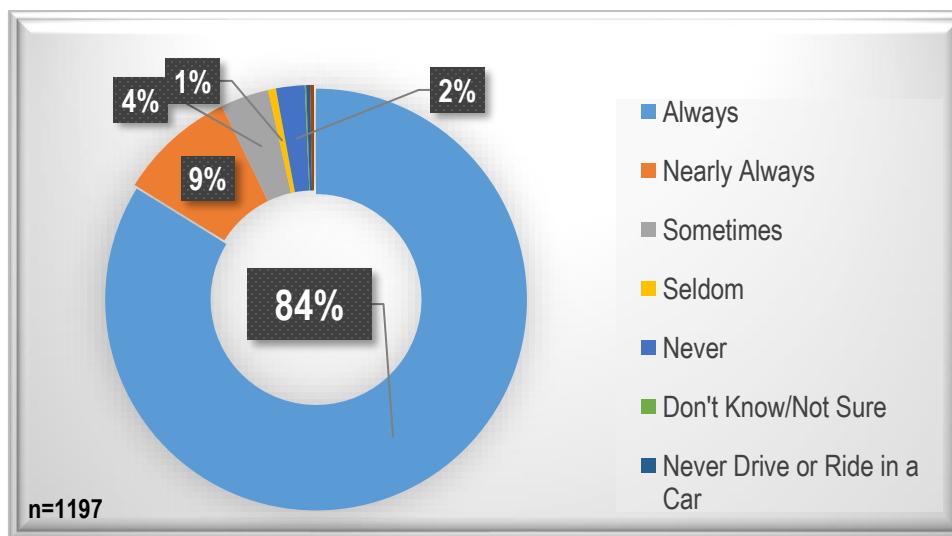
Figure 36. Participated in any physical activities for exercise in past 30 days



Seventy-six percent (76%) of participants reported engaging in physical activities, beyond their regular job during the past month (Figure 36). A smaller percentage of participants (24%) reported that they did not participate in any physical activity or exercise in the past month.

The use of seatbelts, when driving or riding in a car, is routine in the USVI. For the 2016 BRFSS, 93% of respondents reported that they “always” or “nearly always” wear a seatbelt (Figure 37).

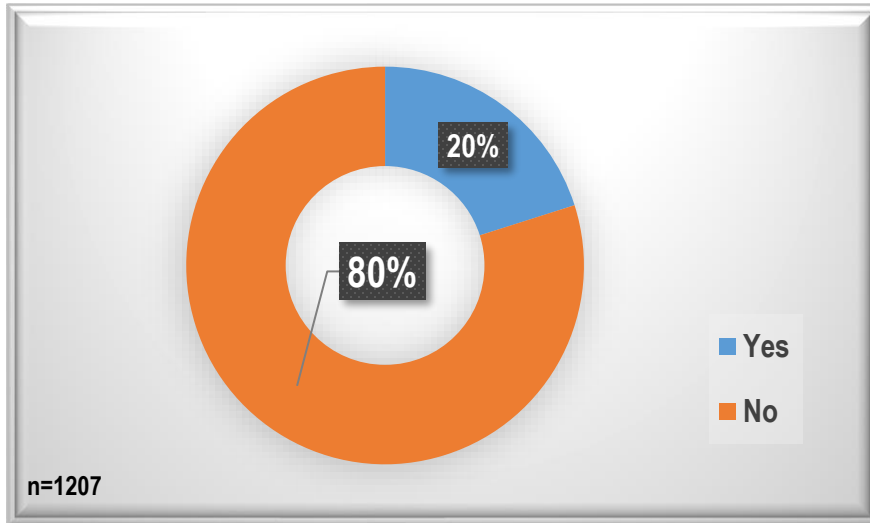
Figure 37. Use a seatbelt when riding or driving in a car



Screenings and Immunizations

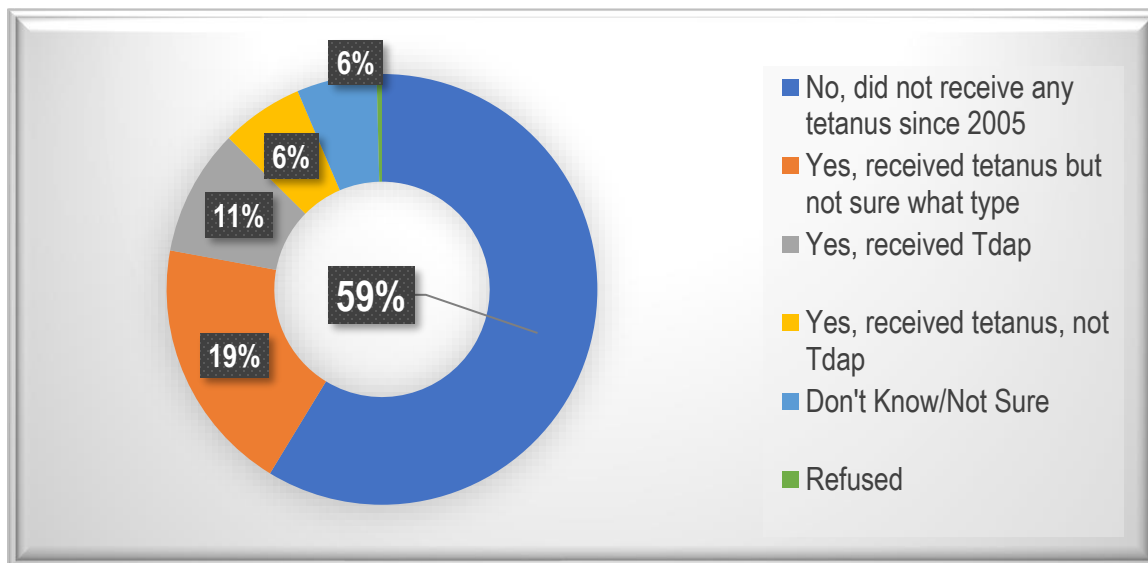
Data on health screenings and immunization behaviors of members of a community provide important information on proactive primary health practices. As such, documenting and understanding the behavior of community members in this area provide a basis for understanding health determinants.

Figure 38. Had the flu shot or spray in the past 12 months



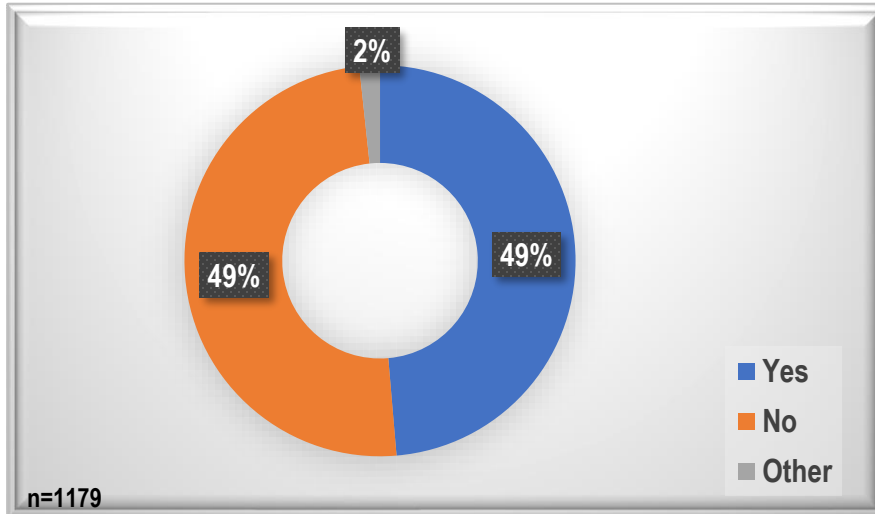
Eight of every ten participants reported that they *had not* taken the flu shot or flu vaccine in the past 12 months (Figure 38), while 28% had gotten tetanus shot but not a Tdap vaccine, according to the BFRSS 2016 survey data (Figure 39).

Figure 39. Ever had a Tetanus shot or Tdap vaccine



Health screenings are used to detect potential health disorders or diseases. Preventive health screening should be considered one of the most important health care strategies to facilitate early diagnosis and treatment, improve quality of life, and prevent premature death. Based on the findings, less than one-half of the respondents (49%) have ever been tested for HIV (Figure 40).

Figure 40. Ever been tested for HIV



Cancer screening

With regards to colon cancer screening, the 2016 BRFSS found that only 56% of Virgin Islanders have ever had a sigmoidoscopy/colonoscopy (Figure 41); and for breast cancer screening 81% of females 40 and older reported ever having a mammogram (Figure 42). For other health screenings such as Pap test, the findings show that nine of every ten female respondents shared that they have had a Pap test (Figure 43); and seven in ten men over age 40 reported ever having a PSA test (Figure 44).

Figure 41. Ever had a Sigmoidoscopy/Colonoscopy

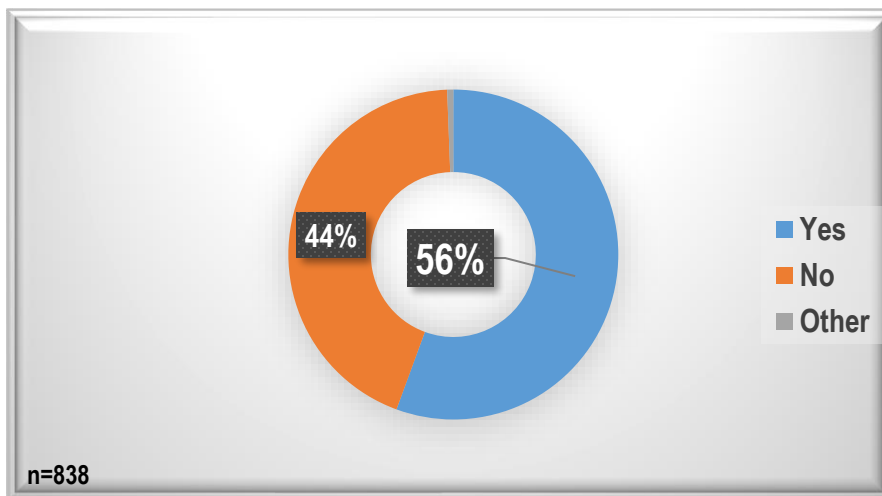


Figure 42. Ever had a Mammogram

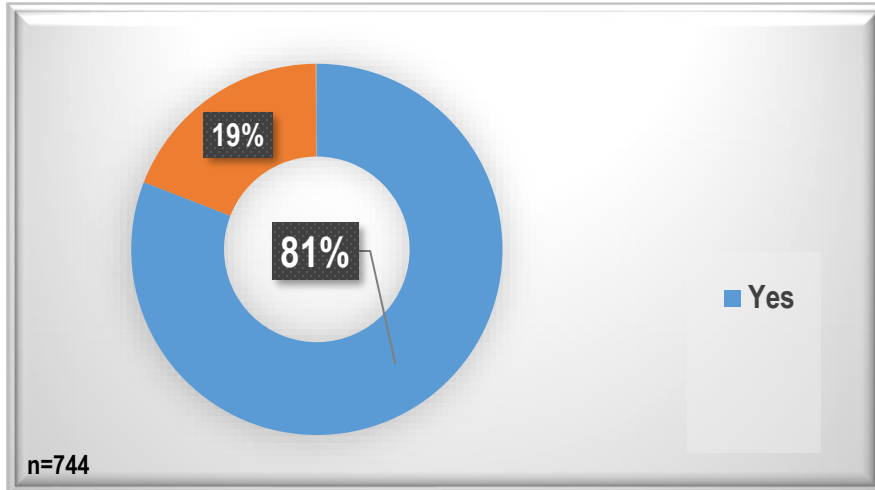


Figure 43. Ever had a Pap Test

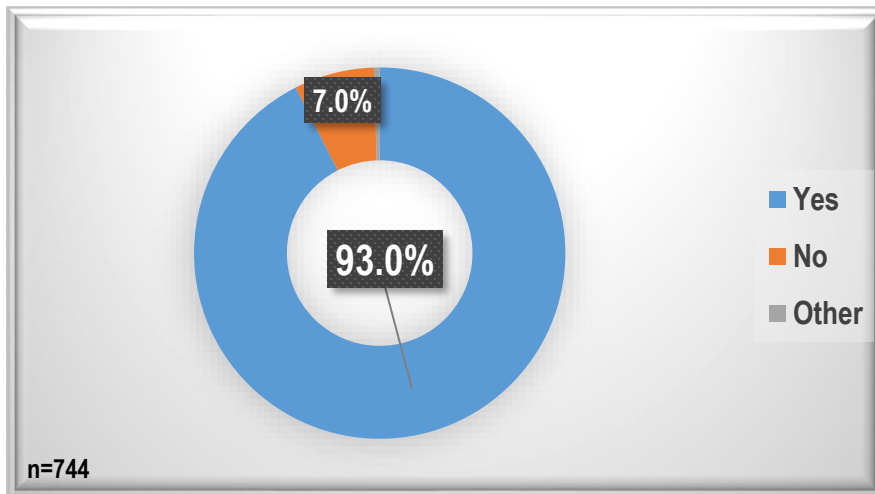
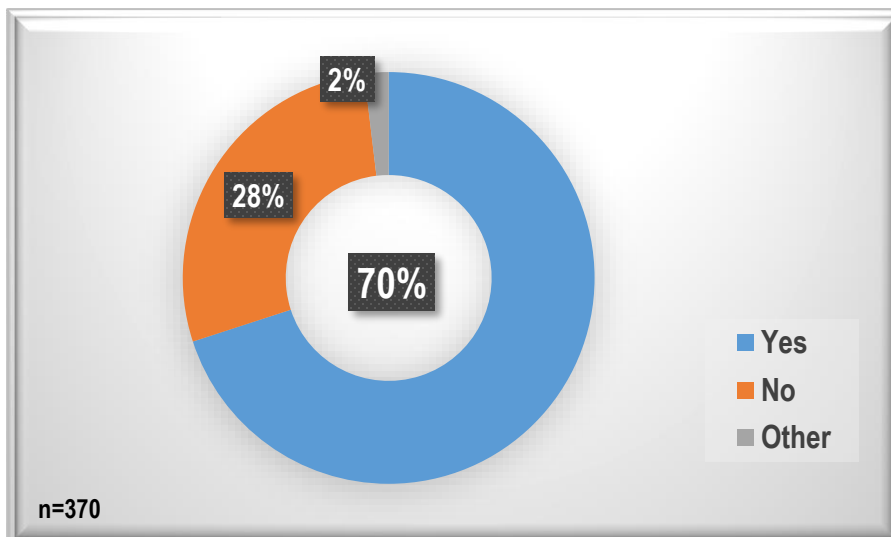


Figure 44. Ever had a PSA Test

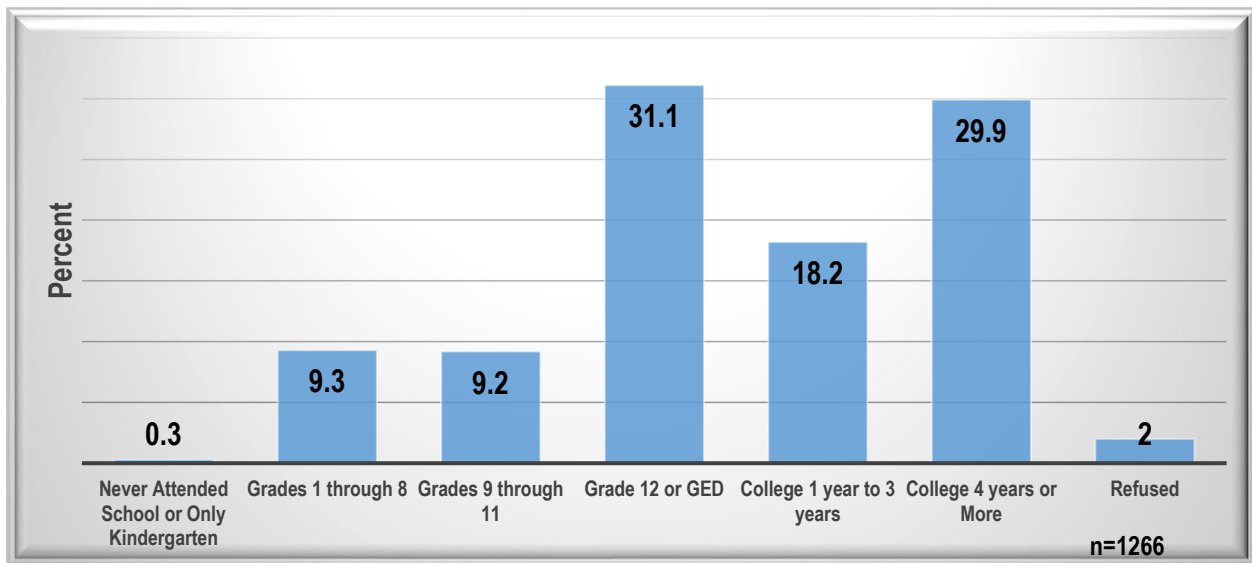


Demographics and Social Environment

USVI residents who participated in the 2016 BRFSS ranged in age from 18 to 80, with a mean age of 56.38 (SD=15.68) and a median age of 59. While 32.2% of respondents were 50 or younger, 35.6% were 65 or older, and only 9% were 30 or younger.

Educational attainment

Figure 45. Highest Educational Level Attained



Of BRFSS 2016 survey participants, approximately 19% had not completed high school, while approximately 30% had completed four or more years of college. For 31%, their highest educational level was a high school diploma or GED certificate.

Employment Status and Household Income

While slightly more than a third of the participants in the USVI 2016 BRFSS survey were wage earners (37%), almost one in three, or 29% were retirees (Figure 46). Of the remaining one-third or participants, approximately 13% reported being self-employed, while 5% reported not being able to work.

Figure 46. Employment Status

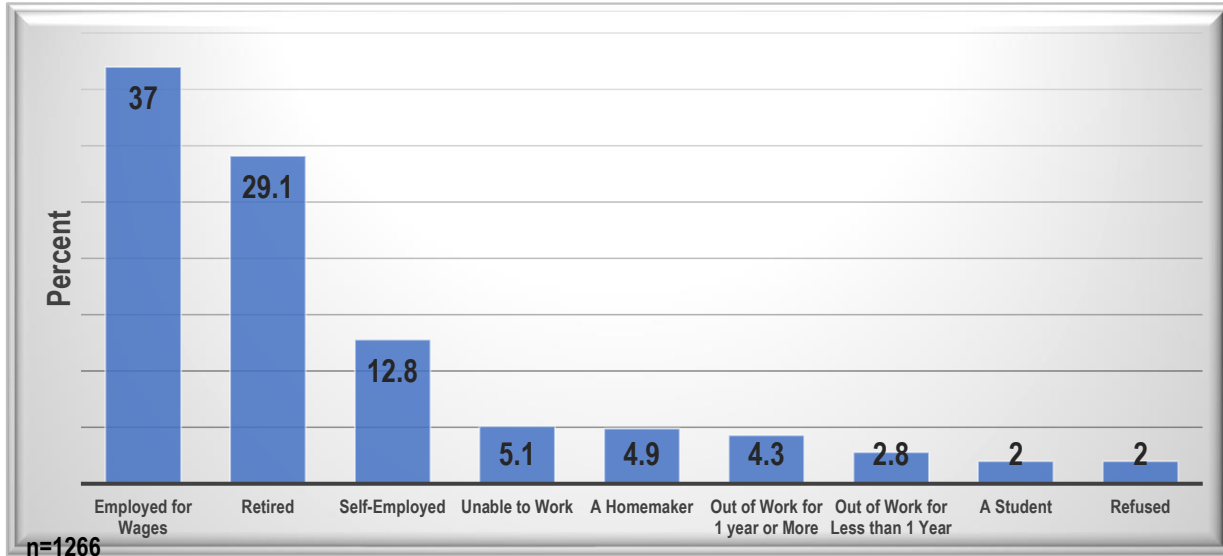
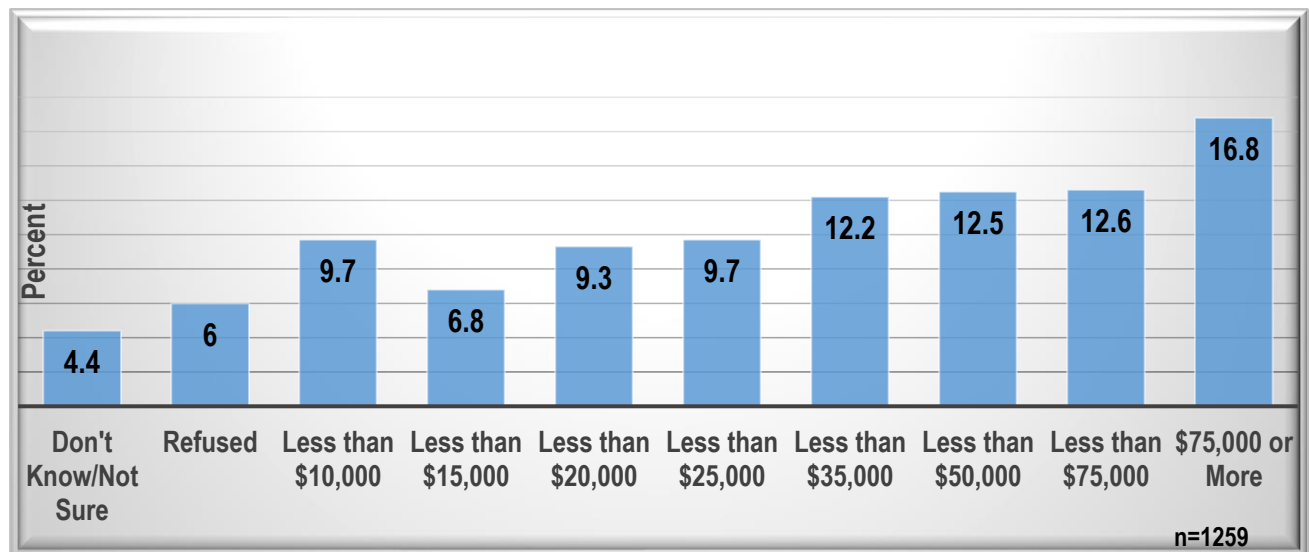


Figure 47 captures reported with annual household incomes for USVI participants in the 2016 BRFSS survey. Of note is that over 40% of respondents report earning less than \$25,000 annually and over 50% earn less than \$35,000. Less than one-third of respondents reported earning \$50,000 or more annually.

Figure 47. Annual Household Income



Both the findings related to highest educational level and employment status seem to be reflected in the overall annual household income reported. As social determinants of health, where residents of the St. Thomas-St. John district fall on these indicators is noteworthy.

YRBS 2017

In this section of the Needs Assessment, findings from the 2017 YRBS administered at all junior and senior high schools across the Territory are presented. Because of the focus of this CHNA, results presented are only for junior and senior high school students in the St. Thomas-St. John District. The high school survey comprised 99 items, including 10 Territory-specific items and the middle school survey comprised 70 items, including 10 Territory-specific items. Because of the extensive nature of the survey and the data, only select health risk behavior findings are presented.

Health Behaviors and Outcomes for Adolescents

Health Behaviors

Health behaviors during adolescence have been shown to carry through to adulthood (Frech, 2012). Therefore, it is important to understand the extent to which adolescents in the St. Thomas-St. John District are engaged in certain health behaviors to appropriately determine appropriate interventions to decrease risky behaviors, reinforce positive behaviors, and help improve health outcomes in the short and long term.

Tobacco Use/Smoking

Figure 48. Ever tried cigarette smoking?

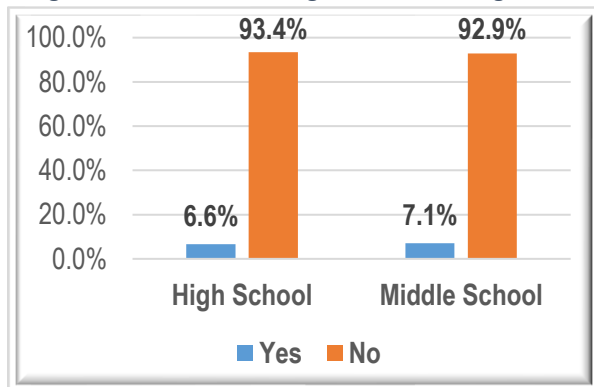
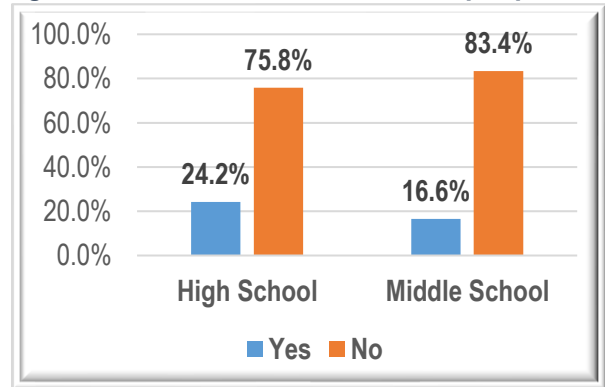


Figure 49. Ever used an electronic vapor product?



With respect to tobacco use and smoking, while 93% of USVI high school students in the St. Thomas-St. John District reported never having tried cigarette smoking, approximately

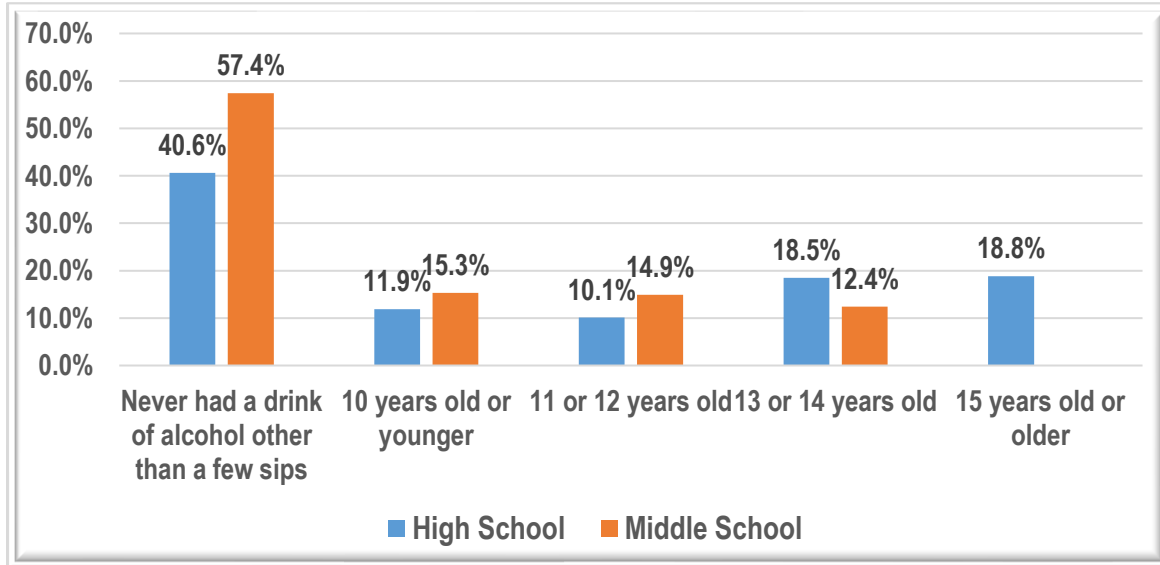
one in four (24%) indicated having used electronic vapor products. For junior high school and middle school students in the St. Thomas-St. John District similar results can be observed with respect to tobacco/cigarette use and the use of electronic vapor products (Figures 48 and 49, respectively).

Alcohol and Other Drug Use

Though the 2017 YRBS questionnaire posed several questions regarding alcohol and other drug use, findings will be presented for two key questions for senior high and junior high school students. First, students were asked to share whether they had had a drink of alcohol (middle school) or the number of days, in their lifetime, that they had had at least one drink of alcohol (senior high school). For senior high school students in the St. Thomas-St. John District, just over two-fifths (42%) responded that they had never had a drink of alcohol, while close to one-fourth (24%) reported that they had had at least one drink 1-2 days in their lifetime. Fewer than 20% reported having had at least one drink of alcohol 10 or more days in their lifetime. For middle school students 58% reported that they had never had a drink of alcohol.

Second, for students who indicated that they had consumed alcohol, they responded to a question regarding their age when they had their first drink of alcohol (other than a few sips). As can be observed from Figure 50, a higher proportion of senior high school students reported having had their first drink at an older age than middle school students. For the middle school students who report consuming alcohol, about the same proportion indicated having had their first drink at age 10 or younger (15.3%) than reported having had their first drink at 11 or 12 years of age (14.9%). For senior high school students, 18.5% and 18.8% reported having had their first drink at age 13 or 14 and 15 years or older, respectively.

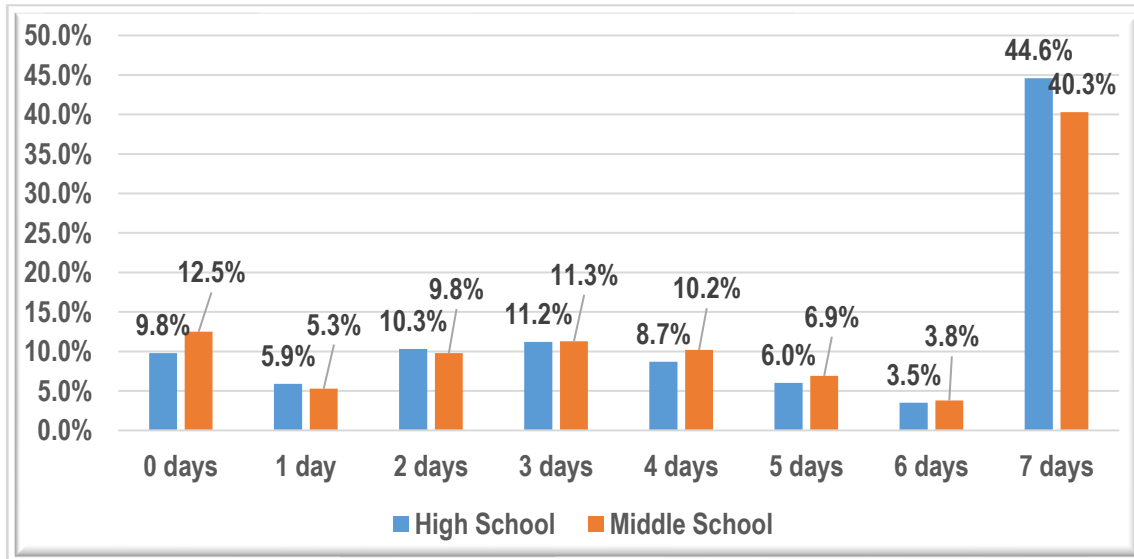
Figure 50. Age at which you had your first drink of alcohol



Dietary Behaviors

Viewed as the most important meal of the day, students in both middle school and the date of the survey) that they had eaten breakfast. Figure 51 captures students' responses, which indicate that, for both middle and senior high school students over 50% reported eating breakfast at least five of the past seven days. Yet, for students, just over one-fourth (27.6% of middle school students and 26% of senior high school students) indicated that they ate breakfast two days or less in the past seven days, signaling that the importance of breakfast needs to be reinforced with adolescents.

Figure 51. Number of days students reported that they ate breakfast 'in the past seven days'



Senior high school students responded to other questions around dietary behaviors.

Two behaviors that are highlighted here are related to the number of times they ate fruit 'in the past seven days' and the number of times they ate a green salad 'in the past seven days'.

Figure 52 shows that these students do not eat fruit regularly, with about one in five (22.8%) indicating that they had not eaten fruit in the past seven days, and approximately one in five (19.6%) indicating that they had eaten fruit at least two or more times a day over the past seven days. Students consumed significantly less green salad, with over half (55.6%) indicating not having eaten a green salad in the past seven days, and just 12% reported having eaten a green salad once a day or more during the past seven days (Figure 53).

Figure 52. Number of times ate fruit in past 7 days

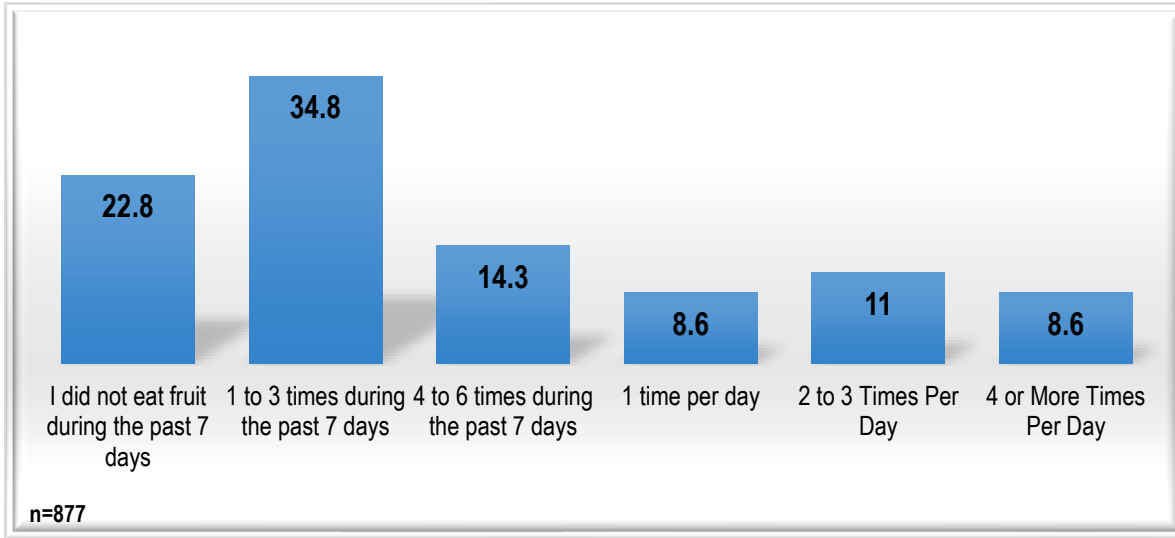
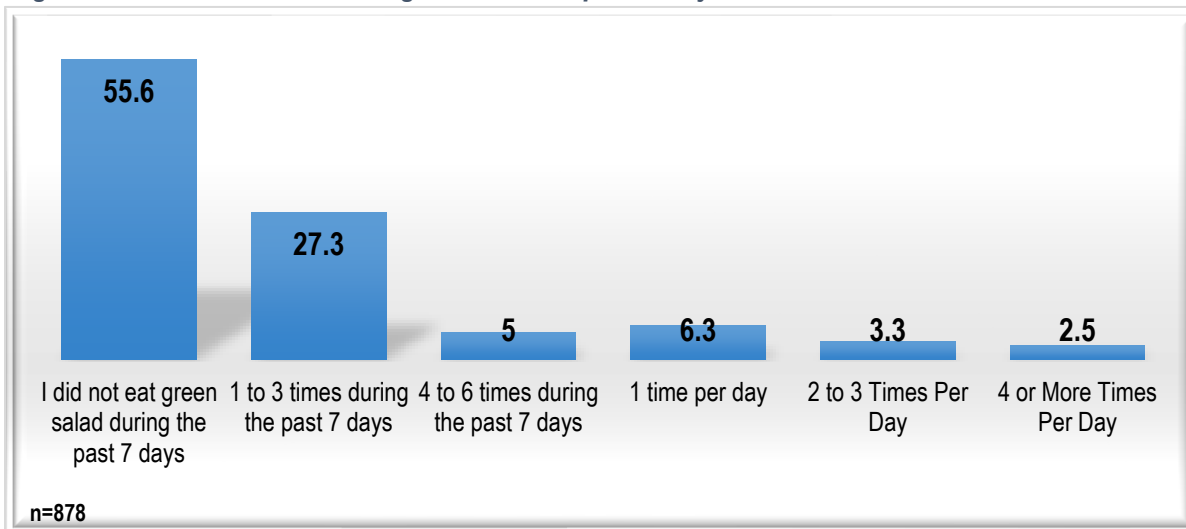


Figure 53. Number of times ate green salad in past 7 days

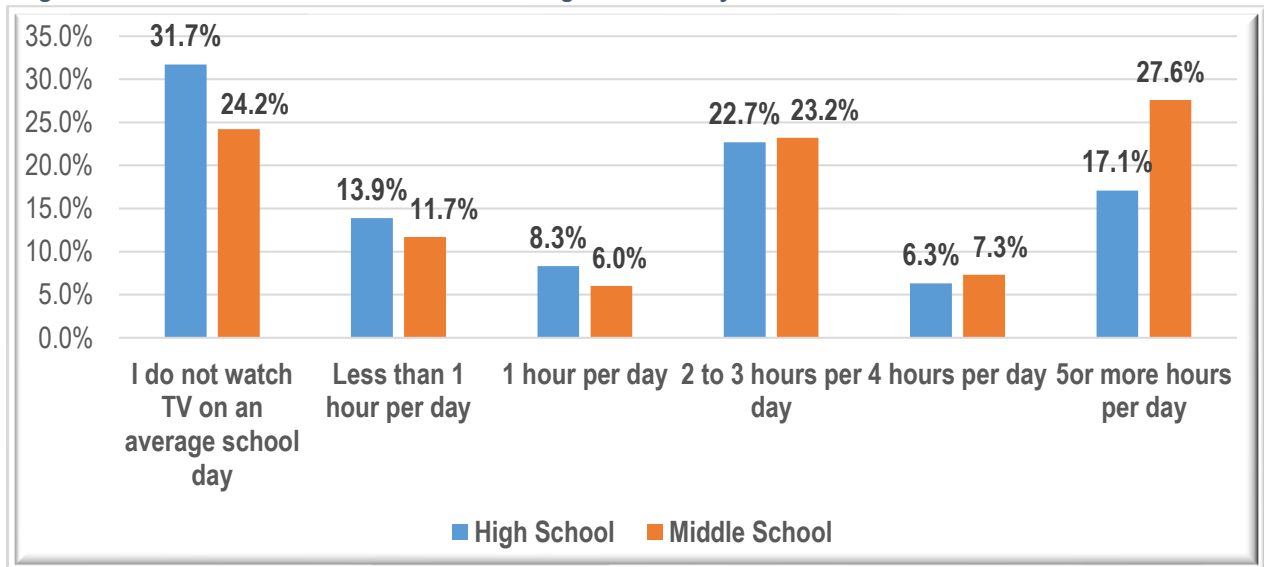


Sedentary Behavior

Sedentary behavior, often measured based on number of hours of screen time (television and/or computer games) has been implicated in increased obesity, poor sleep habits, and increased risk for attention problems, anxiety and depression, particularly in adolescents (Strasburger, et. al, 2010). Figure 54 and Figure 55 capture students responses to number of hours of television watched on an average school day and number of hours spent playing video/computer games on an average school day, respectively. While close to one in three senior high school students reported watching no TV on an average school day,

approximately one-fifth indicated watching TV for 2-3 hours and the same proportion reported watching TV for 4 or more hours on an average school day (Figure 54). For middle school students, more than one in four (27.6%) reported watching TV five or more hours on an average school day, while just under one-fourth (23.2%) reported watching 2-3 hours of TV on a typical school day. Yet, 24.2% of middle school students indicated that they watched no TV on an average school day (Figure 54)

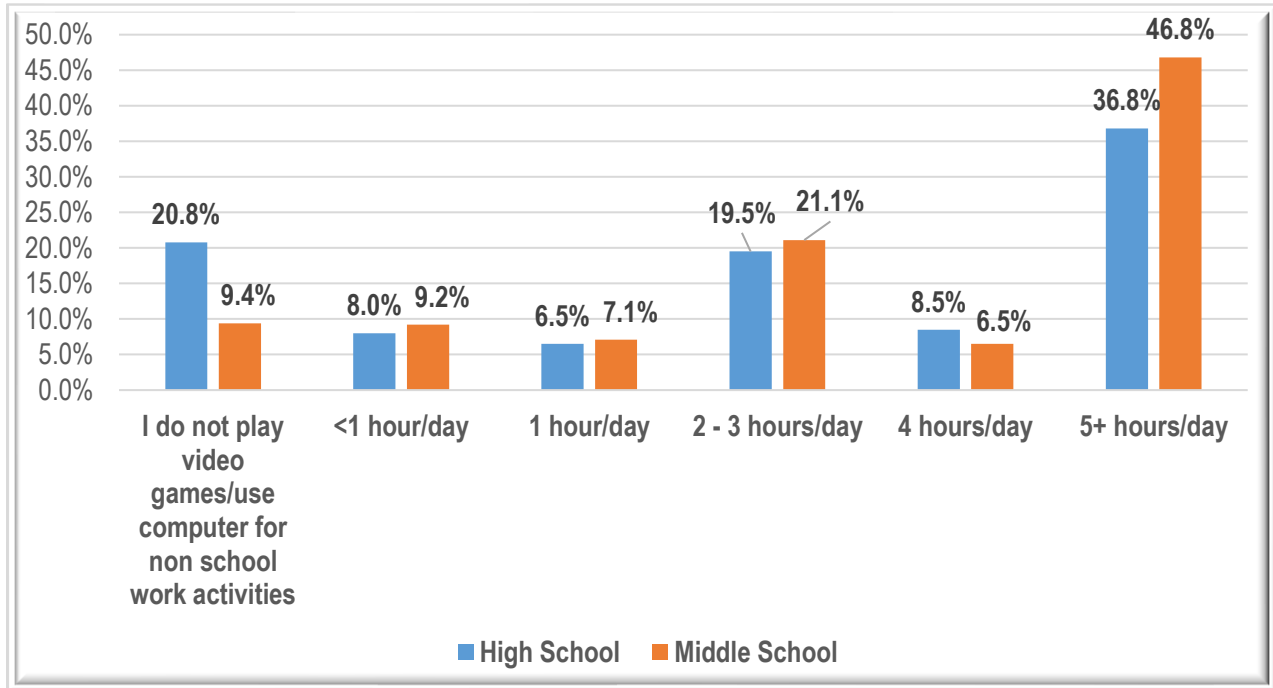
Figure 54. Hours of TV watched on an average school day



Even a higher percentage of students reported playing video or computer games on an average school day. Specifically, while about one in five senior high school students (21%) reported playing no video/computer games on an average school day, about 20% reported playing video/computer games for 2-3 hours, and approximately 45% reported playing video/computer games for four or more hours on a regular school day (Figure 55). Self-reported screen time for video/computer games was even higher for middle school students, with approximately 53% reporting playing video/computer games four or more hours on an average school day. While about one-fifth (21.1%) reported playing video/computer games 2-3 hours a day on an average school day, a similar proportion (18.6%) reported that they spent less than an hour or no time at all playing video/computer games on an average school day (Figure 55).

Both graphs signal that sedentary behavior is prevalent in the adolescent population in the St. Thomas-St. John District, and particularly among middle school students. These data are useful in information possible intervention programs that could target youth on St. Thomas and St. John around increasing physical activity and reducing sedentary activities.

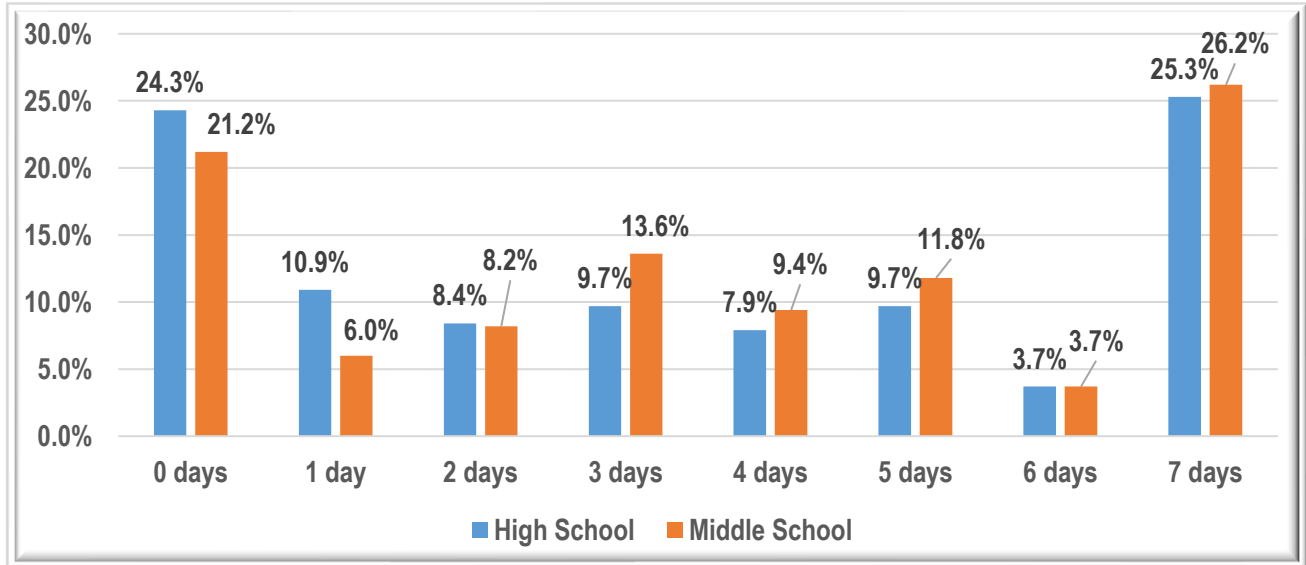
Figure 55. Number of hours a day play video/computer games or use computer for non-school work



Physical Activity

While there were several questions that spoke specifically to physical activity in both the middle school survey as well as the senior high school survey, the question that is highlighted related to number of minutes of physical activity. Students' responses to the question are captured in Figure 56. For both high school and middle school students, about one fourth (25.3% and 26.2%, respectively) indicating being physically active for at least 60 minutes every day 'during the past seven days'. About the same proportion of high school students (24.3%) and one in five middle school students (21.2%) reported not being active for at least 60 minutes at any time 'during the past seven days'.

Figure 56. Number of days you were physically active for at least 60 minutes a day in the past 7 days

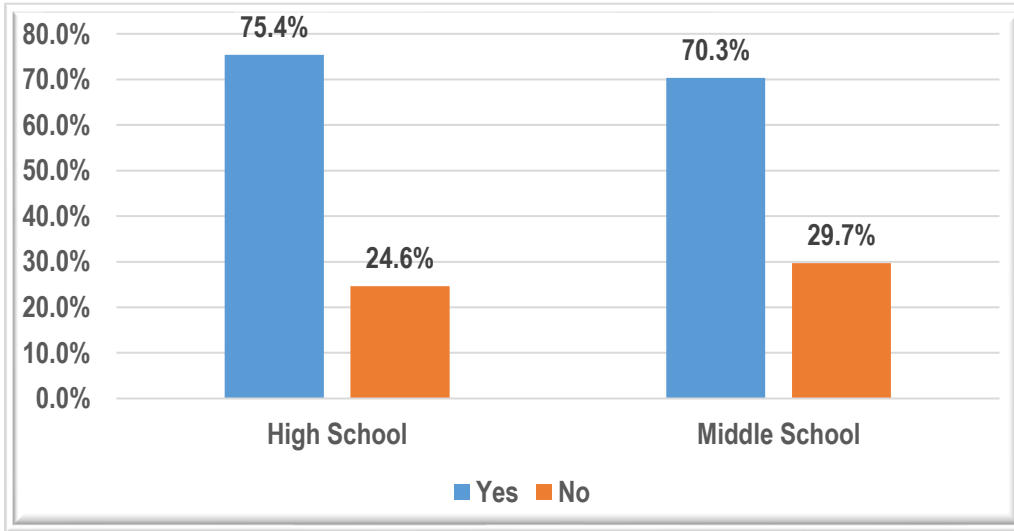


Physical Environment

The physical school environment is an important consideration in assessing community health needs, as a consideration of social determinants of health. The YRBS high school and middle school surveys both included questions about the school environment, particularly with respect to safety. While questions around safety ranged from topics about being threatened injury in school in school (with weapon) and feeling safe to bullying at school and electronic bullying and being involved in physical fights at school, this section focuses on the questions related to being bullied on school property, feeling safe at school, and gang activity in schools.

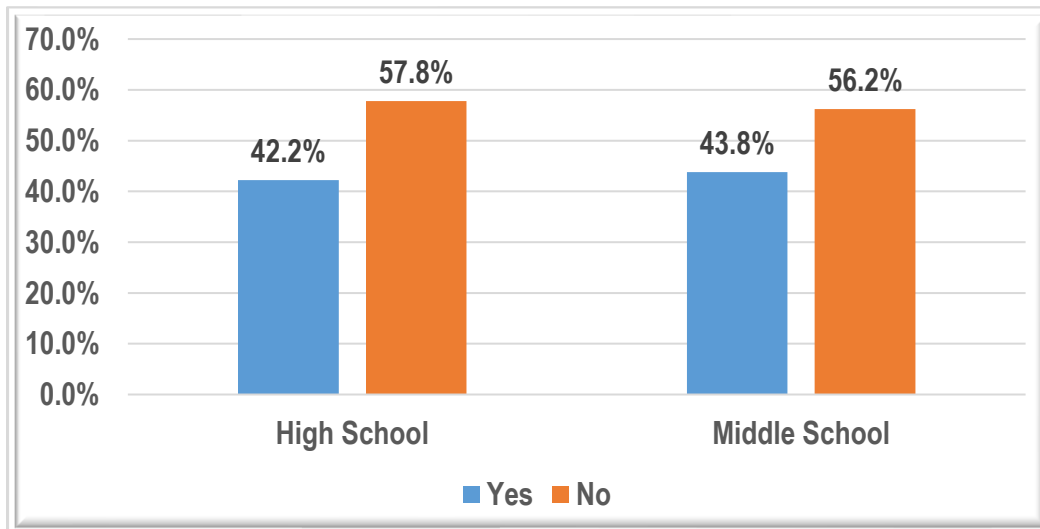
Figure 57 captures students' responses relative to feeling safe at their schools. For high school students, one in four (24.6%) reported not feeling safe at school. The percentage was even higher for middle school students, with approximately three in ten (29.7%) reporting not feeling safe at school.

Figure 57. I feel safe at my school



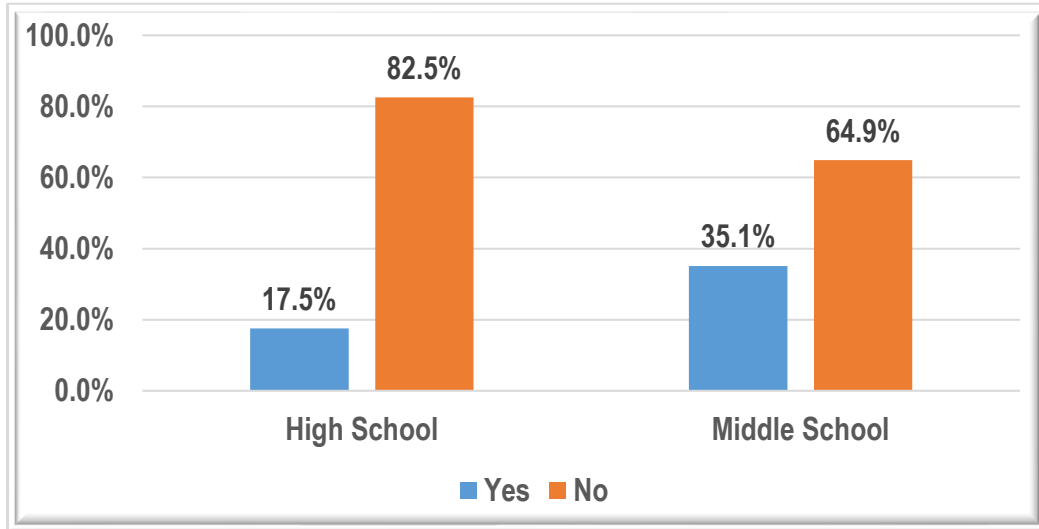
Also noteworthy is that, in considering the safety of the school environment for adolescents, 42% of senior high school students in the St. Thomas-St. John District responded in the affirmative to whether there was gang activity at their school, while approximately 44% of middle school students indicated that there was gang activity at their school (Figure 58).

Figure 58. There is gang activity at my school



Bullying is another aspect of safety. Figure 59 captures students' responses to the question of whether they have been bullied at school. While 17.5% of high school students responded in the affirmative regarding having been bullied at school, more than one-third of middle school students (35.1%) indicated that they have been bullied at school.

Figure 59. I have been bullied at my school



Sexual behaviors

Within the area of adolescent health, sexual behaviors are an important consideration in assessing health needs and possible interventions. The next three figures relate to sexual behaviors adolescents in the St. Thomas-St. John District. As can be observed from Figure 60, approximately three in 10 high school students (29.1%) reported being sexually active while approximately 16% of middle school students reported that they had had sexual intercourse.

Figure 60. Ever had sexual intercourse.

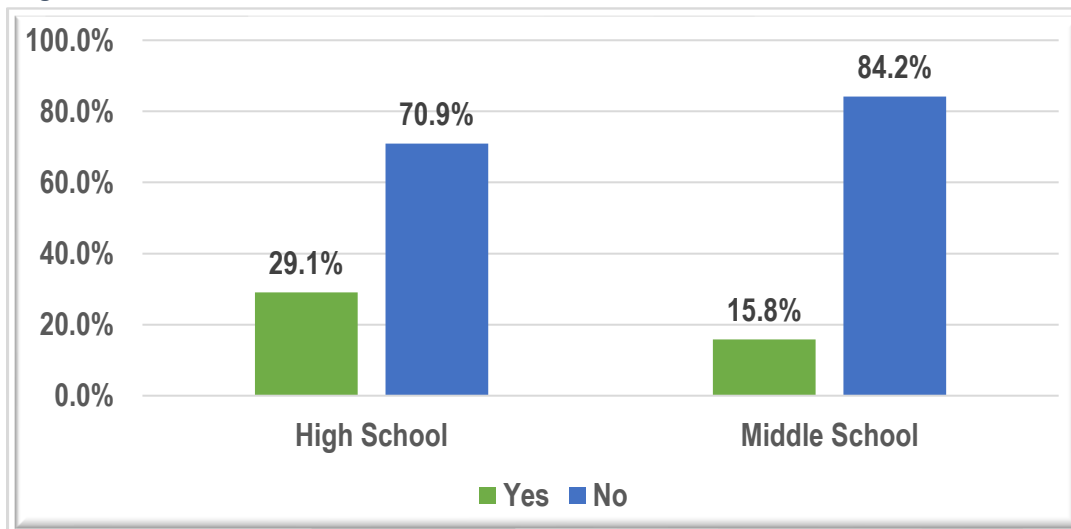
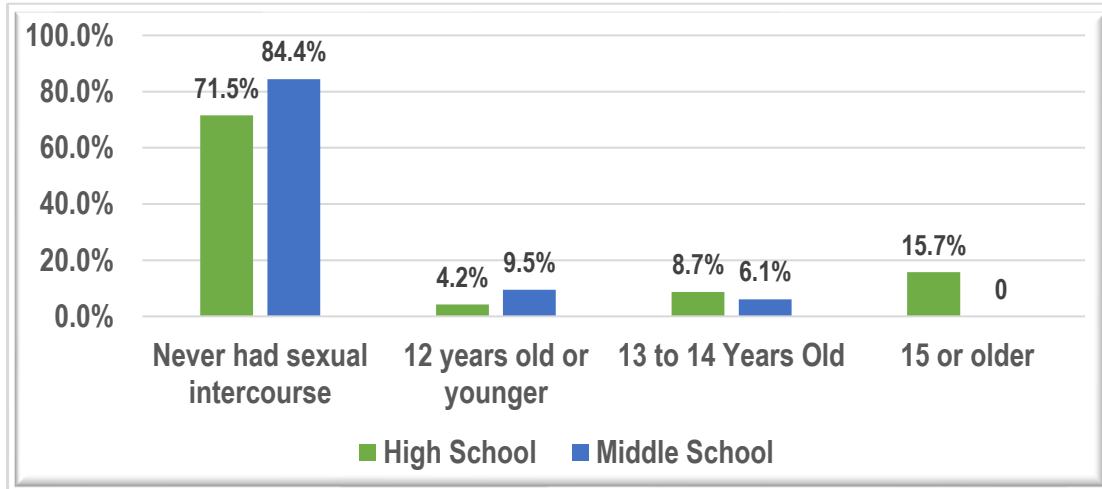


Figure 61 captures information on the age at which adolescents reported having first had sexual intercourse. While approximately 72% of high school students and 84% of middle

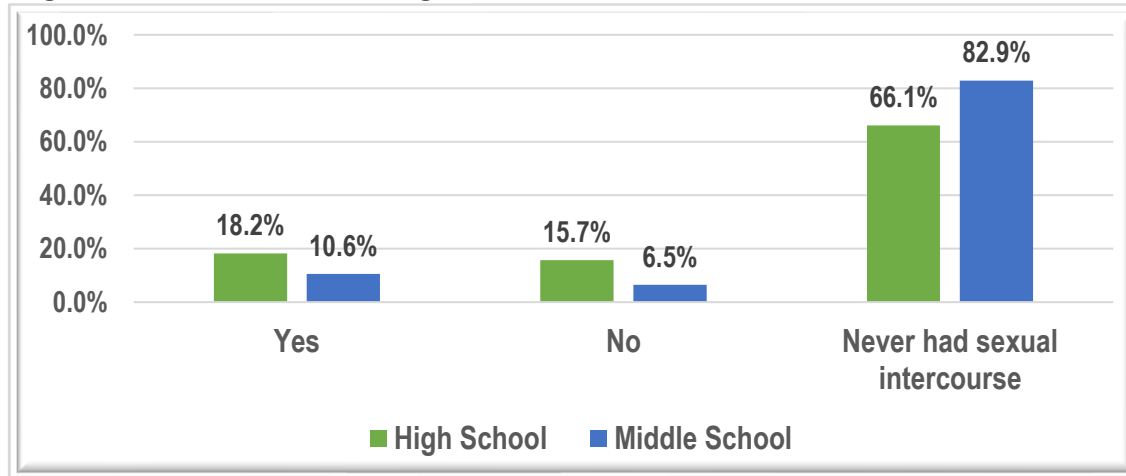
schools students reported never having had sexual intercourse, approximately 16% of high school students indicated being 15 years or older when they first had sexual intercourse. For middle school students, approximately 10% indicated being 12 or younger when they first had sexual intercourse.

Figure 61. Age first had sexual intercourse



Most students who responded to questions on the YRBS related to sexual activity report never having had sexual intercourse, for those who are sexually active, it is important to know whether they are practicing safe sex. One marker of safe sex is the use of a condom, which reduces the risk for sexually transmitted infections (STIs) as well as the risk of pregnancy. A review of Figure 62 reveals that while many high school students (18%) reported using a condom during their last sexual encounter, approximately 16% indicated not using a condom. More middle school students reported using a condom (15.7%) than not (6.5%).

Figure 62. Used a condom during last sexual intercourse



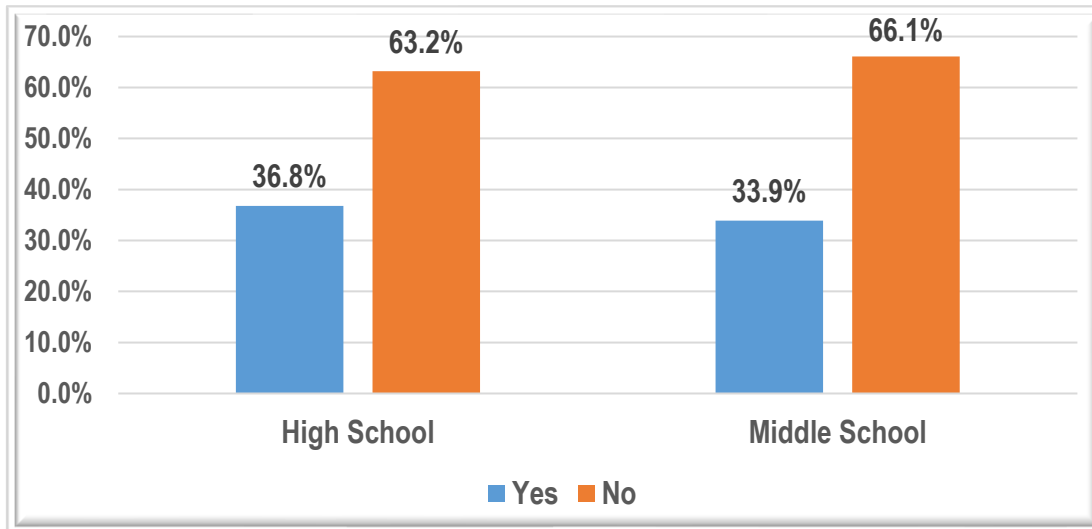
[Depression and Suicide Ideation and Behavior](#)

In the 2019 YRBS report for the USVI (Valmond, et al), behavioral health findings were highlighted, particularly as the VIDOH has been called upon to assist schools seeing an uptick in instances of students discussing or engaging in suicidal behaviors. Thus, the final sections of the YRBS data to be presented summarize findings around depressive behavior and suicide ideation and behaviors for adolescents in the St. Thomas-St. John District.

Depression

To gauge the prevalence of depression in the adolescent population, the YRBS asks the question, “During the past 12 months, have you felt so sad or hopeless almost every day for two weeks or more in a row, that you stopped doing some usual activities?” Student responses, captured in Figure 63, reveal that just over one in three high school students (36.8%) and middle school students (33.9%) responded in the affirmative to the question, signaling possible depressive symptoms among both high school and middle school students in the St. Thomas-St. John District. That more than 33% of both high school and junior high school students responded to the question in the affirmative signals the need for some intervention around helping adolescents cope with depressive symptoms.

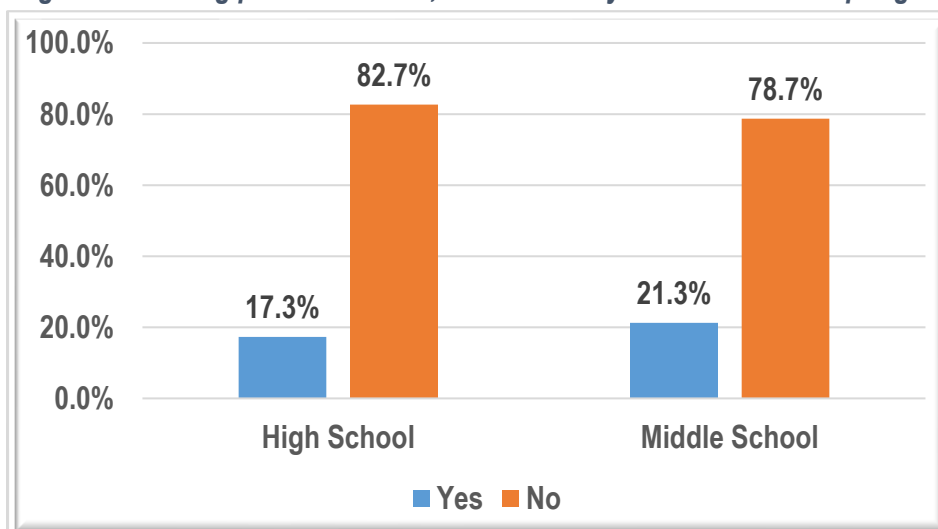
Figure 63. During past 12 months, felt so sad or hopeless almost every day for two weeks or more in a row, you stopped doing some usual activities



Suicide Ideation

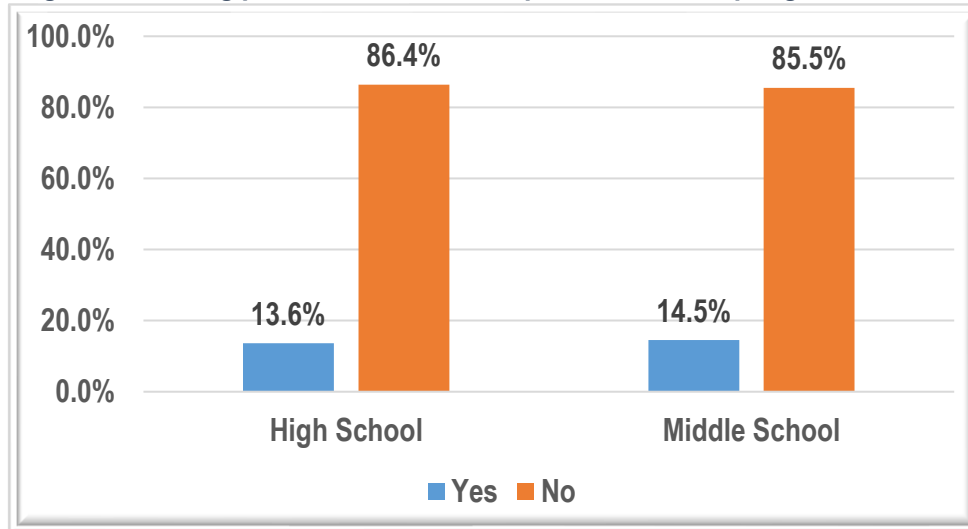
Students also responded to questions related to suicide, with the first related to suicide ideation. For high school students, 17.3% indicated that they had given serious thought to attempting suicide in the past 12 months. For middle school students, that percentage was higher with just over one in five students (21.3 %) indicating that they have given serious thought to attempting suicide in the past 12 months (Figure 64).

Figure 64. During past 12 months, ever seriously considered attempting suicide?



Students were also asked whether, during the past 12 months, they had made a plan regarding attempting suicide. About the same proportion of high school students (13.6%) as middle school students (14.5%) indicated that they had made a plan (Figure 65).

Figure 65. During past 12 months, made plan about attempting suicide?



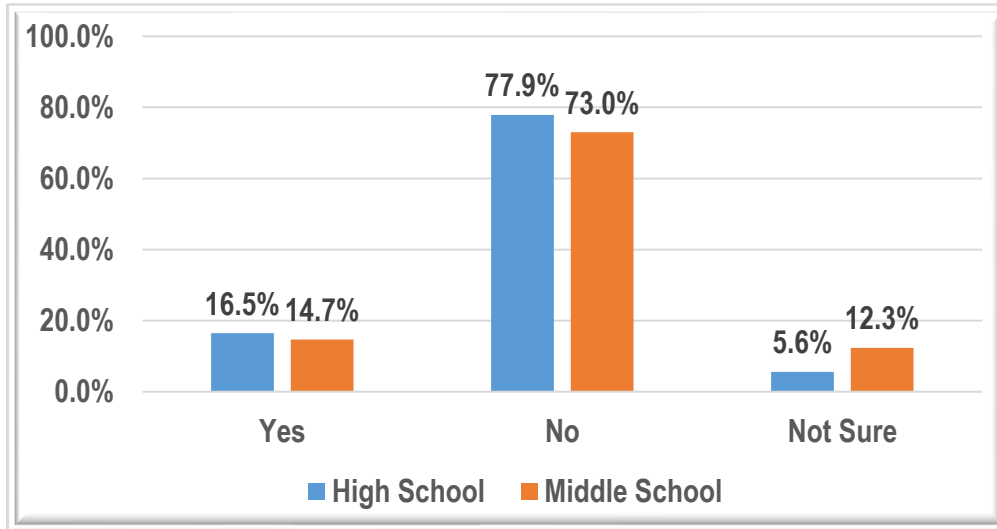
The final question posed to students related to attempting suicide. The question was posed slightly differently for high school student and middle school students. High school students were asked how many times they had attempted suicide in the past 12 months. While 88.7% indicated that had had not attempted suicide in the past 12 months, 5.3% indicated that they had attempted suicide once and 2.3% indicated that they had attempted suicide more than once. Middle school students were asked if they had ever tried to kill themselves – 92.6% indicated that they had not, while 7.4% responded in the affirmative.

Other Health Outcomes

Asthma is a chronic respiratory illness that is monitored in the Territory, particularly for children and adolescents. As can be observed from Figure 66, approximately 17% of high school students indicated that they have been told that they have asthma, while approximately 15% of middle school student report being told that they have asthma, while approximately 12% were uncertain of having received such a diagnosis. Given issues that have arisen around air quality (particularly because of the landfill in the Eastern end of St. Thomas) – STEEMCC’s

catchment area, as well as instances of mold in the schools, particularly in the aftermath of Hurricanes Irma and Maria, this chronic respiratory illness among adolescents bears monitoring.

Figure 66. Have you ever been told you have asthma?



BEHAVIORAL HEALTH ASSESSMENT: 2018

Behavioral health has been a long-term health concern in communities across the nation, with recent disruptions bringing a keen focus on behavioral health challenges that compound medical health challenges due to trauma injuries. In the current reality of the COVID-19 pandemic, ongoing challenges associated with global warming and climate change considerations, assessing behavioral health as part of a CHNA is crucial. The findings reported in this section of Needs Assessment is based on data collected in 2018 as part of a community health needs assessment focused on vulnerable children and families in the aftermath of Hurricanes Irma and Maria (Michael, et al., 2019).

Health Status of Children and Youth

One of the areas explored was health status, with focus on behavioral health considerations for school-aged children in grades 4 – 12 (Michael, et al., 2019). Two separate instruments were used for data collection in the schools in the St. Thomas-St. John District. Children at the elementary level – grades 4th through 6th completed the 10-item Child Trauma

Screening Questionnaire (CTSQ). Youth at the junior and senior high school levels (grades 7 through 12) completed the 24-item, two-part Child PTSD Symptom Scale (CPSS). Key findings of both surveys, with respect to behavioral health issues for children in the St. Thomas-St. John District in the aftermath of two Category 5 hurricanes are summarized.

Elementary School Students

Elementary students who completed the CTSQ represented 17 schools in the St. Thomas-St. John District – nine private and parochial schools and eight public schools. A total of 1,180 students completed the survey. Of that number 946 (80.2%) attended public schools. Tables 2 and 3 below provide a summary of students by age and sex (Table 2) and by grade level and sex (Table 3). As captured in Table 2, over 50% of the students who completed the survey were girls and just over one-third were 10-years of age.

Table 2. CTSQ Survey Participants by Age and Sex

Age	Sex		All Students
	Female	Male	
8	33	25	58
9	163	117	280
10	208	189	397
11	158	137	295
12	32	50	82
13	6	3	9
All ages	600	521	1121

Table 3. CTSQ Survey Participants by Grade and Sex

Grade	Sex		All Students
	Female	Male	
4 th	203	171	374
5 th	198	199	397
6 th	212	174	386
All Grades	613	544	1157

With respect to the grade levels represented, there was approximately the same distribution of students in each of the grade levels, with each grade level having between 33 or

34% of the participants. The noted discrepancy in the total number of students reflected in Tables 2 and 3 reflect the reality of some students not responding to the question regarding their sex, age, or grade level.

Students were asked to respond to the 10-item survey based on their experience with Hurricane Irma, Hurricane Maria, or both. Table 4 shows the number and percent of elementary students who responded affirmatively to each of the 10 items. More than half of all students who answered the questions, responded in the affirmative to four of the 10 items. Considering that data collection in the school occurred between 11 and 13 months after Hurricanes Irma and Maria, it is noteworthy that more than half of the students indicated that they feel like the hurricanes are about to happen again (52%) and that they have thoughts or memories about the hurricanes that they don't want to have (54%).

Table 4. Students' Affirmative Responses to CTSQ Items by Sex

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?	622	347	275	ns
2. Do you have bad dreams about the hurricanes?	242	141	101	ns
3. Do you feel or act as if the hurricanes are about to happen again?	590	335	255	**
4. Do you have bodily reactions (such as a fast-beating heart, stomach churning, sweating, and feeling dizzy) when reminded of the hurricanes?	314	189	125	**
5. Do you have trouble falling asleep or staying asleep?	433	234	199	ns
6. Do you feel grumpy or lose your temper?	375	190	185	ns
7. Do you feel upset by reminders of the hurricanes?	456	267	189	**
8. Do you have a hard time paying attention?	305	154	151	ns
9. Are you on the "look-out" for possible dangerous things that might happen to yourself and others?	854	467	387	ns
10. When things happened by surprise or all of a sudden, does it make you "jump"?	719	422	297	***

Student responses were also examined to determine whether there were significant associations between students' sex or grade level and how they responded to the questions.

Understanding these associations have implications for potential interventions or programs that may be targeted to students based on grade level or sex. Table 5 reveals that for four of the 10 items, there was a significant association between sex and students' responses. In all four instances, more girls than boys responded "Yes" to the questions.

Table 5. Students' Affirmative Responses to CTSQ Items by Grade

Questions	Affirmative Responses				Statistical Significance
	All Students	4th	5th	6th	
1. Do you have lots of thoughts or memories about the hurricanes that you don't want to have?	636	240	222	174	***
2. Do you have bad dreams about the hurricanes?	248	109	84	55	***
3. Do you feel or act as if the hurricanes are about to happen again?	603	218	201	184	**
4. Do you have bodily reactions (such as a fast-beating heart, stomach churning, sweating, and feeling dizzy) when reminded of the hurricanes?	323	131	123	69	***
5. Do you have trouble falling asleep or staying asleep?	443	181	161	101	***
6. Do you feel grumpy or lose your temper?	381	127	145	109	*
7. Do you feel upset by reminders of the hurricanes?	466	180	161	125	***
8. Do you have a hard time paying attention?	308	115	121	72	***
9. Are you on the "look-out" for possible dangerous things that might happen to yourself and others?	865	291	294	280	ns
10. When things happened by surprise or all of a sudden, does it make you "jump"?	727	228	270	229	*

In understanding how children respond to traumatic experiences, not only can sex be an important variable, but also students' academic level. Though all students completing the CTSQ were at the elementary level, considering grade level associations can also be important for providing the most appropriate supports for students in the aftermath of disruptions. Table 6 reveals that, except for one item, there is a significant association between grade level and students' affirmative responses to the survey questions. For the nine items for which there was a significant association between grade level and affirmative responses, more 4th graders than 5th or 6th graders answered "Yes" to six of the questions, and more 5th graders than 6th graders

answered the questions in the affirmative. For the other three items (6, 8, and 10) more 5th graders than 4th or 6th graders responded “yes”.

Table 6. Students' Affirmative Responses to CTSQ Items

Questions	Affirmative Responses	
	Number	Percent
1. Do you have lots of thoughts or memories about the hurricanes that you don't want to have?	636	(54.4)
2. Do you have bad dreams about the hurricanes?	248	(21.2)
3. Do you feel or act as if the hurricanes are about to happen again?	603	(51.6)
4. Do you have bodily reactions (such as a fast-beating heart, stomach churning, sweating, and feeling dizzy) when reminded of the hurricanes?	323	(27.9)
5. Do you have trouble falling asleep or staying asleep?	443	(38.1)
6. Do you feel grumpy or lose your temper?	381	(32.8)
7. Do you feel upset by reminders of the hurricanes?	466	(40.0)
8. Do you have a hard time paying attention?	308	(26.9)
9. Are you on the “look-out” for possible dangerous things that might happen to yourself and others?	866	(74.8)
10. When things happened by surprise or all of a sudden, does it make you “jump”?	727	(62.5)

Secondary School Students

The CPSS is organized into two parts: the first 17 items are based on the DSM-IV-TR criteria for PTSD and ask questions about psychosocial problems that children might experience after an upsetting event or disruption. In addition to an overall score, there are also three sub-scales in the first part: subscale 1, Re-experiencing, is based on the first five items; subscale 2, Avoidance, comprises items 6-12; and subscale 3, Hyper-arousal, is based on items 13-17. The second part of the questionnaire comprises seven items that assess functional impairment.

A total of 375 7th to 12th graders, representing eight of the ten private and parochial schools in the St. Thomas-St. John District that have students enrolled in secondary grades completed the Child PTSD Screening Scale (CPSS), a 24-item instrument validated for use with adolescents. Of the students completing the survey, 180 (52.3%) identified as female and 164 (47.7%) identified as male. About 31 students did not respond to the question. Participants ranged in age from 11 to 18, with a mean age of 13.7 (SD=1.84) years (Figure 67); 16 students

did not provide their age. Most students (52.2%) were 7th or 8th graders and 20% were 11th and 12th graders (Figure 68); 11 students did not indicate their grade level.

Figure 67. Student participants by age

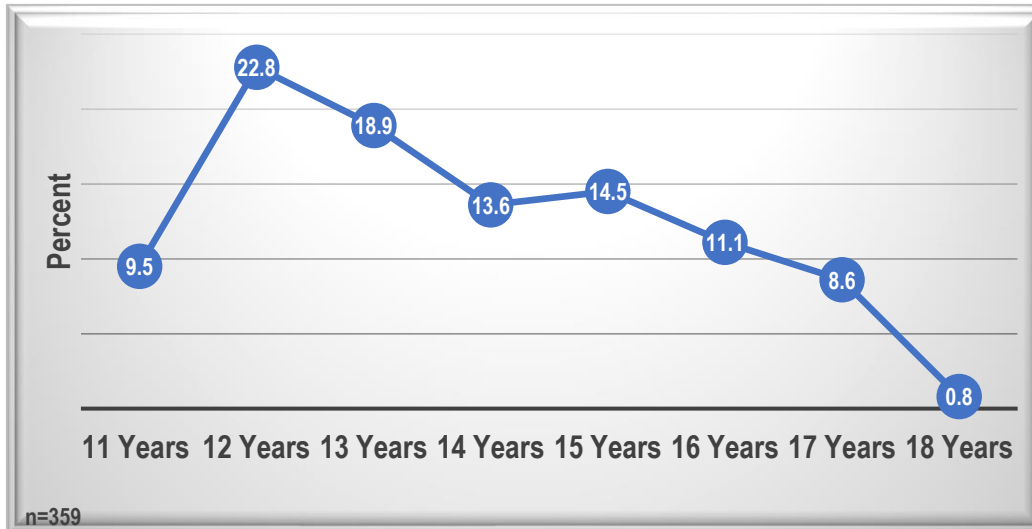
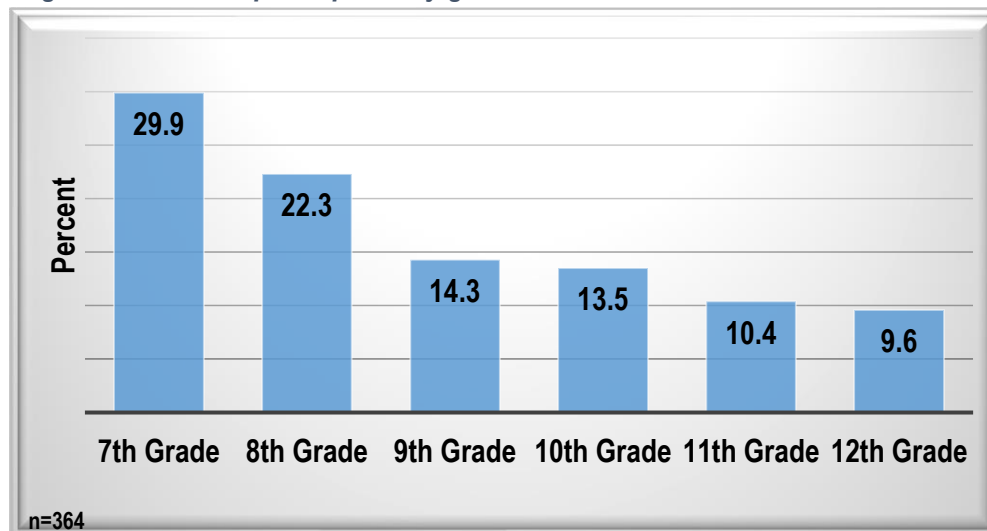


Figure 68. Student participants by grade level



To determine whether students were symptomatic for PTSD, responses on the first 17 items were summed. PTSD scores ranged from 0 to 44, with a mean score of 9.53 and a median score of 8.0 and a modal score of 0. Students with scores of 12 or higher were identified as symptomatic for PTSD. *Based on students responses (complete data were available for 326 students), one in three students – 33.4% -- may be at risk for PTSD.* Additionally, the findings reveal a significant negative relationship between PTSD score and age ($r = -.123, p = .03$), indicating that younger aged students had higher PTSD scores than older students, which

aligns with previous research examining possible symptomatology for PTSD and children's ages. Reliability for the CPSS for the St. Thomas-St. John students was excellent, with a Cronbach's alpha of .871. Subscale reliabilities were acceptable: Subscale 1, Re-experiencing, $\alpha=.76$; subscale 2, Avoidance, $\alpha=.738$; and subscale 3, Hyper-arousal, $\alpha=.74$.

As previously noted, Part 2 of the CPSS comprises seven items and assesses functional impairment. Students were asked to indicate whether the problems they rated in Part 1 of the CPSS had interfered with specific areas of their lives in the past two weeks. Responses were "yes =1" or "no=0" and scores ranged from 0 to 7, with higher scores indicating higher functional impairment. The Functional Impairment scale had very good reliability, with a Cronbach's alpha of .826. Table 7 captures the percent of students who responded in the affirmative regarding the extent to which the problems noted for Part 1 of the survey "got in the way" of seven areas of their lives.

Table 7. Students' Affirmative Responses to CPSS Items Related to Functional Impairment

Areas of Your Life	Number	Percent
Doing your prayers	99	(27.5)
Chores and duties at home	130	(35.5)
Relationships with friends	159	(43.6)
Fun and hobby activities	160	(43.8)
Schoolwork	154	(42.3)
Relationships with your family	141	(39.3)
General happiness with your life	134	(37.0)

Twenty-eight percent (**28%**) of respondents had scores of 5 or higher. For the sample, there was a significant positive relationship between PTSD scores (Part 1) and Functional Impairment scores (Part 2), $r=.236$, $p<.001$, $n=307$. For the respondents, those with higher PTSD scores tended to have higher Functional Impairment scores, signaling that youth more likely to be at risk for PTSD are more likely to have challenges in certain areas of their lives, as reflected in Table 7.

Health Status of Adults

Sociodemographic Characteristics of Respondents

This section of the CHNA reports findings based on a battery of instruments used to collect data on the behavioral health of adults in the Territory in the aftermath of Hurricanes Irma and Maria. Because of the focus of the current Needs Assessment, only data collected from adults in the St. Thomas-St. John District are included here. It is also noteworthy that in the original study, all data were collected at STEEMCC and over 95% of respondents were either STEEMCC clients or staff.

Though 236 surveys were attempted, usable data were available for 235 surveys. With respect to age, just over one-third (34.7%) of respondents were in the 50 - 64 age group; 18.6% were 30-39; 18.6% were in the 40-49 age group; and approximately 17% were between 18 and 29 years of age. While 93% of respondents identified as Black, with respect to ethnicity, only 13% identified as Hispanic. While one-third identified as married, approximately 48% described themselves as “single, never married”.

There was great diversity across persons completing the survey in terms of highest educational level. While 44% identified as high school graduates, approximately 21% indicated being college graduates or holding a graduate/professional degree (8%). Approximately 17% did not complete high school. While 55% reported no children in the household, 35% reported one or two children in the home. With respect to employment status, over half (52%) reported being employed for wages, 16% reported being unemployed, but job hunting, 9% reported being self-employed, and 10% were retired.

Behavioral Health Status

Understanding the behavioral health status of adults in the community served by STEEMCC is important in terms of determining areas of focus for potential expansion of clinical personnel as well as services. The findings presented focus on just some of important aspects of behavioral health.

Depression

The link between depression and overall health has been established and emphasized in the literature (Andresen, et al., 1994; Jacob, 2012). Additionally, the link between natural disasters and depression has also been established (North, et al., 2004; Goldman & Galea, 2014). Thus, examining depression in the adult population in the USVI, within the context of this community health needs assessment is important. The *CESD-10*, a 10-item instrument, is used in the general population to assess depression/depressive symptoms. This instrument has been documented to have good reliability (Eaton et al., 2004) and, in the St. Thomas-St. John (STT-STJ) sample, the reliability was also good – as measured by Cronbach’s alpha ($\alpha=0.802$).

Based on the scoring guidance (Andresen, et al., 2013), respondents are identified as having depressive symptoms if their scores are higher than 10. For the 235 respondents who completed the *CESD-10* in the year following Hurricanes Irma and Maria, **54.7% had scores higher than 10**, signaling that depression is a real issue for adults in the Territory. Given that the Territory remains in the recovery mode and is currently dealing with the COVID-19 pandemic, the need to address this health issue is urgent.

PTSD

Post-traumatic stress disorder (PTSD) is another important measure of overall behavioral health status of individuals. The *PTSD Checklist*, or *PCL*, a 17-item instrument was used to assess adults’ status relative to PTSD. The literature reports excellent reliability for the *PCL* (Weathers et al., 1999) and in the STT-STJ sample, the reliability was also excellent, as measured by Cronbach’s alpha ($\alpha=0.947$). In interpreting results of the *PCL*, the cut-score for determining whether respondents may have PTSD symptoms is a score higher than 30. For the adults (n=235) in the St. Thomas-St. John District who completed the *PCL* approximately one year after Hurricanes Irma and Maria, **58% had scores higher than 30, suggesting possible PTSD symptoms in six of 10 respondents**, signaling the need to address this matter in the

community. Given the current situation with COVID-19, the urgency to address the potential behavioral and mental health situation for adults in STEEMCC's catchment area is great.

Stress

Stress is another key marker when considering the behavioral health of the community. The existing data included information on participant responses to the *Perceived Stress Scale*, a 10-item instrument which asks respondents to indicate their level of stress with respect to different situations, to include disruptions such as the two Category 5 Hurricanes that ravaged the U.S. Virgin Islands in September 2017. Scores on the PSS can range from 0 – 40, with higher scores reflecting higher perceived stress. ***For respondents (n=236), 8% (n=19) perceived themselves as having low stress (scores of 0 – 13); 81.7% (n=193) perceived themselves as having moderate stress (scores of 14-26); and 10.2% (n=24) perceived themselves as having high stress (score of 27-40).*** For the St. Thomas-St. John sample, the PSS had moderate or fair reliability as measured by Cronbach's alpha ($\alpha=0.668$), which is within the range of the reliability for the PSS reported in the literature (Cohen & Wills, 1985).

Self-Efficacy

The General Self-Efficacy scale, or GSE, is a 10-item instrument that assesses an individual's general capacity to deal with stressful situations. With over 80% of respondents perceiving themselves as having moderate stress, it is important to know whether respondents believe they have the capacity to deal with various stressful situations. For the GSE, scores range from 10 -40, with higher scores reflecting greater self-efficacy. Based on responses, over 50% of adults in the St. Thomas-St. John District could be classified as having moderate to high self-efficacy, with 59% having scores of 31 or higher. As measured by Cronbach's alpha, reliability for the GSE in the St. Thomas-St. John sample was excellent ($\alpha=0.895$).

Resilience

Resilience has become a focal point of discussion and significance in the community health and public health arenas in the wake of disruptions that have been occurring globally,

particularly around natural disasters, exacerbated by climate change. In examining community health needs, then, resilience is an important consideration. Thus, the Brief Resilience Scale, 6-item instrument, was one of the instruments adults in the St. Thomas-St. John District completed in fall 2018. Resilience scores were calculated by summing participants' responses and dividing by 6 (the total number of items). Thus, overall scores ranged from 1 – 5. *For the 235 respondents who completed the survey, the majority (68.6%) could be classified as having normal resilience (scores from 3.0 to 4.30), while 17.4% could be classified as having low resilience (scores from 1-2.99), and 14% could be classified as having high resilience (scores from 4.31 to 5.0).* Reliability, as measured by Cronbach's alpha was moderate/fair ($\alpha=0.63$), lower than reported in the literature (Smith et al., 2008).

The snapshot of behavioral health for adults in the St. Thomas-St. John District in the aftermath of Hurricanes Irma and Maria point to the need for particular attention being paid to possible symptomatology for the adult population around depression and PTSD, while approximately 40 of adults self-reported lower than average confidence in their ability to handle stressful situations. Based on the literature regarding the long-lasting effects of disruptive events such as natural disasters (to include hurricanes), (Scott, 2014; Delamater & Applegate, 1999; Hugelius, Gifford, Ortenwall & Adolfsson, 2017; Cherry et al, 2011), and the current situation that exists with respect to the global pandemic of COVID-19, support for adults to address behavioral health issues is needed.

STEMCC: UDS DATA FY2016 – FY2019

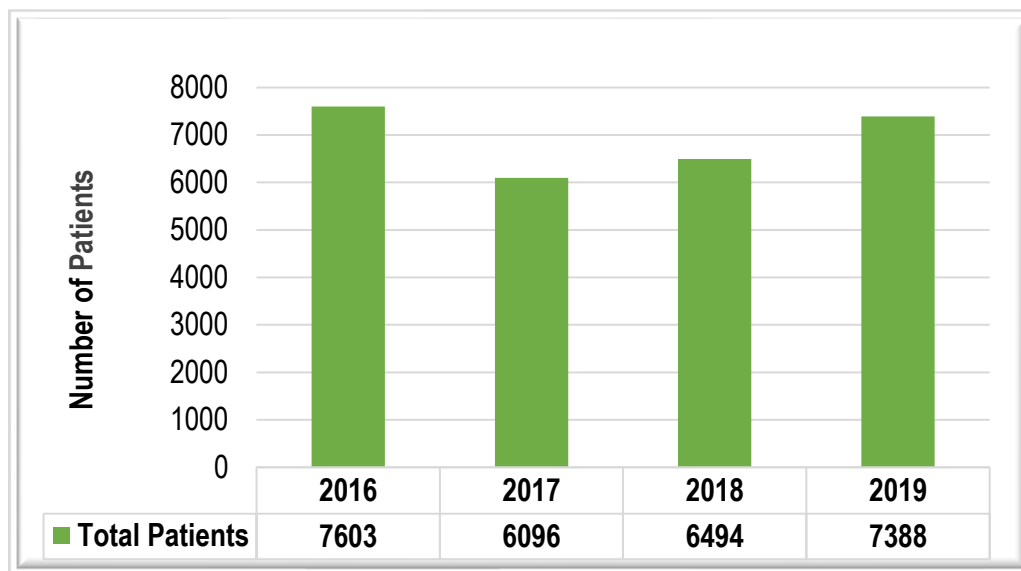
The St. Thomas East End Medical Center has been providing on-going preventative health care to the St. Thomas-John community for more than four decades. It is the largest primary care provider in the St. Thomas-John District, and it focuses its efforts on wellness, prevention, and effective management of chronic diseases and conditions. Its mission, to provide comprehensive, high quality, accessible, affordable and cost efficient primary healthcare services, including, patient education, community outreach, and research, is aptly

illustrated in the data presented in the following paragraphs that summarizes information about the total number of patients treated and types of services provided to patients during the period 2016 - 2019.

A SNAPSHOT OF STEEMCC CLIENTS: FY2016 – FY2019

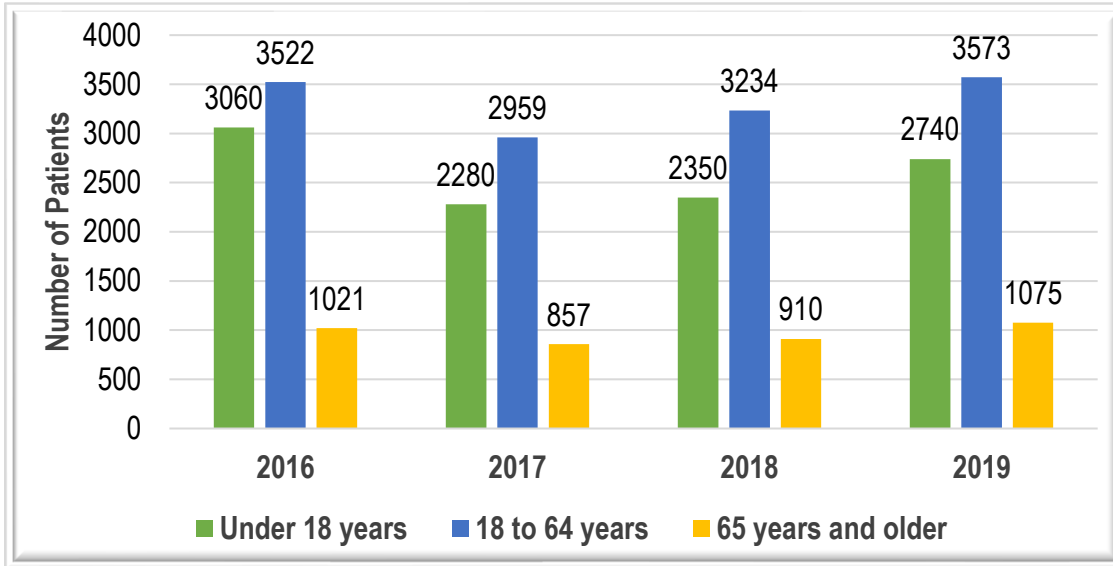
In 2016 the total number of patients treated at the health facility hit an all-time high of 7603. While there was a 20% decline in this total in 2017, the year of the two major hurricanes in the Territory, the trajectory shows that the total number of patients is gradually increasing. Figure 69 shows that the patient load increased by seven percent in 2018 and that percentage increase doubled (14%) between 2018 and 2019 as the total number of patients served once again approaches the 2016 totals (Figure 69).

Figure 69. Number of Clients Served: FY2016 - FY2019



The 18 – 64 age group consistently makes up the largest category of patients treated at the health center annually between 2016 and 2019. However, nearly four in every ten patients (37%) are under the age of 18 and, patients ages 65 years and older average 14% of the total number of patients treated annually during the period under review (Figure 70).

Figure 70. STEEMCC Clients by Age Group: FY2016 - FY2019



Most patients treated at STEEMCC belong to a racial and/or ethnic minority group (95%). Most of the patients are of Black/African American descent and the second largest group constitute Hispanics – approximately 12% of all patients (Figure 71). As immigrants from Haiti (French Creole), Dominican Republic and Puerto Rico (Spanish) settle in the St. Thomas-St. John district, an increasing number of patients who are not native English language speakers are receiving services at the health center. Figure 72 shows that the percentage of patients best served in a language other than English has increased from nine percent in 2016 to 16% in 2019.

Figure 71. STEEMCC Clients Served by Race-Ethnicity: FY2016 - FY2019

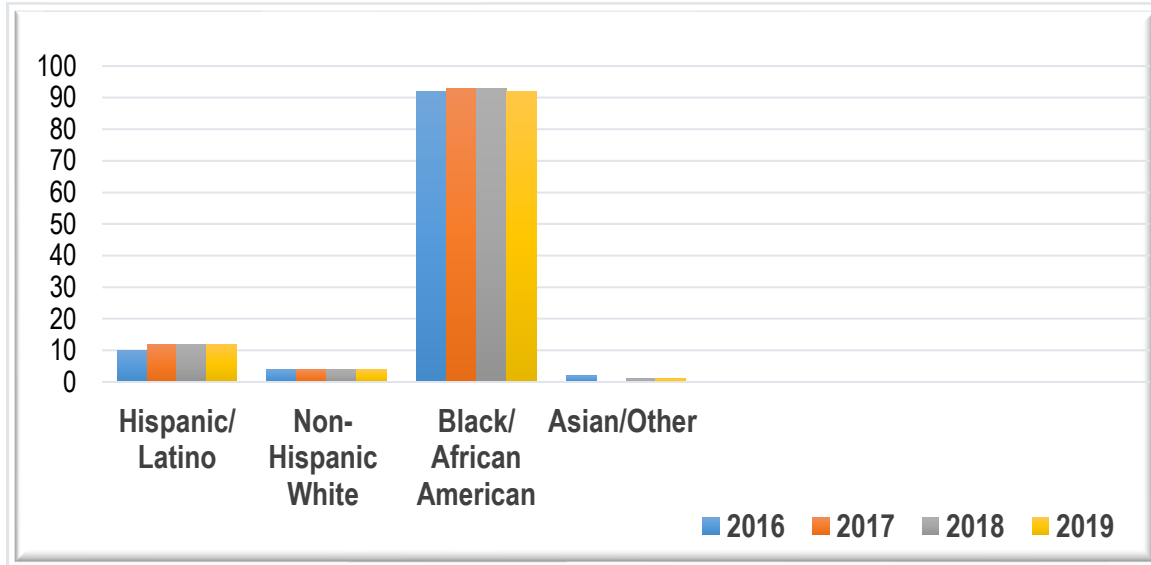
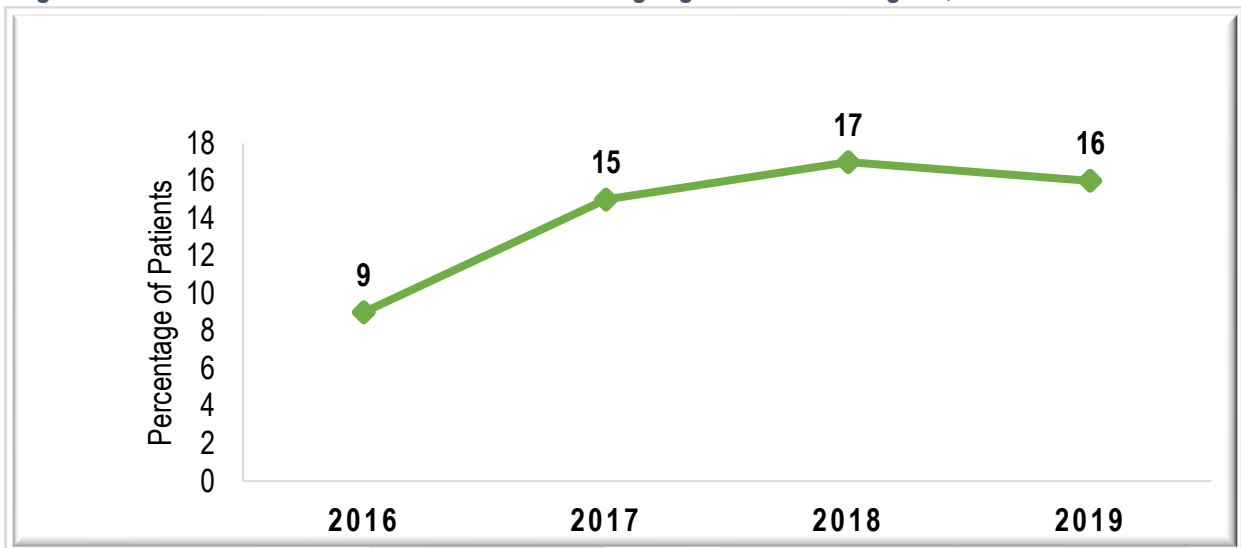


Figure 72. STEEMCC Clients Best Served in a Language other than English, FY2016 - FY2019



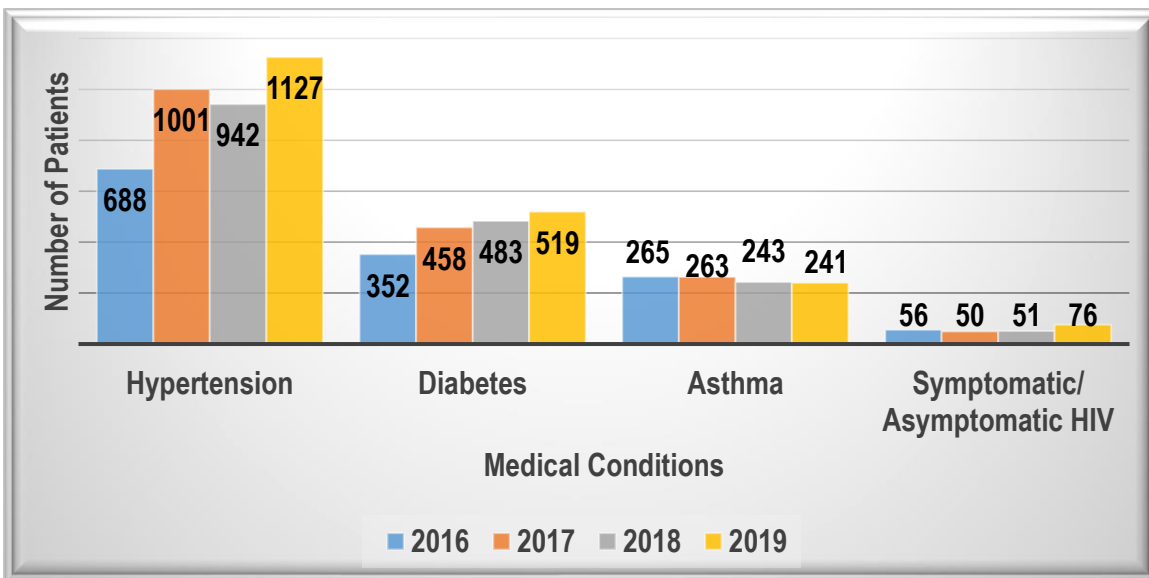
Health Outcomes for Clients

Understanding health outcomes for clients provide a barometer of disease burden for providers and help with planning service expansion, to include considerations of additional providers needed, areas for expansion, as well as providing a basis for assessing effectiveness of current health care services, when considered within the context of disease management and client behaviors. These data could also inform decisions around health literacy, case management, and outreach to patients. Health outcomes related to chronic and other health conditions of STEEMCC clients are presented below.

Health Status of STEEMCC Clients with Respect to Chronic Health Conditions

The leading health concerns in the USVI are centered on issues of access to quality health services for heart disease and stroke, cancer, diabetes, and HIV infection (Callwood, Campbell, Gray, Radelet, 2012). While the findings from the BRFSS survey provide a partial portrait of health behaviors and health screenings available for some of these chronic conditions at the Territory-level, the information below provides a community-level picture of the health care services that residents, presenting with these medical conditions, are able to access at STEEMCC. The data show that between 2016 and 2019, there was a dramatic increase (64%) in the number of patients presenting with hypertension and a 47% increase in those presenting with diabetes during the same period. However, the number of asthma patients in the St. Thomas-St. John district continues to decline incrementally. Additionally, for symptomatic/asymptomatic HIV patients 2019 saw the highest number of total patients treated at STEEMCC. The 2019 totals reflect a 36% increase over the 2016 patient load, this after the three years from 2016 to 2018 showed a steady decline in the number of HIV patients seeking treatment at the FQHC (Figure 73).

Figure 73. Prevalence of Select Medical Conditions for STEEMCC Clients, FY2016 - FY2019

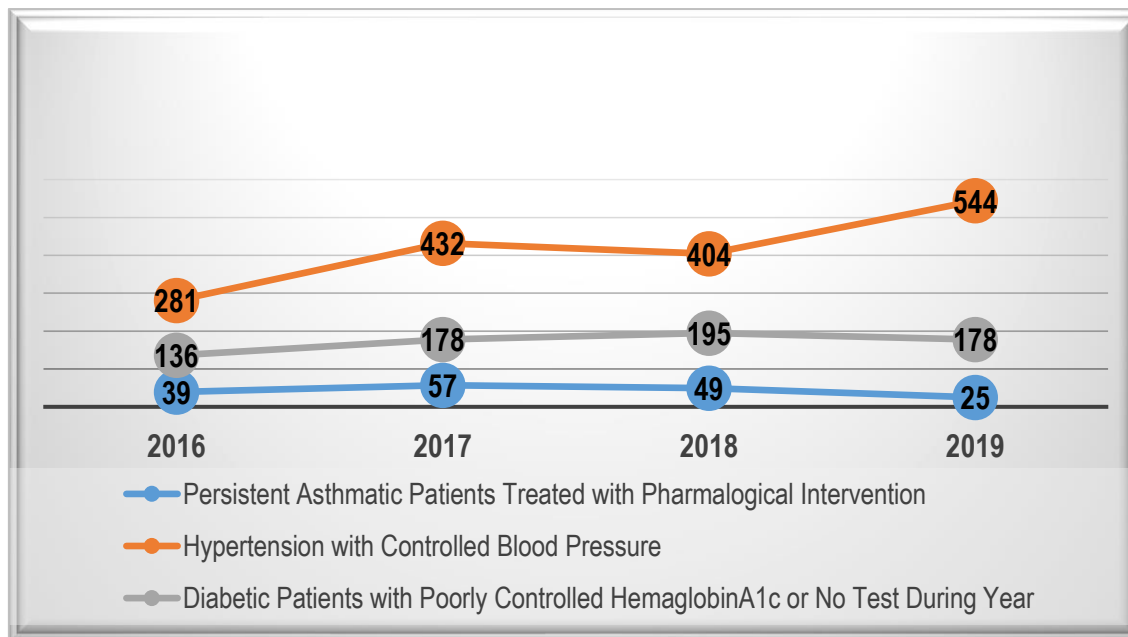


The information gathered from patients' records, presented in Figure 74 indicates that an increasing number of patients are presenting with the comorbidity of hypertension with

controlled blood pressure. Hypertension is a serious medical condition and high blood pressure is very common in adults in the United States, and many do not have it under control. In the study area, there was a significant increase in the number of patients with hypertension whose blood pressure was controlled based on care management services received at the health center. The data show the patient load for this illness increasing from 281 in 2016 to 432 in 2017, then plateauing in 2018 before rising again to 544 in 2019.

During the same period, the number of diabetic patients with poorly controlled hemoglobinA1C or no test during the year ranged from 136 in 2016 to 195 in 2018, before declining to 178 in 2019. Fluctuations were also evident for persistent asthmatic patients treated with pharmacological intervention, but overall, there was a 36% decrease in the total number of patients treated at the health center between 2016 and 2019 (Figure 74).

Figure 74. Select Presenting Chronic Diseases for STEEMCC Clients, FY2016 - FY2019



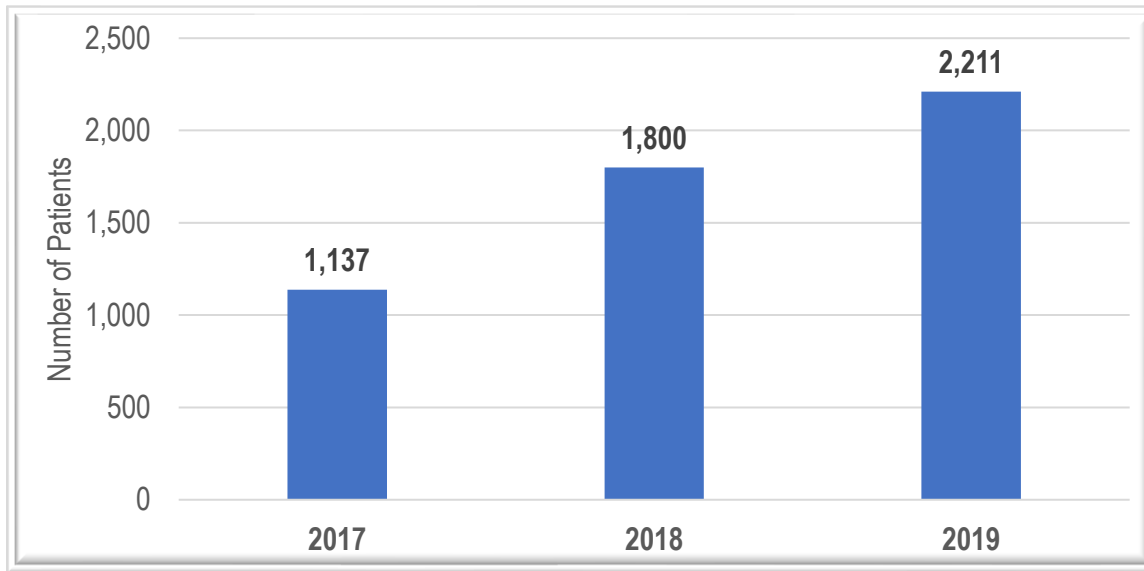
Other Health Outcomes

Overweight and Obesity

Most of the world's population live in countries where overweight and obesity kills more people than underweight, according to the World Health Organization (WHO). BMI

provides a useful population-level measure of overweight and obesity. As such, BMI screening is an important preventive health activity. In 2019, 74% of total patients (18 years and older) received BMI screening and follow-up and this translated into 1,074 (2211-1137) more patients receiving BMI screening in 2019 than in 2017 (Figure 75).

Figure 75. Adult patients (18 and older) with BMI Screening and Follow-Up: FY2017 – FY2019



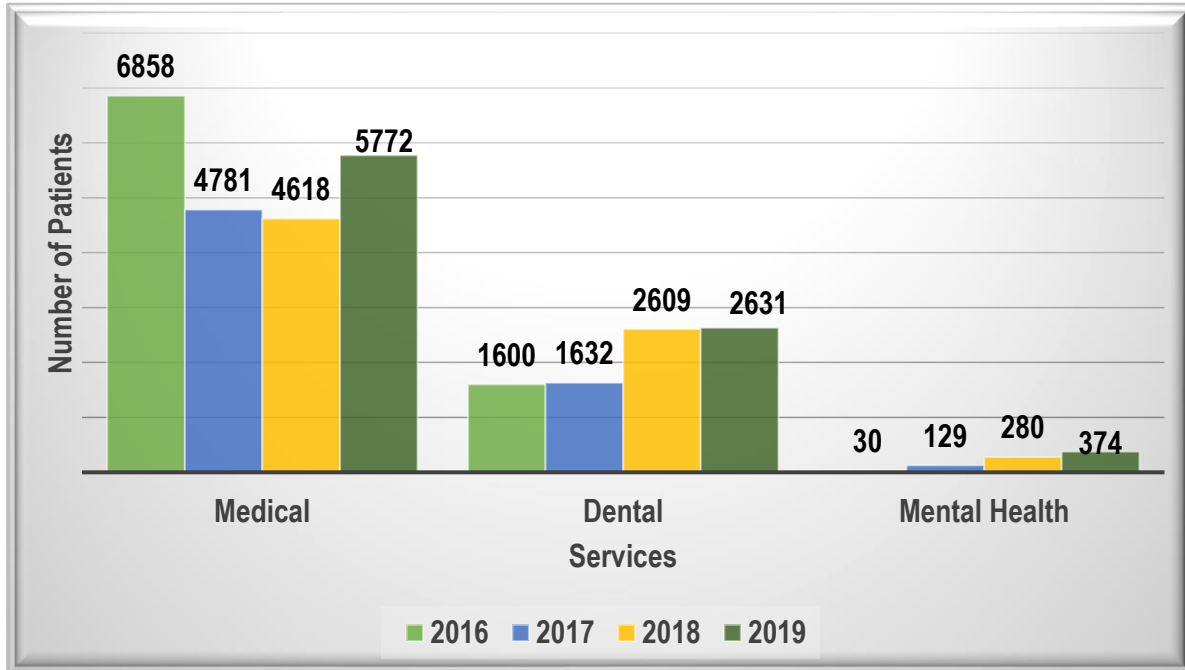
Since 2016 dental and mental services have been offered at STEEMCC and the clinic has witnessed a dramatic increase in the number of clients served every year, as evidenced by the data in Table 8 below showing the total patients served and the percentage change between 2016 and 2019.

Table 8. Changes in Number of Clients Accessing Select Healthcare Services: FY2016-FY2010

Type of Service	FY2016	FY2017	FY2018	FY2019	Percentage Change
Oral Health	1600	1632	2609	2631	↑ 64 %
Mental Health	30	129	280	374	↑ 1147%
Medical	6858	4781	4618	5772	↓ 16%

The total number of patients receiving dental and mental health services at the health care center increased between 2016 and 2019. For the period under review, Figure 76 details the four-year upward trajectory of the oral and mental health services at STEEMCC, while medical services offered at the FQHC in the St. Thomas-St. John District fluctuate.

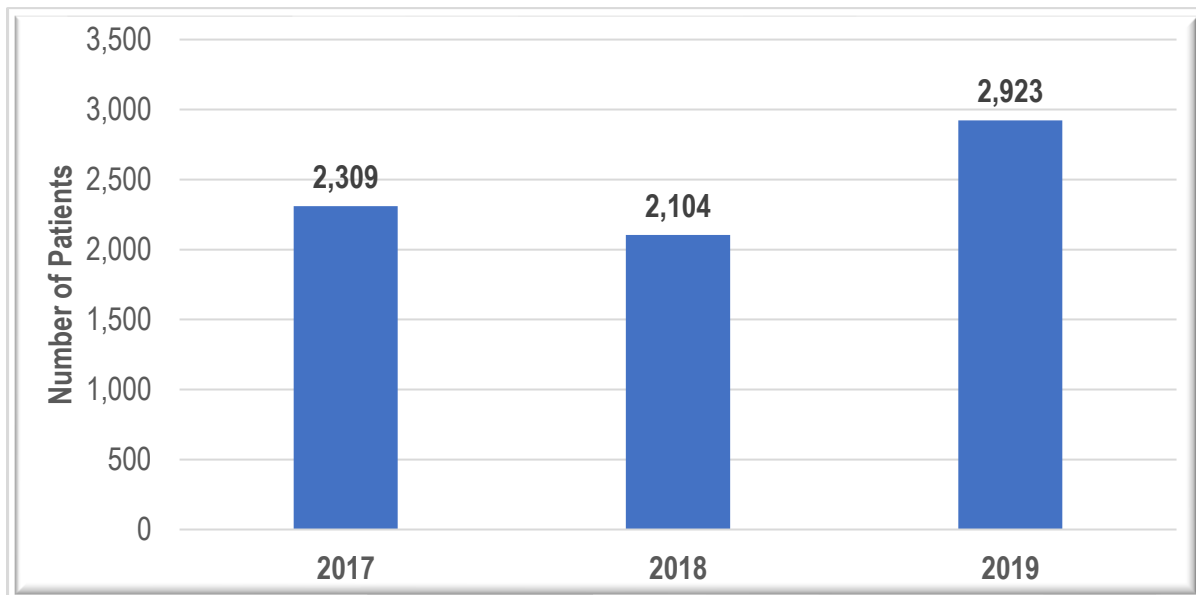
Figure 76. Select Services Offered at STEEMCC, FY2016-FY2019



Mental health clients and major depressive disorder diagnosis

Since 2017 there has been a steady increase in the number of patients screened for clinical depression and provided with a documented follow up plan, if positive (Figure 77).

Figure 77. Patients Screened for Clinical Depression with Follow-Up Plan, if Needed: FY2017 - FY2019



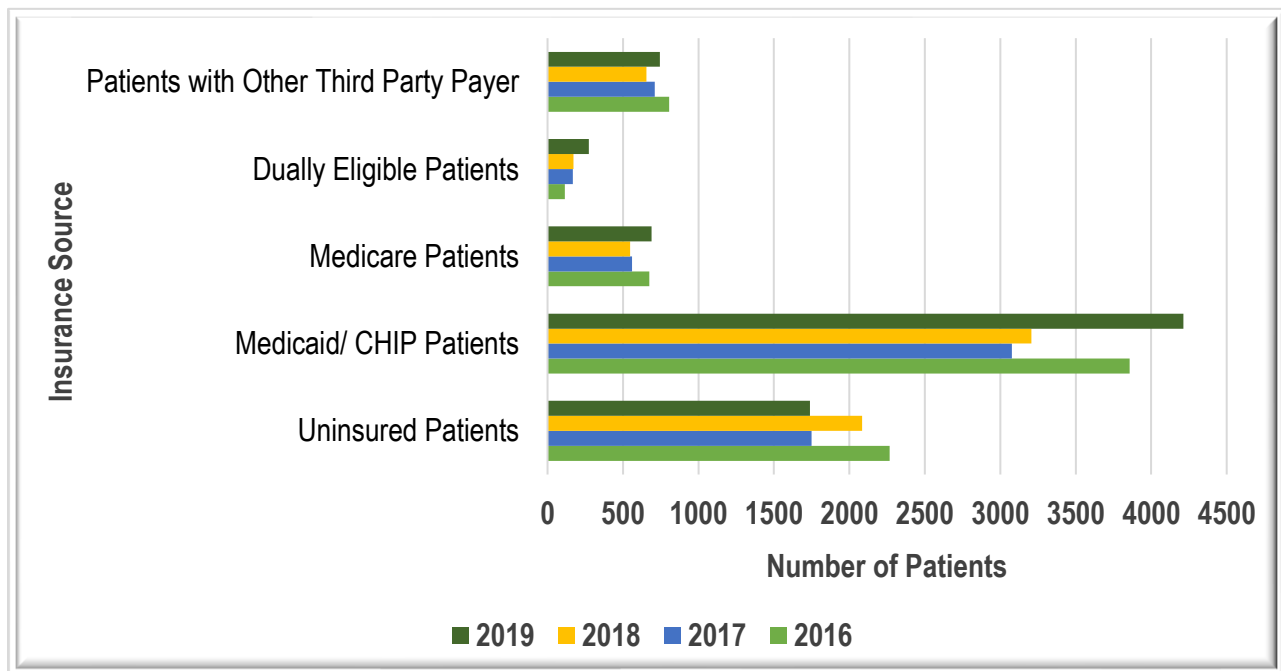
Health Determinants for Clients

Consideration of determinants are essential when completing a community health needs assessments, particularly with respect to addressing the improvement of client health, health outcomes, and overall wellbeing. The information below speaks to some health determinants.

Healthcare Access and Quality

An average of 98% of STEEMCC patients are at or below 200% of Federal Poverty Guideline, therefore more than one-half of all clients rely on Medicaid or CHIP to provide insurance coverage for health care. Additionally, Figure 78 shows that a significant number of patients are uninsured, and they comprise the second largest group of patients served at the health center. In 2018, as many as one in three (32%) patients served at the clinic was uninsured.

Figure 78. STEEMCC Clients by Source of Insurance Coverage, FY2016 - FY2019



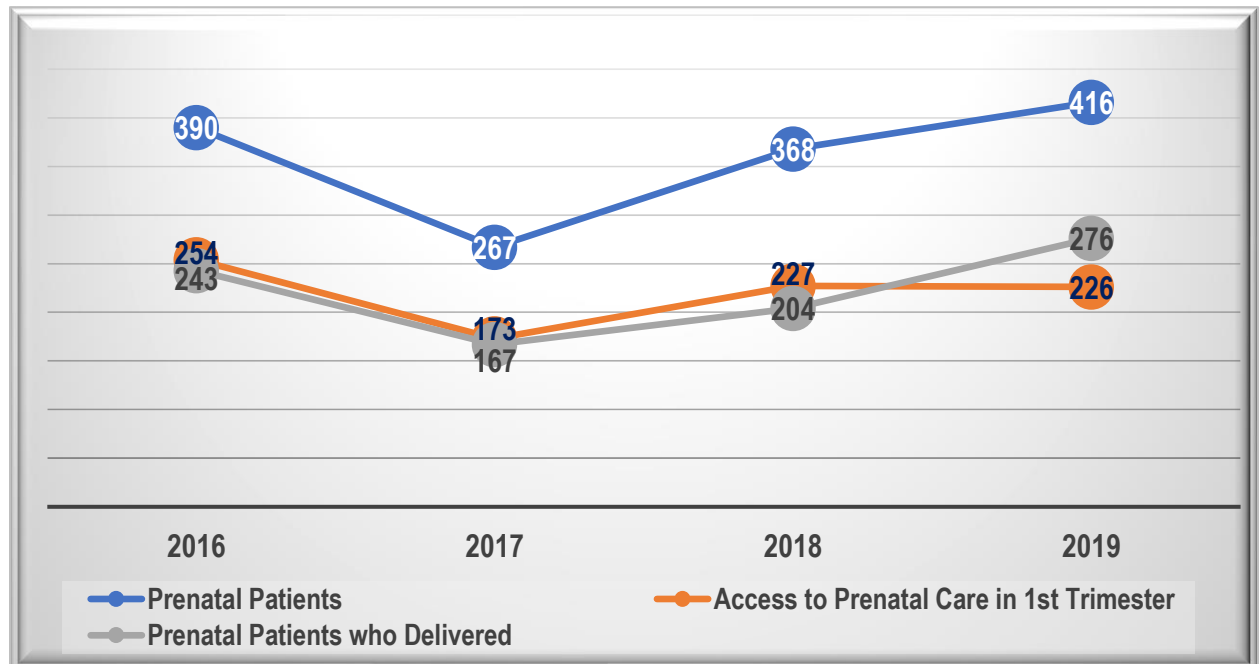
Prenatal Care

To reduce the risk of pregnancy complications and to give women a positive pregnancy experience, the WHO recommends ongoing maternal and fetal assessments. A positive

pregnancy experience, to include counselling, guidance on nutrition during pregnancy, prevention and treatment of physiological problems commonly experienced during pregnancy, will not only result in a healthy pregnancy for mother and baby, but also an effective transition to positive labor and childbirth and ultimately to a positive experience of motherhood.

STEEMCC provides prenatal care for an average of 360 patients annually, between 2016 and 2019. Figure 79 shows that not all patients receiving prenatal care at the health center accessed care in their first trimester. Only between 55% and 65% of patients who received perinatal service at the Center, accessed care in their first trimester. However, the findings indicate that the number of patients accessing prenatal care in their first trimester mirrors the number of prenatal patients who delivered. However, there is a significant gap between prenatal patients who delivered, and the total number of prenatal patients served. Interestingly, STEEMCC HRSA reporting consistently shows that, between 2016 and 2019, less than 10% of babies born to patients were classified as low birth weight babies.

Figure 79. First Trimester Prenatal Care for Prenatal Clients, FY2016 - FY2019



Health Behaviors

Clients participating in screening activities

Colorectal cancer can often be prevented through regular screening. Figure 80 shows that the number of patients screened for colorectal cancer at STEEMCC has increased steadily during the period under review. Similarly, cervical cancer screening is used to find changes in the cells of the cervix that could lead to cancer. Based on reporting data, screenings for cervical cancer have increased steadily for patients receiving services at STEEMCC (Figure 81.)

Figure 80. Number of Clients Screened for Colorectal Cancer, FY2017-FY2019

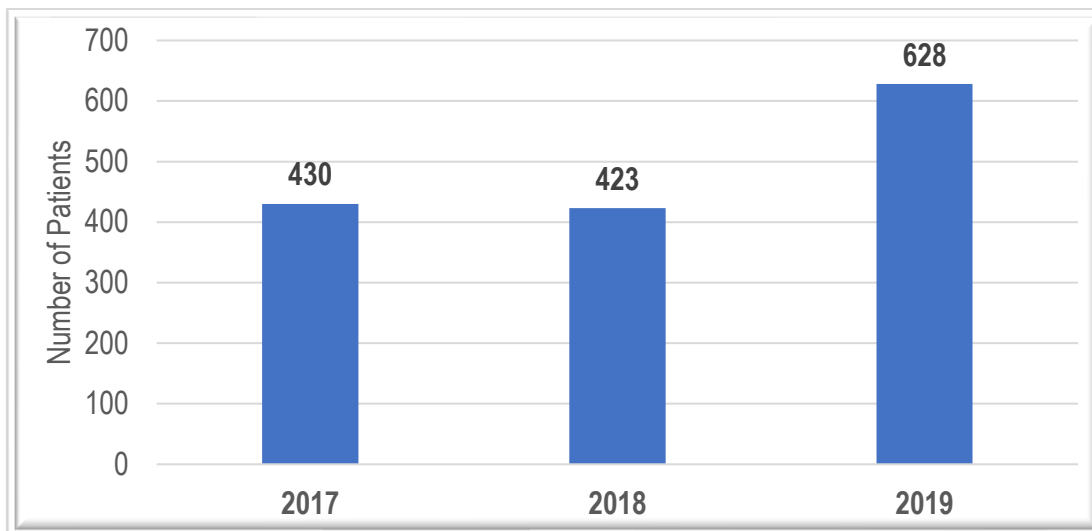
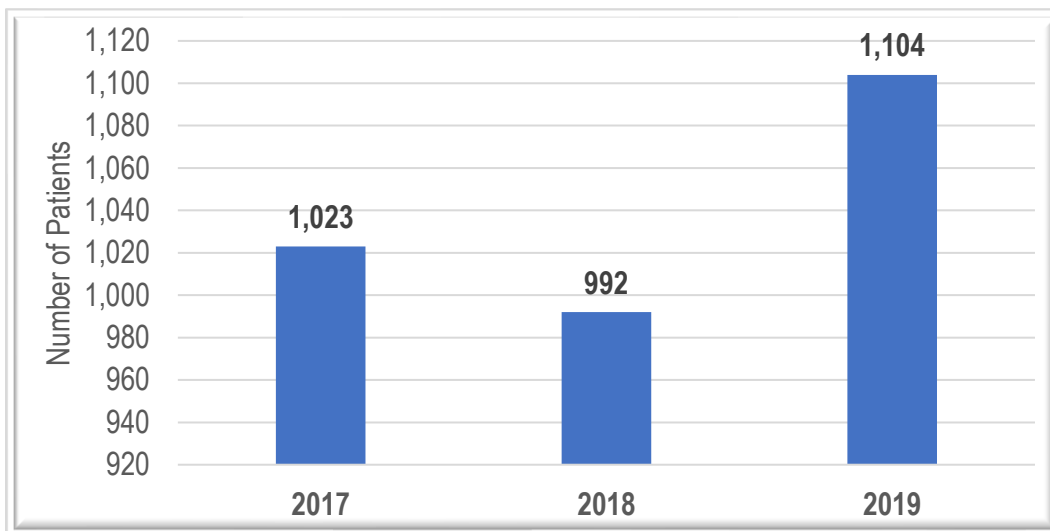


Figure 81. Number of Clients Screened for Cervical Cancer, FY2017 - FY2019



CUSTOMER SATISFACTION

Measuring customer satisfaction is integral to the growth of any organization. It serves as a measure that can inform how services provided by a company meet customer expectations and provides insights into what works and offers opportunities for optimization. St. Thomas East End Medical Center Corporation uses a Patient Satisfaction Survey (PSS) to obtain feedback from clients regarding their experience at STEEMCC, particularly with respect to satisfaction with services received and the extent to which clients feel that their needs are being met in an effort to improve client services. Survey questions cover nine broad areas, to include: Ease of Getting Care (four items); Waiting (five items); Provider (six items); three other categories of staff (covering eight items); Payment (three items); Facility (six items); and Confidentiality (one item). Clients responded to items on a Likert-type scale, with “5” representing “very satisfied” and “1” representing “very dissatisfied”. The survey also included seven open-ended items.

Results from one such survey, administered in the third quarter of 2019, provide a snapshot of how clients perceive and respond to the services and procedures offered and/or received (*See Appendix I for a copy of the Customer Satisfaction Survey.*). Clients were asked to use a five-point Likert scale to rate key services, experiences, and various categories of staff.

Figure 82. Average Ratings of Key Items on Customer Satisfaction Survey, 2019

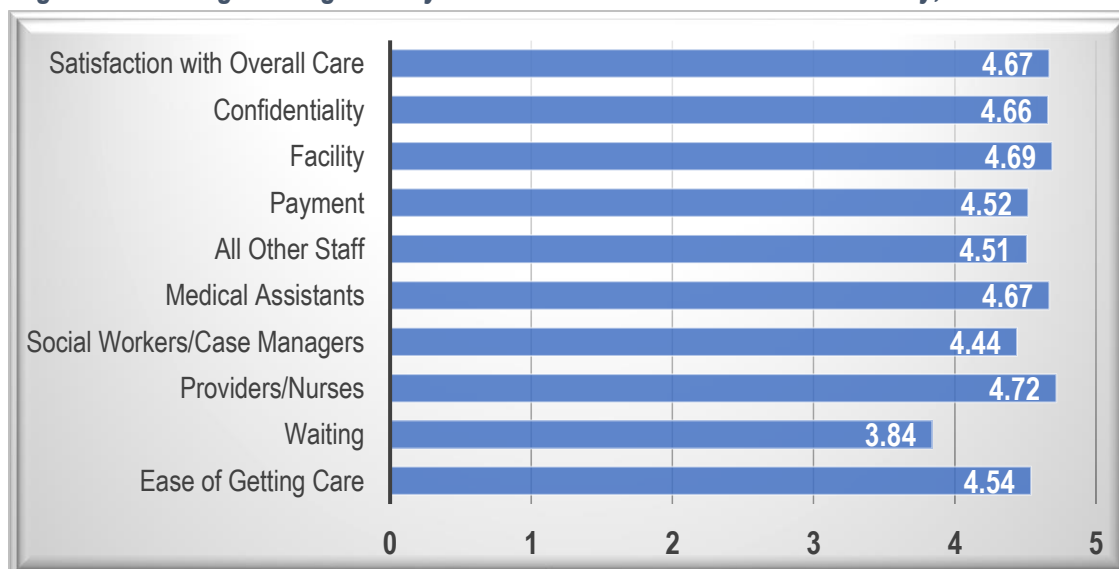
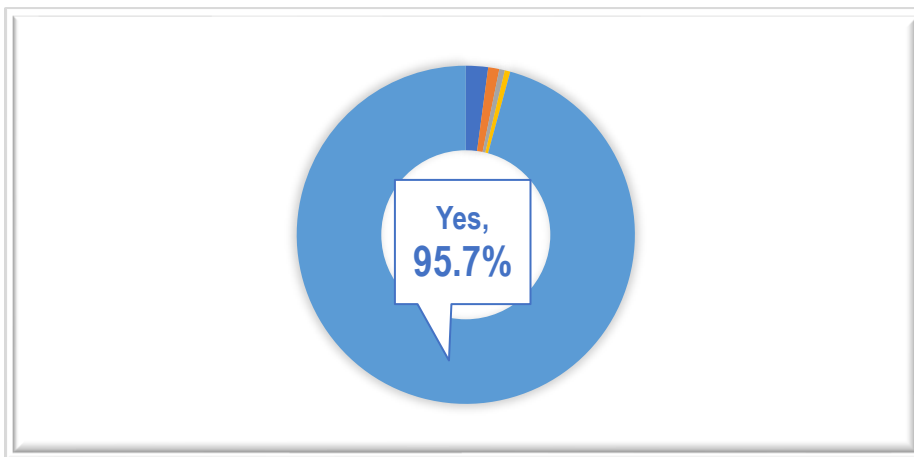


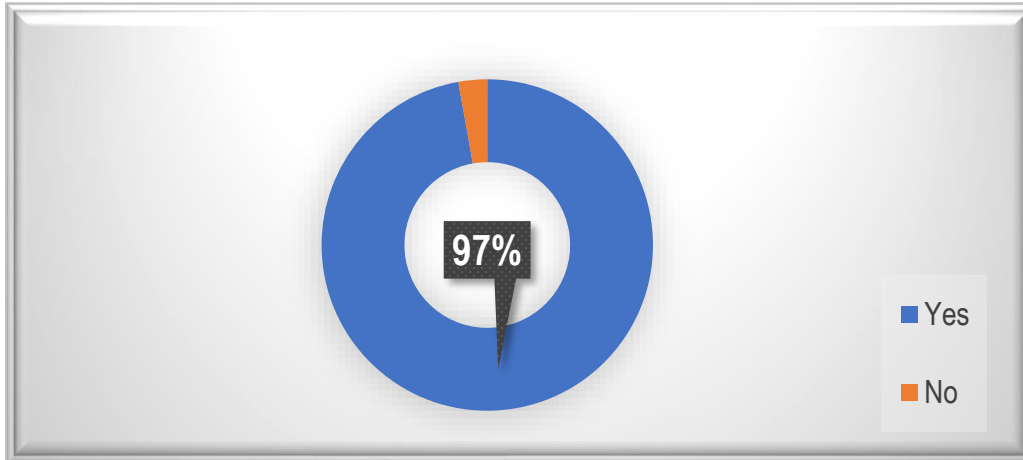
Figure 82 captures average ratings for the items in the various sub-areas of the survey and reveals that clients were most satisfied with items related to ‘Provider’ (physician, nurse, dentist, physician assistant, psychologist), with an average rating of 4.72 and a second staff category, labeled ‘medical assistants’ on the graph (but encompassing nurses, medical assistants, and nursing assistants on the survey), with an average rating of 4.67. For all areas except Waiting, on which clients rated STEEMCC and the services provided received ratings between 4 and 5, average ratings were approximately 4.5. Yet, even with respect to the area of “Waiting” (to include time in waiting or exam room, waiting for test results) the overall rating showed general satisfaction, with an averaging rating of 3.84. A testament to clients’ satisfaction with the overall care received is reflected in Figure 83, with approximately 96% of clients indicating satisfaction with the overall care received at STEEMCC.

Figure 83. Satisfied with overall care received at STEEMCC



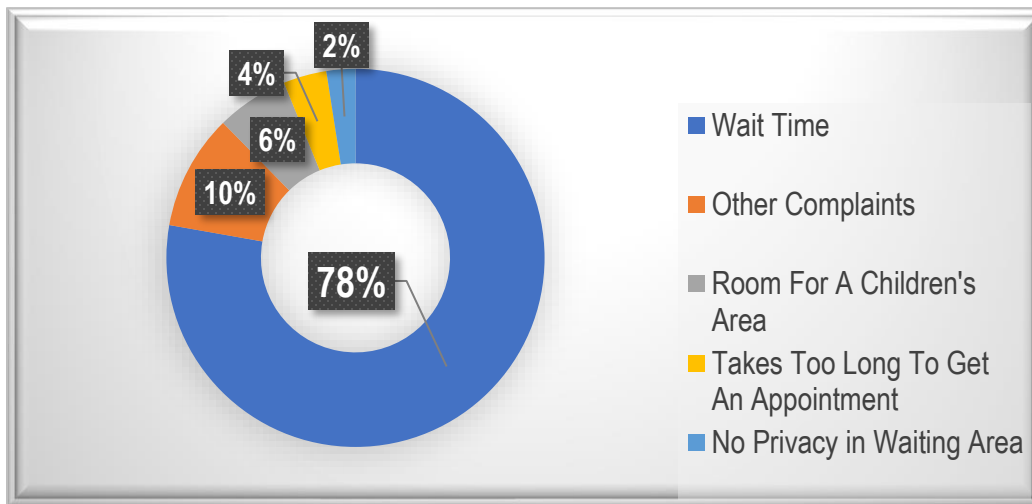
Significantly, most respondents noted that they would refer the health care facility to friends and family members for health care services (Figure 84).

Figure 84. Likelihood of referring friends and family to STEEMCC, 2019 CSS



In addition to the closed-ended questions, clients had an opportunity to provide open-ended comments. A total of 81 clients (approximately one-third of all clients who completed the Customer Satisfaction Survey) responded to one or more of the open-ended items. One prompt seeking open-ended comments asked, “What do you like least about the Center?” Figure 85 captures the response of the 81 clients who provided feedback on this item and reveals that *just over three-fourths (78%) were dissatisfied with the wait time* -- lengthy wait times on the day of the appointment to receive services. For the other areas, between two and eight clients voiced other concerns, including length of time to secure an appointment (8 persons) to no privacy in the waiting room (2 persons).

Figure 85. What Clients Like Least about STEEMCC, 2019 CSS



Along with noting areas of dissatisfaction, some clients offered suggestions to improve the services and experiences at STEEMCC. Suggestions included establishing a room or corner for children, more space in the waiting room, headsets to listen to music, and news on the television. It was also noted that it would be appreciated if clients were given information on the procedures for checking in and registering, and more staff associated with greeting were bilingual and exhibited better communication skills as they interacted with a diverse group of clients.

Additionally, survey participants made recommendations for additional services that would expand the scope of services offered by STEEMCC, specifically, eye doctor/ophthalmologists (4 persons); ultrasound/x-rays (5 persons) and other services, to include additional dentists, and overall, wider medical services in a larger facility.

CLIENT SUPPORT FROM THE PERSPECTIVE OF CASE MANAGERS AND OUTREACH WORKERS

One of the ways that STEEMCC has worked to support clients has been through direct support provided by case managers and outreach workers. To understand the supports provided by case managers and outreach workers, as well as to get a better understanding of health issues, services provided, and gaps that exist, a focus group discussion was convened with case managers and outreach workers. Focus group participation was voluntary, and no names are associated with information provided or quotes included to highlight key points shared. Participants have been working at STEEMCC from less than one year to approximately 10 years, with most being at the Center for approximately three years.

Participants described how their client caseload is determined, their roles and responsibilities and how those have changed in the past two to three years, the extent to which they have been able to observe clients' behaviors around medication compliance and chronic disease management, and case management and/or outreach activities with school-age children. Additionally, participants described how the addition of the Behavioral Health Unit at STEEMCC has affected the scope of their responsibilities and their client load. With respect

to COVID-19, participants shared how the reality of COVID-19 has affected their capacity to function, to include supports that they have been unable to provide clients due to shifts in how direct services are provided. Participants also addressed documented changes in lifestyle management and wellness behaviors that could be linked to case management/outreach services and shared areas related to case management/outreach that clients would view as particularly positive as well as areas where improvements are needed. The focus group discussion ended with participants sharing recommendations that could contribute to the improvement of programs and services for STEEMCC clients

What follows are summary statements of information shared by participants on each of the areas covered during the focus group discussion, with salient quotes to support key points made by participants.

Determination of Client Caseload

With respect to the assignment of clients to case managers and outreach workers, participants noted that this is generally based on referrals by physicians after an assessment of clients' needs and how case workers and outreach workers can assist with non-clinical aspects of their care that could have implications for health outcomes. Participants also shared that identification of clients for support by case managers and/or outreach workers is also based on "triggers" that help determine need. These triggers could be a result of observation of clients' behavior by case workers/outreach workers and/or a result of listening to clients and/or clients' family members. The quote below provides further clarity.

And we also by listening to our patients we get triggered. Sister calls in for medication for a patient who is also a behavioral health patient and medication has run out in July, you've noticed that, and you say to the sister, well, why, why are you now looking for a refill when his meds finished in July. And then we hear things like, "Oh, I don't live with my brother, but I don't think he's getting the medications that he needs", so then that starts us moving again to contact behavioral health – maybe the patient isn't getting the ... medications that he's supposed to be taking in order to stabilize him also. There are a lot of family members or ultimate triggers when we speak to them, whether

it's for medication refill or whatever the case may be just a follow up, and we hear things that are triggers. So, mostly physicians, but also the patients.

Roles and Responsibilities and Changes over the Past Two to Three Years

Participants then responded to a question around changes in roles and responsibilities over the past two to three years and whether roles and responsibilities had shifted based on client groups, for example children vs adults vs seniors. Though there were no definitive shifts in responsibilities based on client groups, case managers and outreach workers identified three areas in which their roles and responsibilities have shifted. In all instances, the shifts, as described have been influenced by the COVID-19 pandemic.

The first area in which shifts were mentioned had to do with outreach efforts, both within the Center as well as beyond the Center. Participants described having to suspend some of the weekly services provided onsite, specifically educational sessions focused on health education and disease management, which were routinely provided to clients in the waiting rooms. Additionally, Yoga classes were also suspended. The internal educational sessions were suspended primarily due to the low numbers of clients receiving services on site since March. Further, outreach activities were suspended, and participants described working on innovative alternatives to address clients' needs in the face of the suspended outreach activities. As one participant shared,

Before COVID, I was doing small little educational pieces in a waiting room area of patients about what diabetes mean, what hypertension mean, what stress looks like, those different things that affect their health while they're waiting. And now it's well, ever since COVID that definitely slow down because the patient flow slowed down. Also, when it came to outreach, we may not be able to go out. I had to be more creative and do things inward. So, I came up with idea of having care packages, (inaudible) so that patients that they were identified in this case by the physician that are in more of an immediate need of things that they were not able to get.

Another area where there were shifts was around an expansion of case worker/outreach worker responsibilities around behavioral health. Again, when queried as to when the increase in behavioral health needs and supports were most notable, participants identified the period

since the COVID-19 pandemic, noting visibly more anxiety observed in clients. A related area with some shifts, more in terms of responsiveness, had to do with coordination with external agencies to support services for clients. Case managers and outreach workers shared experiencing difficulty connecting to various agencies since the COVID-19 pandemic. Needed transportation services for clients have also been put suspended. The quotes below captures the essence of these shifts.

Yeah, in the, in the area of behavioral health in the area of anxiety and depression I am seeing a, an increase, and even among young people who are having difficulty, just dealing with what all of us are dealing with and not knowing exactly how, how to deal with it. So, we're getting more referrals, in that area. Patients who are saying, I am anxious for, or you know, I'm not feeling well, I'm feeling depressed, I'm feeling overwhelmed and stuff like that so definitely, I see an increase in that.

In terms of doing outreach for different agencies it is very much more difficult to get a hold of the individual that we work closely with or partner with. And so that makes it hard, a little bit harder than we would like it to. And so, we have to encourage the patients to be more patient especially with the opening and shutting in the community, due to COVID. So that of course increases their stress level and that trickles on to other things, and it adds to their long list of already means. So, for example, in need of transportation services, VITRAN. That has been one of the areas that we're working with that has constantly been put on hold and then put back on, off and on, off and on. And we do have clients that are in need, especially the elderly population of those services so that has been affected.

Observation of Clients' Behaviors around Medication Compliance and Chronic Disease Management

With respect to the area of clients' behaviors around medication compliance and chronic disease management, participants focused on two areas, behavioral health and cancer diagnoses. In the case of behavioral health, there was a sense of noncompliance with taking prescribed medication. For clients diagnosed with cancer, however, the challenge was described in terms of fiscal challenges that confront clients and an inability to pay for needed cancer treatment. The quotes below are illustrative of these points.

Definitely in the area of behavioral health. We have issues with patients who are non-compliant. Sometimes (inaudible), or it's not quite working for them. And so basically we would always encourage them go and talk with our psychiatrist. So, there

have been some issues with that. With medication compliance with some of our patients. And we always try to make sure that, you know, we let them know that it's something that can be addressed, and we want to do that with them and for them.

I am seeing ... a lot of patients that are unable to pay for their care. Once they've been diagnosed because here it at STEEMCC, we actually help patients with ultrasounds and other testing that needs to be done, but there is no funding available once the patient has been diagnosed. And then where do we go from there with them. We had one with a huge mass. No insurance, not a legal standing. The only lifesaver for her. I don't know how, when, where, how, but the next phone call, we made to the patient the patient was off island. She had made it to Miami. But we're actually seeing a lot of patients that are unable to pay for their care self-pay and there are a few doctors that work with them in diagnosing. Then what do you do without radiation, you, they can't even get off island to get treatment. So, there has been there has been a large to me an increase in patients that are coming out of being diagnosed and have nowhere to go.

Case Management and Outreach Activities with School-age Children

Participants shared that there is limited activity around case management and outreach activities with school-age children. Though working with adolescents and school age children is not a routine activity for case managers and or outreach workers, there are instances in which these staff persons follow up with school counselors after youth are seen at the Center. Further, prior to COVID19, during outreach activities to various organizations to present information on awareness of chronic diseases and approaches to self-care, there would be some instances when school-age children would be in attendance.

Scope of Responsibilities within Framework of the Addition of Behavioral Health Unit

Focus group participants described their scope of responsibility within the context of the addition of the Behavioral Unit at STEEMCC. The case managers and outreach workers estimated that their caseloads comprise approximately 20 – 30% of clients who have behavioral healthcare needs. Supports provided include the coordination of appointments to address behavioral health issues, working closely with the staff psychiatrist in supporting behavioral health clients, and assisting with housing needs (homeless clients) and placement at The Village on St. Croix for clients who need to address addiction/substance abuse issues. Outreach workers described collaborating with Case Managers in terms of how clients are

approached and how needed support is provided for clients. In describing the value of the Behavioral Health Unit for STEEMCC clients, one participant noted:

... the behavioral health unit has been a saving grace, especially women who have lost, their babies during pregnancies, not having to go anywhere else but we're right here, who preferred quite a number of patients to behavioral health in the past, which makes it easy, easy. As far as the caseload getting larger it hasn't affected the numbers, but it has made a difference, to being able to get a holistic treatment plan. Being, because we do need to address the mental health issues...

Meeting Clients Needs during the COVID-19 Pandemic

Focus group participants discussed adjustments that they have had to make in terms of the delivery of care and supports to clients, from the need to wear masks and face shields when meeting with clients on site to the significant increase of communication with clients through telephone calls. Case managers and outreach workers noted that some clients viewed the use of face shields by staff as an indirect statement that clients' presence pose probably risks to the staff, rather than that the staff just protecting themselves and the clients. The case workers noted increased outreach to clients phone to reaffirm clients that they were not alone, despite the need for social distancing; to continue to check in with clients, and to build rapport with them. The challenges of telemedicine were noted, particularly around services such as physicals, and immunizations, two areas where challenges remain in terms of scheduling appointments to provide those services. Participants also acknowledged that there is some loss in the quality of connections with clients that results in not being able to interact with clients in person. As noted by one participant,

Because you know that personal touch and interaction. You know, is always better. You know I find, you're able to observe more when you have people right in front of you. And it's easier, you know, to see things that you may not normally see. If the person isn't there. So ...there's some loss by not having them ...we have to find other ways to stay connected to the patient and let them know that you're still here.

Changes in Lifestyle Management and Wellness Linked to Case Management/Outreach Workers

During the focus group discussion, Case Managers and Outreach Workers described efforts to support clients with respect to wellness behaviors and lifestyle choices, particularly around medication compliance, serving as conduits between clients and physicians, assisting clients with referrals to access care external to STEEMCC, and remaining in contact with clients even when they leave the Territory to get needed healthcare at facilities on the mainland. Participants noted compiling monthly reports which documented progress of clients in their caseloads and maintaining contact, particularly through phone calls, with clients with various chronic diseases to encourage and remind them to take their medication. There was also discussion regarding some challenges with supporting undocumented clients, clients who recently became permanent residents, who need certain assistance but are not eligible for certain benefits. In general, respondents felt that their support roles benefit the clients and contribute to positive health outcomes.

What Case Managers and Outreach Workers Do Particularly Well and Areas for Improvement

With respect to what case managers and outreach workers do particularly well, participants felt that clients would highlight their consistent communication, the follow through on efforts to support clients, and clients' timely receipt of services. The two quotes below capture these perspectives.

I think they would say that we follow through and we communicate.

I would say that we get them to the services that they need as quickly as we can for the majority of them.

With respect to areas that clients would say that improvements are needed, participants noted that these would likely include areas in which efforts have to be made with external entities for referrals and services not available through STEEMCC. The case workers and outreach workers acknowledged that to some extent, clients may not feel that the STEEMCC

staff is following up sufficiently to ensure access to services and supports from other agencies. The quotes below speak to these perspectives.

[I]t might appear from the patients perspective that we are not bridging the gap in terms of doing outreach to Human Services and other department when in actuality we are especially during these times.

But I would say that there was an entire period we did not get movement. I mean I would call head of the department because... My patient has cancer ... and I would contact the directors and things would move very slowly but recently the last six, seven months. They picked up momentum and it looks like it's gone right back. There's nothing happening. It looks like they have a high and a low and we're back to the low.

Recommendations for Improving Programs and Services for STEEMCC Clients

Focus group participants stressed the need for health care workers to continue communicating that behavioral health is a critical part of overall health. There was agreement that efforts are being made in behavioral health at STEEMCC. Yet, there is a need for mental health awareness and to remove the stigma associated with mental health, as noted in the quote below.

We want to try to remove that stigma and provide services that are not necessarily associated with a diagnosis but just to be able to say that I am doing my wellness check on a regular basis and providing opportunities for people to do it and there's funding that can help with any programs to promote that because everything revolves around your mental health. So, any services that we could provide could only be helpful to the community as behavioral health looks to focus on different groups, reach out to the community and have them see a place where they can come. A place where they feel safe to talk and a place where they shouldn't experience any stigma but just to say that I am taking care of myself, my mental health which is all of me.

There was also some discussion of the need to better serve clients whose first language is not English. STEEMCC's use of Language Link to communicate to clients in their "native" language was referenced, yet there was a sense the language barriers pose one of the greatest challenges with respect to efforts to support clients. There was a recommendation for improvement in foreign language skills and support for clients with limited English facility, as noted in the quote below.

... Would like to see language. Our biggest problem is language barriers and although we use Language Link... [to] communicate with a person speaking to someone in Language Link that doesn't even speak Haitian Creole or Santo Domingan Spanish and they don't understand... They walk away frustrated... if there is some way that we could get some language here it would be good for the community. Looking at the entire population and what their needs are. We definitely need communication... teaching some basic medical terms. We are in the medical field and we want the patients to understand. Definitely conversational English.

As the focus group discussion ended, Case Managers and Outreach Workers emphasized the value of the supports and services provided to clients both during the current reality of COVID-19, but also once things return to “normal”.

We are not dealing with the full load at this time due to COVID and we are actually three strong right now compared to two strong two years ago. So definitely there's a need for us. How busy we are going to get after COVID when things are hopefully back to normal or even if they are not, we are still going to be needed but the numbers we are not sure.

PROGRAMMATIC EFFORTS TO ADDRESS CLIENTS' NEEDS: FY2017 – FY2019

Over three years of Budget Hearing testimony before the Legislature of the Virgin Islands, the STEEMCC leadership has documented programmatic efforts that have been implemented to address a range of health needs of clients seeking healthcare at the Center.

Center provides comprehensive medical care (adults); psychiatric/behavioral health services; immunization; screening (blood pressure, cholesterol; glucose; HIV testing); dental (adult and pediatric); laboratory services; funds clients unable to cover medical expenses related to mammograms; pap smears; prostate screening; radiologic studies; colonoscopies; related medications and TP to support access to these services. To help ensure accessibility to quality care for vulnerable families, STEEMCC continued its Medicaid expansion program, the sliding fee discount program, and payment plans for clients who are uninsured or underinsured.

These efforts are documented as far back as FY2017 when STEEMCC (Smith, M. STEEMCC FY2019 Budget Hearing Testimony) expanded several areas based on the 2016

C²HNA. Specifically, a Dental Clinic was added, and behavioral and mental health was expanded. There were also expansions that fiscal year in the areas of immunizations and prescription drugs.

During FY 2020 Budget Hearing Testimony (2019), STEEMCC's Executive Director reported on initiatives undertaken by the Center in FY2018 to promote health and wellness for clients. The first initiative was the expansion of case management services, with exemplary service provision as a goal. Through the implementation of expanded case management services, STEEMCC was able to:

- Serve over 350 clients.
- Provide health education information to clients and their families to assist them understanding treatment options available to them.
- Identify resources available on- and off-island to provide clients with the best quality care, at optimal cost, with effective health outcomes.
- Support clients secure off-island placements for oncology health issues for which on-island care was not available.

With respect to off-island placements, the FY2020 Budget Hearing Testimony documented challenges with these placements primarily for clients who were uninsured, underinsured, or whose insurance was provided by Medicaid.

Other initiatives included further expansion of behavioral health services, enhanced, quality laboratory services, enhanced clinical quality assurance systems and strengthened partnerships with federal, local, institutional, and nongovernment partners.

In August 2020, the most recent Budget Hearing Testimony for STEEMCC, for the presentation of the Center's FY21 budget request, three programmatic efforts/expansions to improve client health outcomes. Specific mention was made of the implementation of Premier Integrated Community-Based Behavioral Health Program, a further enhancement of the behavioral health efforts already in place, a renewed focus on community education, and the implementation of a Substance Abuse Intervention program.

These programmatic initiatives across multiple fiscal years demonstrate STEEMCC's consistent commitment and understanding of the need and value of evidence-based decisions and the need to implement programs that support clients overall health and well-being, while being cognizant of fiscal challenges facing clients with public insurance or with insufficient or no insurance to access secondary and tertiary care not available at STEEMCC, whose focus is on primary healthcare delivery.

PRIORITY HEALTH AND PROGRAMMATIC ISSUES

This section of the Community Health Needs Assessment focuses on priority health and programmatic issues, anchored in the findings previously reported. The prioritization of health and programmatic issues provides another resource that STEEMCC can utilize in making decisions regarding targeted expansion of care to address health and programmatic issues for clients.

PROCESS TO PRIORITIZE HEALTH AND PROGRAMMATIC ISSUES

The project team used a three-phased approach to determining priority health and programmatic issues. The first phase was consideration of what the administrative and secondary data revealed, as well as what was revealed in the focus group discussion with Case Managers and Outreach Workers. Administrative and secondary data considered included quantitative data that provide a context with respect to the environment within which STEEMCC operates as well as key socio-demographic characteristics of persons seeking services and being served, as well as socio-economic and political realities of the Territory broadly and the St. Thomas-St. John District, more particularly. Other secondary data also considered include quantitative data related to health behaviors, health status, and health outcomes, STEEMCC client satisfaction survey, and qualitative data from STEEMCC's Budget Hearing testimony (multiple years). The final aspect of phase 1 related to attention to qualitative data and findings emanating from the focus group discussion with Case Managers and Outreach Workers.

Phase 2 involved a review of key health indicators from Healthy People 2020 and Healthy People 2030 that aligned with some of the findings from the secondary quantitative data and a determination of whether findings related to those indicators show the Territory lagging behind on the Healthy People 2020 targets. Further, with the focus shifting to Healthy People 2030, related objectives and indicators can serve as guides as STEEMCC set targets for addressing various health priorities. The final phase, Phase 3 involved incorporating feedback

from key stakeholders – the Project Advisory Committee, on draft priority health and programmatic issues to guide the final priorities captured below. Key priority health and programmatic issues are noted below.

PRIORITY HEALTH ISSUES

Based on the feedback from stakeholders, including clients, as well as the data and information from the datasets included as part of this Needs Assessment, the following emerge as priority health issues for the STEEMCC.

1. Needed health education for adults in the areas of health screenings, dental health, and weight management.
2. Needed health education for adolescents around nutrition, sedentary behavior, and unprotected sex.
3. Needed health education for pregnant women around the importance of accessing prenatal care in the first trimester.
4. Need to address behavioral health issues particularly around depression and PTSD for adults, adolescents, and children.
5. Need to address reduction of non-academic-related screen time for adolescents.
6. Need to address physical environment for adolescents in school settings with respect to reported gang presence in USVI public middle and high schools.
7. Increasing access to secondary and tertiary cancer treatment particularly for clients who are uninsured, underinsured, and those insured through Medicaid.

PRIORITY PROGRAMMATIC ISSUES

- Continued expansion of behavioral health providers and services to STEEMCC clients, to include children and adolescents.
- Expansion of current collaborations by establishing targeted collaborations with VIDE to address risky health behaviors, behavioral health issues, and safety considerations associated with the physical environment of public secondary schools in the St. Thomas-St. John District.
- Formalization of collaboration agreements/understandings with VIDHS and other key government agencies for Case Managers and Outreach Workers to be able to timely and effectively assist clients needing support.
- Explore options for identification of financial support for uninsured and underinsured clients needing secondary and tertiary care, based on laboratory and other test results.
- Provide targeted training for Case Managers and Outreach Workers to be able to optimally support clients within the context of COVID-19, to include consideration of the need for social distancing and facilitate increased use of Telehealth services.

- Mitigate wait-time for clients with respect to appointments and improve clients' overall experience during visits to the Center.

STRENGTHS, GAPS, AND OPPORTUNITIES

The STEEMCC mission, to provide comprehensive, high quality, accessible, affordable and cost-efficient primary healthcare services, including, patient education, community outreach, and research, and the data and information collected in this Needs Assessment are the basis for the strengths, gaps and opportunities the Center should consider in its future planning and actions.

STRENGTHS

1. Responsiveness to recommendations of 2016 C²HNA as evidenced by the addition of a separate, dental health unit which provides dental services to pediatric and adult clients.
2. Ongoing, incremental expansion of behavioral health providers and services available to clients.
3. Expansion of non-clinical staff – Case Managers and Outreach Workers – to support clients as they navigate challenges and access needed secondary and tertiary care and related services.
4. Expansion of pharmacy and laboratory services for clients.
5. Providing care for an increased number of clients after disruptions associated with hurricanes in 2017 and despite difficult conditions of the recovery.
6. Availability of services and informational campaigns supporting an increase in screenings for colorectal cancer and cervical cancer.
7. Maintenance and expansion of agreements with key agencies within the V.I. Government and other medical facilities within and outside the Territory in support of mission fulfillment.
8. Sought and successfully obtained grant funding and community support for improving staff and services, including outreach and transportation services for clients needing targeted support.

GAPS

1. Insufficient staff with language skills to meet growing communication needs of diverse client pool.
2. Need for targeted programs to address patient support for management of key chronic illnesses, to include obesity, hypertension, HIV, cancer, and overall wellness.

3. Minimally targeted services for adolescents.
4. Clients' complaints regarding wait-time may signal the need for added providers.
5. Because of COVID-19 and social distancing requirements, current space does not allow for the provision of targeted clients services by Case Managers and Outreach Workers at the Health Center.
6. Insufficient programs to provide special information and support needed for disease-management and wellness of children and adolescents and geriatric clients (ages 65 and older).

OPPORTUNITIES

1. Targeted collaboration with the public education system in the St. Thomas-St. John District to address identified health priorities for children and adolescents, particularly around behavioral health issues, the physical school environment for middle school and high school students, and nutrition education.
2. New or expanded MOAs and collaborations associated with funding in support of hurricane recovery and resilience and climate change impact mitigation.
3. Expansion of telehealth, outreach, and case management to mitigation negative impacts of COVID-19 impacts on clients' health.
4. Expansion of physical space at Health Center to accommodate new realities associated with COVID-19.
5. Consideration of revisiting appointment scheduling or increase of providers to reduce client wait-time while at Health Center to see providers.
6. The modification of training for outreach personnel and providers to include bilingual communication and consideration of conversational English classes for clients based on the demographic shifts in populations served by STEEMCC.

CONCLUSIONS AND RECOMMENDATIONS

The contextual information and findings presented in this needs assessment provide a solid foundation upon which the STEEMCC leadership can continue to build and expand the services provided to clients as well as the continued growth and development of both clinical providers and other support personnel that are part of the Center. The findings not only affirm the diversity and complexity of the context within which STEEMCC operates, but also demonstrates the systematic increase of the Center's capacity and purposeful, data-driven approach to meeting clients' medical, dental, and psycho-social needs through integrated services and partnerships with a ranges of entities and providers within and outside STEEMCC's catchment area, the St. Thomas-St. John District, and the Territory.

The findings affirm clients' continued satisfaction with the services received through the Center and reveal that, despite the significant disruption in infrastructure, educational, healthcare, and other areas of the Territory generally, and the St. Thomas-St. John District, in the aftermath of Hurricanes Irma and Maria, STEEMCC, some three years later, has not only been able to expand services in the areas of behavioral health, case management and outreach, laboratory, and pharmaceutical services to clients, but has been able to build back the number of clients served to numbers close to pre-hurricane levels.

STEEMCC is therefore poised, with the able leadership, guided by the findings of this 2020 CHNA, to continue its expansion efforts, to utilize the findings highlighted in this needs assessment to make the case for the need for additional funding to meet the growing needs of clients served, and potential clients who will seek services through the Center in the future. It is within this framework the recommendations made are anchored.

First, STEEMCC needs to recognize what it does well and build on this, particularly in the area of the provision of high-quality care and services to clients, as evidenced from client satisfaction survey results.

Second, STEEMCC should incorporate, within its strategic priorities, addressing the health and programmatic priorities noted, and, in particular, addressing areas where indicators related to client health outcomes fall short of Healthy People 2020 targets set, and, as the Center implements plans to address these priorities in 2021 and beyond, to consider the Healthy People 2030 targets for particular indicators to set interim targets for STEEMCC client health outcomes. Addressing the health and programmatic priorities must be done within the framework of the Social Determinants of Health (Figure 86).

Figure 86. Social Determinants of Health



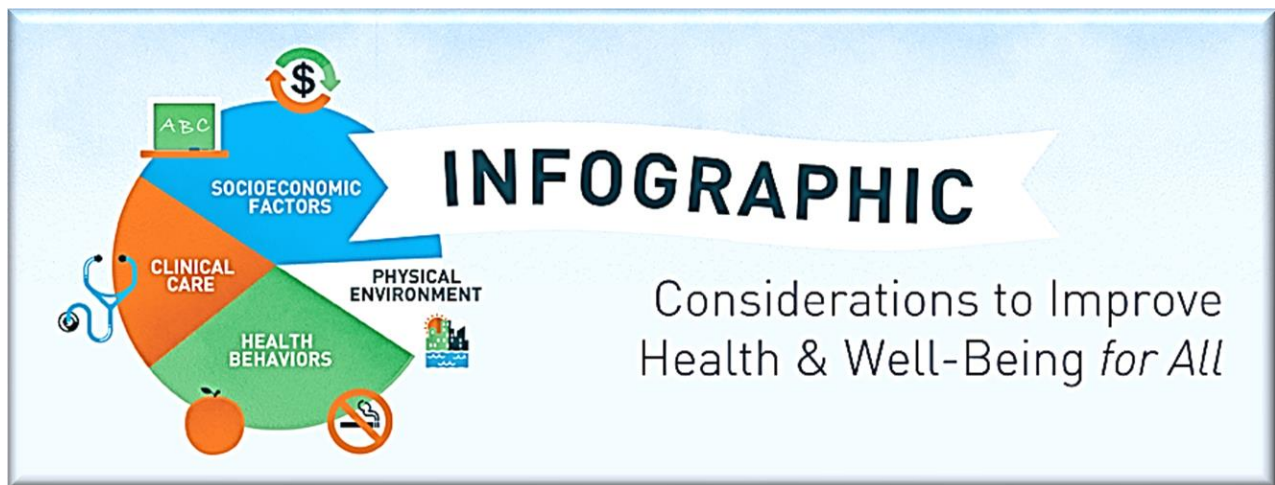
Source: Centers for Disease Control & Prevention

The findings presented highlighted how some of these social determinants are manifest for STEEMCC's current and prospective clients. Notably, the findings that over 40% of middle and high school students in the St. Thomas-St. John District reported the presence of gangs in their schools signals the need for STEEMCC to collaborate with leaders within the public school system to address this health risk. Further, with respect to students, such collaboration

can also address health issues around the social and community context domain of the social determinants of health, particularly findings related to students' average daily screen time.

Additionally, findings that revealed that financial exigency limits some clients' capacity to access needed secondary and tertiary health care around female oncology health issues that link to the domain of health care access and quality.

Figure 87. Social Determinants of Health - Considerations in Addressing Community Health and Wellness



Source: Centers for Disease Control & Prevention

Further, as broken down further in Figure 87, STEEMCC can directly contribute to the improvement of the overall health and well-being of clients through timely, high-quality primary clinical care. Direct interventions through services provided by Case Managers and Outreach Workers can help address health behaviors, again, around some of the health priorities noted to include addressing overweight and obesity, increased and timely dental health practices, increased number and percentage of pregnant women accessing prenatal care in the first trimester, and addressing nutrition and nutrition choices among adolescents.

A third recommendation is that STEEMCC embrace and act on the opportunities enumerated, particularly around increased collaboration to expand its reach to support clients – adolescents, clients whose first language is not English, clients with financial challenges who may need support from community-based organizations as well as the Department of Human Services, the Department of Education, and the University of the Virgin Islands.

A fourth recommendation is that, within the current realities of COVID-19, STEEMCC make the needed investment to ensure that optimal telehealth services are provided to clients and that opportunities are provided to supplement telehealth services with face-to-face services to ensure that the Center's most vulnerable clients do not fall through the cracks. Further, attention should be paid to the tools that Case Managers and Outreach Workers may need to be able to optimally carry out their duties and responsibilities in supporting clients in this new reality.

A final recommendation is that STEEMCC continue to anchor decisions around service expansion, collaboration, and overall priorities in the best data available so that clients most critical medical, dental, and behavioral health care needs can be met, thereby improving the health and well-being of as many STEEMCC clients as possible, on an ongoing basis.

RESOURCE INVENTORY

This section provides a brief description of existing health care facilities and services in the St. Thomas-St. John District, as well as related support services and entities, to include community-based organizations (CBOs) and non-governmental organizations (NGOs) that have provided certain types of services.

DESCRIPTION OF EXISTING HEALTH CARE FACILITIES WITHIN THE SAME COMMUNITY, INCLUDING SPECIALTY SERVICES

Aside from STEEMCC, the most significant health care facility in the St. Thomas-St. John District is the Schneider Regional Medical Center (SRMC), which comprises the only hospital in the St. Thomas-St. John District, the Roy Lester Schneider Hospital, the Myrah Keating Smith Community Health Center on the island of St John, and the Charlotte Kimelman Cancer Institute. Current information on the services offered, staffing, and hours of operation can be found at [here](#).

In addition to SMRC, as noted in Table 1 (page 14), there is a wide range of health care facilities and providers in the St. Thomas-St. John District, providing care ranging from family medicine and pediatrics to radiology, orthopedics, and oncology and hematology.

STEEMCC collaborates and partners with all other health care and social service resources, and provide information, as well as referrals to specialty services and procedures, when necessary and appropriate.

ADDITIONAL RESOURCES AVAILABLE TO MEET THE COMMUNITY HEALTH NEEDS IDENTIFIED

The 2013 Virgin Islands Community Survey includes a section on health in the Territory that offers initiatives that will continue to be associated with opportunities for collaboration and advancement for the STEEMCC in areas such as cloud storage and management of health data, advancement of telemedicine and collaboration with VIDOH on emergency planning and addressing climate impact issues.

In addition, the Community Foundation of the Virgin Islands (CFVI) publishes a [Directory of Community Organizations](#) listing government and non-government organizations as well as community-based organizations that serve the U.S. Virgin Islands. The Directory, published bi-annually, is regularly updated and updated e-versions can be retrieved from [CFVI's website](#). The current directory, dated 2016-2017, provides both a services index as well as an alphabetical listing of community organizations. Under the heading of “health” services, over 35 community organizations are listed. Further, the directory includes separate listings of licensed childcare and preschool centers, private and parochial schools operating in the Territory, and section on Virgin Islands Government services, with a focus on “selected agencies serving children, youth, and families.

The directory provides contact information, to include physical location, telephone and/or email contact, as well as the name and title of the key contact person. Information on the purpose of the organization as well as programs offered is also provided.

DISSEMINATION PLAN

DESCRIPTION AND DATE OF REPORT RELEASE TO PUBLIC

The final e-version of the STEEMCC 2020 Community Health Needs Assessment will be released by the leadership of the St. Thomas East End Medical Center Corporation to key stakeholder groups. Specific details regarding release will be shared by the STEEMCC leadership through a media alert.

ACCESSING THE REPORT – LIST OF WEBSITES AND HOT LINKS

The final e-version of the report will be available on CERC's microsite on the UVI website as well as from STEEMCC's website. Interested persons can download the report for easy access. A limited number of hard copies of the report may be available. At least one hard copy will be available at each UVI library for use at the library only. Interested persons are asked to contact STEEMCC directly regarding the possible availability of hard copies of the report.

DESCRIPTION OF PROCESS TO SHARE INFORMATION WITH THE BROAD COMMUNITY

As appropriate, members of CERC will collaborate with the STEEMCC leadership to share findings of the STEEMCC 2020 Community Health Needs Assessment with stakeholders and members of the broader community through virtual platforms, given the current realities of COVID-19 within the U.S. Virgin Islands.

APPENDICES

APPENDIX I. STEEMCC PATIENT SATISFACTION SURVEY



PATIENT SATISFACTION SURVEY

We would like to know how you feel about the services we provide so we can make sure we are meeting your needs. Your responses are directly responsible for improving these services. All responses will be kept confidential and anonymous.

Patient's Age: _____ **Race:** (please circle one): Black White Asian Other _____

Ethnicity: (please circle one): Hispanic Non-Hispanic

Who did the patient see today: Doctor Nurse Social Worker Psychologist Other _____

Please circle how well you think we are doing in the following areas:	Very Satisfied 5	Satisfied 4	Just Average 3	Somewhat Satisfied 2	NOT SATISFIED 1	DOES NOT APPLY
EASE OF GETTING CARE						
Ease of making appointment						
Hours center is open						
Convenience of location						
Follow up to give test results						
WAITING						
Time in waiting room						
Time in exam room						
Waiting for tests to be performed						
Waiting for test results						
Waiting for immunizations						
PROVIDER (PHYSICIAN, NURSE, DENTIST, PHYSICIAN ASSISTANT, PSYCHOLOGIST)						
Listens to you						
Takes enough time with you						
Explains what you want to know in words you understand						
Gives you instructions and information on new medications						
Gives you good advice and treatment						
Involves you in decision making process						
SOCIAL WORKER, NUTRITIONIST, CASE MANAGER						
Listens to you						
Takes enough time with you						
Explains referrals, testing, and changes in medications etc						
Gives you good advice and treatment						
NURSES, MEDICAL ASSISTANTS, NURSING ASSISTANTS						
Friendly and helpful to you						
Answers your questions						
ALL OTHER STAFF						
Friendly and helpful to you						
Answers your questions						
PAYMENT						
Amount you pay						
Explanation of charges						
Collection of payment/money						

PATIENT SATISFACTION SURVEY – Page 2

FACILITY						
cleanliness of waiting room						
cleanliness of exam room						
cleanliness of bathroom						
ease of finding where to go						
safety while waiting						
privacy						
CONFIDENTIALITY						
Keeping my personal information private						
SATISFACTION WITH OVERALL CARE						

- 1. Do you consider this center your regular source of care? YES NO
- 2. Are you likely to refer friends/relatives to this center? YES NO
- 3. What do you like best about the center? _____

- 4. What do you like least about the center? _____
- 5. Any suggestions for improvement? _____

- 6. Are there any additional services you would like the center to provide?

- 7. Are our hours of operation convenient for you? _____

THANK YOU FOR COMPLETING OUR SURVEY!!

APPENDIX II. PROTOCOL USED FOR FOCUS GROUP DISCUSSION

FOCUS GROUP PROTOCOL STEEMCC CASE MANAGERS AND OUTREACH WORKERS SEPTEMBER 21, 2020

Introduction:

Thank you for agreeing to participate in this focus group. We are researchers from the Caribbean Exploratory Research Center (CERC) located at the University of the Virgin Islands (UVI). We have been engaged by STEEMCC to complete a follow up Community Health Needs Assessment (CHNA) to update the initial Comprehensive Community Health Needs Assessment (C²HNA) completed in early 2016. The information from this focus group discussion will be added to other data that we have from the UDS reports to address the improvement of the health of residents served by the STEEMCC, St. Thomas, USVI.

The focus group may take 60-90 minutes and will be confidential. In this discussion, we would like to ask you about your experiences as a case manager or outreach worker over the past 3-5 years. The intent is to use the information shared to help identify priority health issues for the clients receiving services from STEEMCC as well as to make recommendations regarding how programs and services could be improved to better serve clients and to address identified gaps in programs and services offered by STEEMCC. We are requesting your permission to the discussion. {Thank you, if permission granted.} 12 questions will be posed.

Key for question assignment: **Purple: LER;** **Brown: DEB;** **Blue: NM**

Questions [12]

1. Please share your role at STEEMCC and the length of time in your role.[LER]
2. How would you describe your typical day or week, with respect to working with clients?
3. How would you say your roles and responsibilities have changed over the past three to five years? Probe: Do these roles and responsibilities differ if you are working with pediatric (0-17) clients, adults (18-64) or geriatric clients (65+)? [DEB]
4. Have you had occasion to observe clients' behavior regarding medication compliance, chronic disease management, or other health-related behaviors?
5. Can you describe the case management and/or outreach activities that you have engaged in with school age children, adolescents, and their families? Probe: How have you assessed the success of these activities? [NM]
6. How has the addition of the Behavioral Health Unit at STEEMCC affected your scope of responsibilities with respect to behavioral health issues and/or your client load?
7. How has the situation with COVID-19 affected how you function as a case manager and/or outreach worker? How has the shift to telemedicine affected how you function as a case manager/outreach worker? [LER]
8. Are there documented changes in lifestyle management and wellness behaviors because of availability of case management/outreach services?
9. As a case manager/outreach worker, are there ways you would like to support your clients that you are unable to, given the current situation with COVID-19? What supports would assist you in better meeting your clients' health needs? [DEB]
10. If we were to ask your clients, what would they say the Center does particularly well? With respect to case management and outreach services? In what areas would they say the Center's services could be improved?
11. Are there formal or informal client satisfaction surveys completed to assess clients' satisfaction with case management services and/or outreach services? [NM]
12. We have shared with you the purpose for this interview and the CHNA. Is there anything else you would like to share that you think will help us provide the most meaningful recommendations regarding improving programs and services for STEEMCC clients?

APPENDIX III. FEEDBACK FROM PAC AND OTHER STAKEHOLDERS ON NEEDS ASSESSMENT

**St. Thomas East End Medical Center
2020 Community Health Needs Assessment
Optional Feedback Form November 2020**

Three feedback forms were received. Feedback received is summarized below.

Statements describing the 2020 STEEMCC Needs Assessment: The Needs Assessment	AGREE	UNCERTAIN	DISAGREE
1. Gives a clear description of current USVI residents using specific data and data sources.	3	U	D
2. Gives a clear description of the social and economic context of USVI households and families in the Territory and the St. Thomas-St. John ISTT-STJ) District.	3	U	D
3. Provides easily understandable information on the education, health, nutrition, and social services needs of children and families in the STEEMCC catchment area.	3	U	D
4. Provides valuable information documenting the economic, social, educational, health, and environmental factors that affect health outcomes for children and families in the STEEMCC catchment area.	3	U	D
5. Provides clear information about the health status of children, youth, and adults in the STT-STJ District.	3	U	D
6. Presents clear, understandable data and information on health issues facing children, youth, and adults in the STT-STJ District	3	U	D
7. Provides understandable information about resources available to serve children and families in the STT-STJ District.	3	U	D
8. Clearly and logically presents the gaps, strengths, and opportunities related to providing healthcare for families in the STEEMCC catchment area.	3	U	D
9. Clearly describes the major issues facing the STEEMCC with respect to providing services to the community.	3	U	D
10. Is an easy to understand presentation of the goals and mission of STEEMCC.	3	U	D

Respondents identified as: educator (1), nurse (1), and parent (1).

Comment 1: The STEEMCC 2020 Needs Assessment was very informative and eye-opening. It presents valuable information that helps the community to better understand the services provided at STEEMCC and areas where STEEMCC can improve patient care.

Comment 2: Excellent report. The information was presented in a logical, comprehensive, and easy to read manner. Documentation throughout the entire report was clear and succinct. Thank you for allowing community feedback to the 2020 Needs Assessment.

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