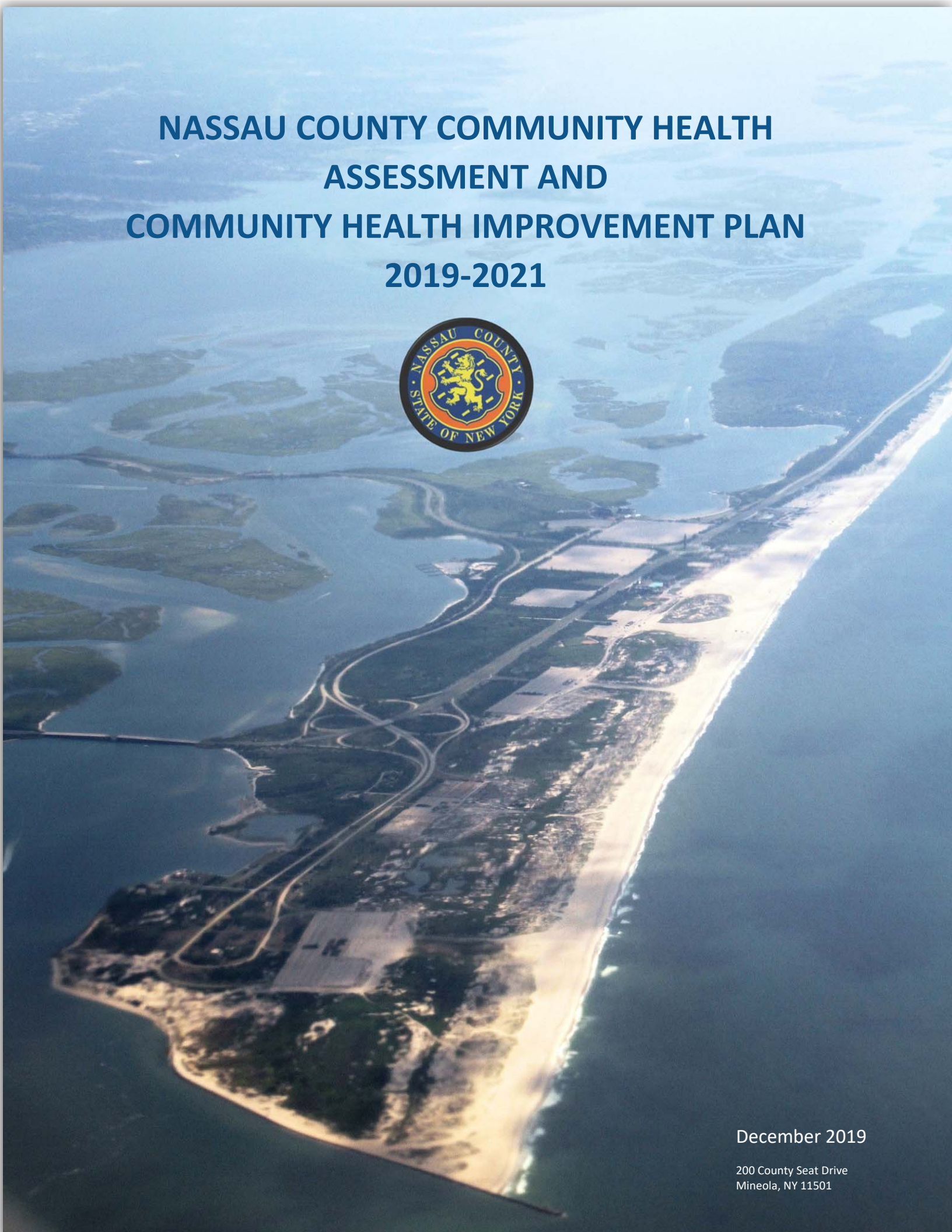
NASSAU COUNTY COMMUNITY HEALTH ASSESSMENT AND COMMUNITY HEALTH IMPROVEMENT PLAN 2019-2021



December 2019

200 County Seat Drive
Mineola, NY 11501

Executive Summary of the Community Health Assessment and Improvement Plan for Nassau County, NY.

Located in the western region of Long Island, Nassau County is home to some 1,363,069 residents. Nassau's populace lives within roughly 287 square miles of the county's 453 total square miles – the rest is occupied by water. The following report provides a snapshot of the health of Nassau County's residents and a plan for improving it. This assessment was based on demographic, publicly available morbidity and mortality, and qualitative data. The results consistently demonstrated that Nassau County's wealth translates to overall excellent health. However, a closer examination of underserved communities finds that a significant part of Nassau County's population experiences poor health outcomes and conditions. This is true for hospitalizations due to chronic disease, specific infectious diseases, and perinatal outcomes. Vital statistics (birth and death records) demonstrate that chronic diseases are the leading cause of death as the population ages.

New York State Department of Health (NYSDOH) identifies health issues as part of its Prevention Agenda from which counties are required to select two health priorities that it will address during a Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP) cycle. Two health priorities were selected for Nassau County and its partners to address: (1) preventing chronic disease with a focus on chronic disease preventive care and management and (2) promoting well-being and preventing mental and substance use disorders with a focus on mental and substance use disorder prevention.

These priorities, chosen from NYS Department of Health's Prevention Agenda, are similar to priorities selected from the prior CHA and CHIP cycles. Chronic disease and mental health are multifactorial and not quickly remedied. They are impacted by multiple determinants of health including behavior, economics, social barriers, access to quality clinical care, and the environment. Therefore, to achieve improvement in the health of Nassau County, collaboration across multiple agencies is necessary.

The Long Island Health Collaborative (LIHC) was created in 2013. It is a regional partnership including local health departments from both Nassau and neighbor Suffolk County, hospitals, academic institutions, community-based organizations, associations and the Nassau-Suffolk Hospital Council which serves as the coordinating agency. The LIHC is funded by the New York State Population Health Improvement Plan (PHIP). The advantage of this broad-based collaborative is that it provides expertise in the areas of 1) statistical analysis and methodology, 2) clinical care and

community-based programs, 3) evidence-based interventions, and 4) community feed-back. The health departments provide expertise in data analysis, methodology, connection to the community and understanding its needs, evidence-based programs, and organization. The hospitals provide much of the direct health care to the community including chronic disease community-based programs and interventions. The hospitals are distributed throughout the county and increase the accessibility to residents. Academic institutions provide capacity to collect qualitative data and expertise in assessment methodology. Community based organizations and associations offer insight of the public's need and methods for outreach. In addition, the LIHC contributes staff to coordinate its overall efforts, provides communication, and education and reports for members and residents.

Nassau County Health Department relies on the community for input into the CHA and CHIP. The community was solicited to identify these two priorities through the following: The Long Island and Eastern Queens Community Health Assessment Survey, Focus Groups in the community, and In-Depth Interviews of community-based organizations. In addition, the collaborative meetings are regularly scheduled affording different sectors of the community to participate. As a result, the community provides feedback on the priorities and the CHIP's interventions.

Nassau County's Community Health Improvement Plan describes specific, ongoing programs among hospitals, the LIHC and the Nassau County Health Department which addresses the two selected health priorities. Evidence-based strategies for interventions were chosen with community resources in mind. Such interventions include education, self-management programs, community walking programs, support groups and services, trainings, and linkages to care. These programs are tracked collectively and regularly to determine their impact by measuring satisfaction, use, and overall improvement in health. Overall health is monitored by periodic review of hospitalization and vital statistics data. The NYS Prevention Agenda dashboard, an online reporting tool, is an important gauge providing the community with feedback on the progress of the priorities.

Nassau County Department of Health continuously seeks to improve the health of the community by regularly assessing its health, developing a plan and providing services. The emphasis on chronic disease and mental health reflects not only the health outcomes but the desires of the community. Nassau County leads a public health system that works to create healthy communities. Through services and community partnerships, its mission is to promote and protect all who

live, work and play in Nassau County. This community assessment and plan provides a framework by which to achieve this.

Important websites and resources:

Nassau County Department of Health: https://www.nassaucountyny.gov/1652/Health-Department

Long Island Health Collaborative: https://www.lihealthcollab.org/

NYSDOH Prevention Agenda: https://www.health.ny.gov/prevention/prevention_agenda/2019-2024/index.htm

NYSDOH Community Health Indicators: https://www.health.ny.gov/statistics/chac/indicators/

NYS Community Health Indicators by Race/Ethnicity: https://www.health.ny.gov/statistics/community/minority/county/

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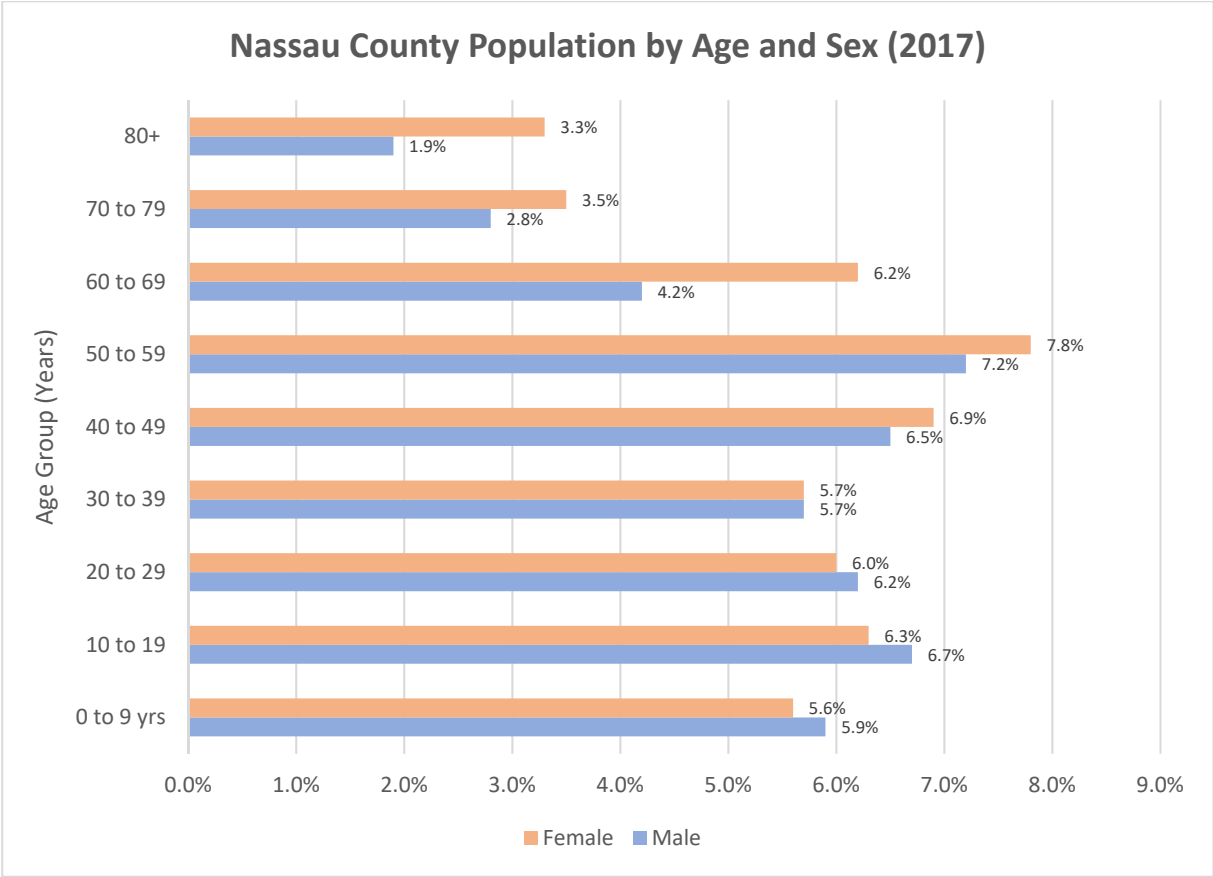
Chapter 1: Nassau County and its Demographics[1]

Located in the western region of Long Island, Nassau County is home to some 1,363,069 residents. Nassau's populace lives within roughly 287 square miles of the county's 453 total square miles—the rest is occupied by water. Formally recognized as a county of New York in 1899, Nassau County is bordered by New York City's Queens County to the west and Suffolk County to the east. Nassau is composed of three towns (North Hempstead, Hempstead and Oyster Bay) and two cities (Glen Cove and Long Beach).

Age and Sex Profile



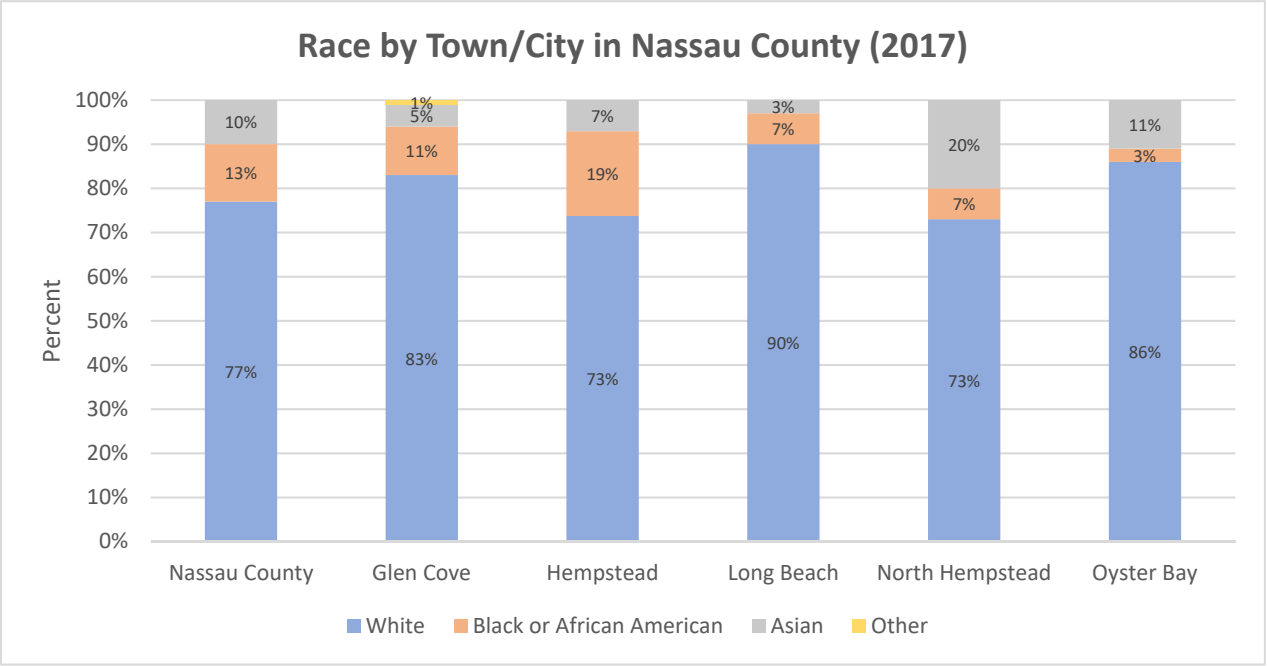
With a median age of 41.5 years, Nassau County is generally an older community compared to New York State (38.1 years of age) and the United States (37.6 years of age). In 2017, there was an estimated 701,351 females and 661,718 males residing in Nassau County, yielding a 51.5%-female and 48.5%-male population. The same percentages

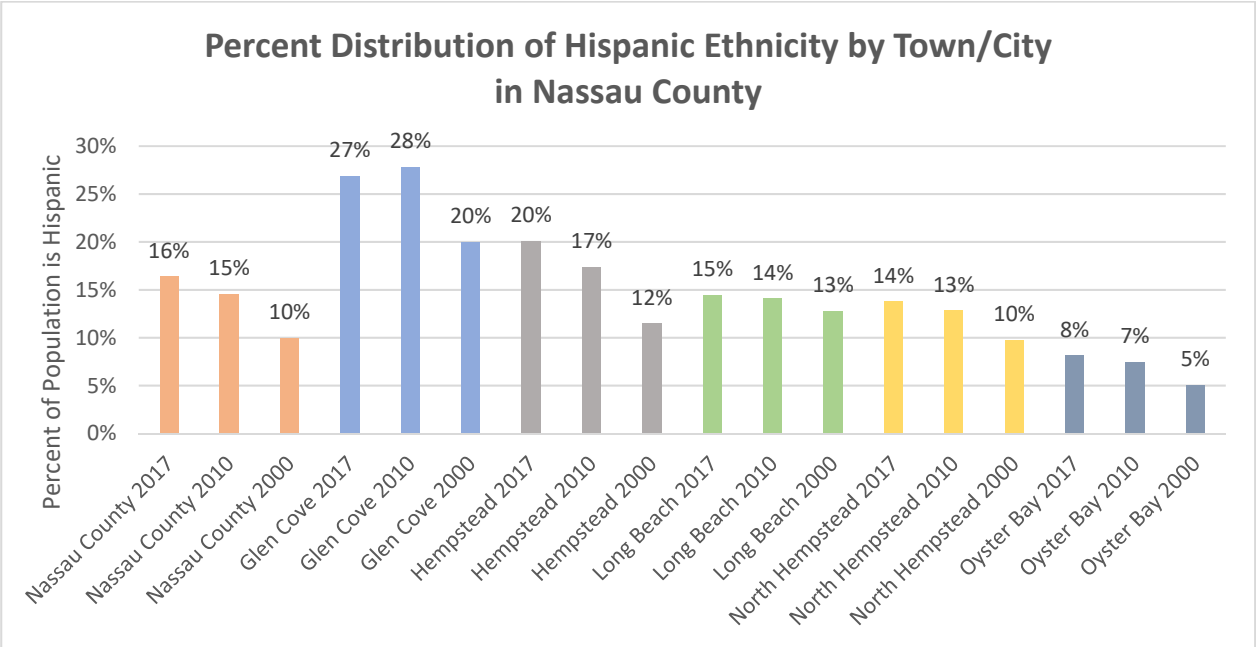
[1] 2017 American Community Survey, https://www.census.gov/programs-surveys/acs

were seen statewide. The gender-based percentages of the United States were very similar, with 50.8% of residents identifying as female and 49.2% identifying as male.

Race and Ethnicity Profile

In 2017, Nassau County's racial and ethnic profile presents some interesting trends. Accounting for 62% of the population, Nassau's 851,645 self-identified non-Hispanic Whites make up the largest group in the county. After ethnicity is factored out, the number of White residents increases to 939,072 or 77.0% of residents. In Nassau, there are 157,339 Blacks and 123,381 Asian Pacific Islander residents, accounting for 13.0% and 10.0% of the county population, respectively. Compared to NYS, Nassau County has a higher percentage of White residents (63.8% of NYS residents), a lower percentage of Blacks (15.7% of NYS residents) and a slightly higher percentage of Asian/Pacific Islander residents (8.3% of NYS residents). Nassau County has seen, in recent years, a significant increase in its Hispanic population overall, from 10% in 2000 to 16% in 2017. This trend is more pronounced in some communities, though most of the county has seen a net increase in Hispanic residents over the past decade.

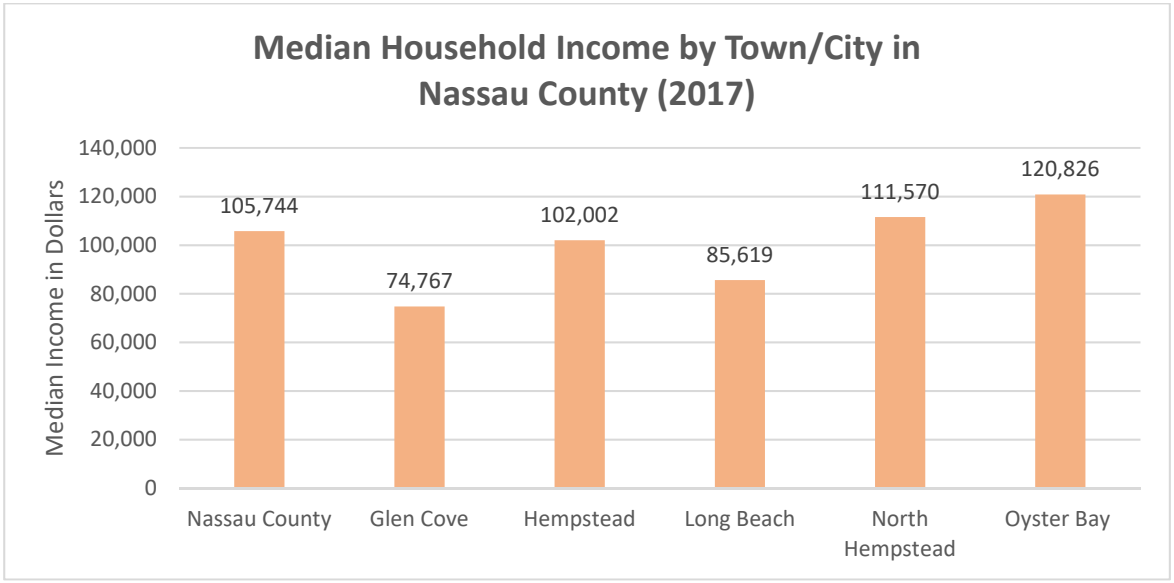




Household Profile and Families

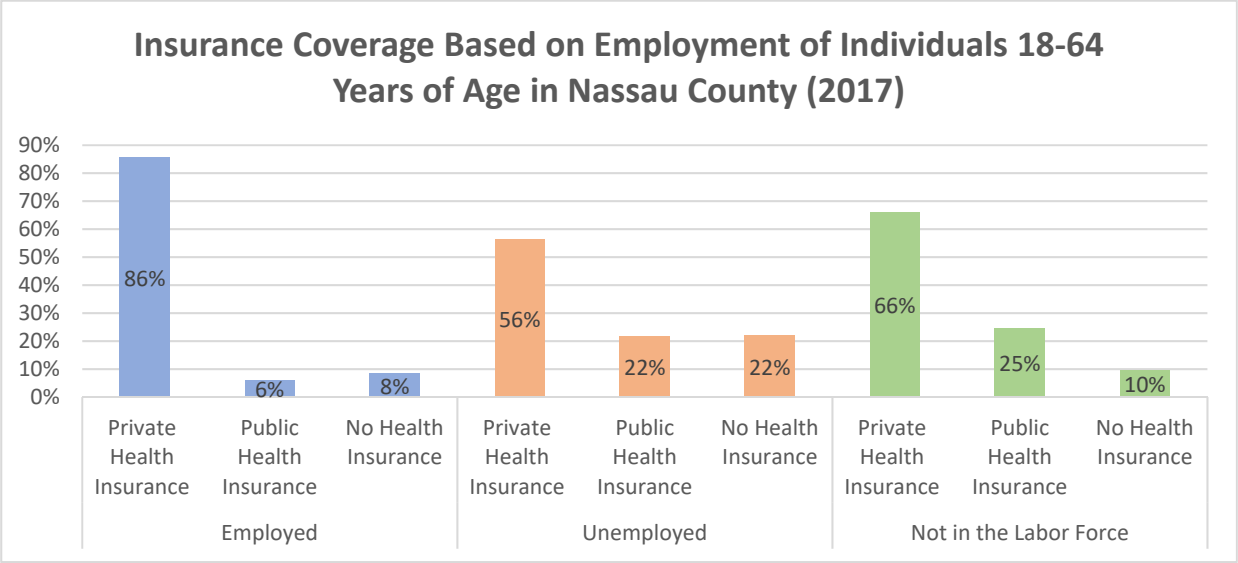
In 2017, Nassau County was composed of 444,136 households. Families made up 76.6% of total households, though the makeup of these families varies. Of the total families in Nassau County, 270,528 (60.9%) are two-parent families while 69,620 (15.7%) are single parent families. Of the total families in Nassau County, 357,982 (80.6%) resided in homes they owned and 86,154 (19.4%) resided in rented housing units.

Income, Unemployment and Insurance Profile



From 2013-2017 Nassau County ranked as one of the wealthiest counties in the country. During this time, Nassau County residents earned a median income of $105,774, which is considerably higher than that of New York State ($62,765) and the United States ($57,652).

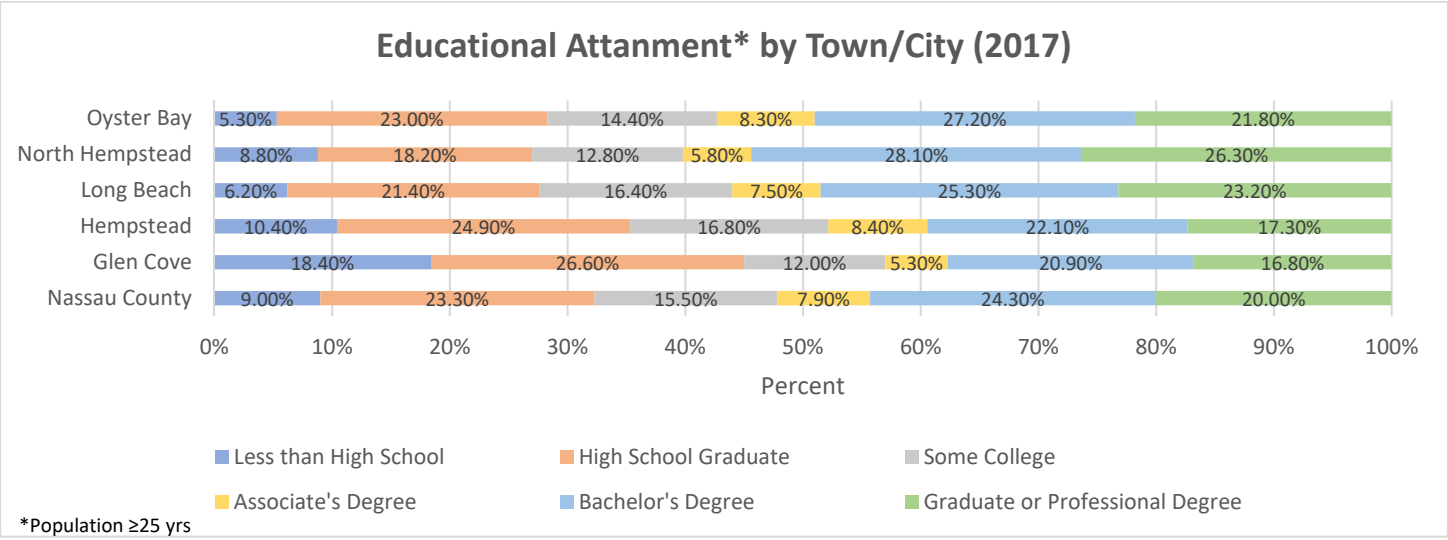
Nassau County also experiences a lower unemployment rate compared to both the state and the nation. Approximately 4.1% of Nassau residents were unemployed in 2017 in contrast with an estimated 4.7% of New York State residents and 4.4% of United States residents.[2] In addition, the following figure displays the number of Nassau County residents who have private, public, or no health insurance according to their employment status. In general, most of the private insurance is made available to residents who are employed and are between the ages of 18-64. Residents who are unemployed have significantly less insurance coverage as compared to those who are employed or are no longer a member of the labor force. Those over the age of 65 years who are not in the workforce use publicly provided health insurance (Medicare) and/or private insurance.



Education Profile

An estimated 90.8% of Nassau residents above the age of 25 received a high school diploma or GED equivalent. For comparison, 86.1% of New York State residents and 87.3% of U.S. residents have achieved the same level of educational. Approximately 50.7% of Nassau residents have received a college degree compared to 42.7% of New York State residents and 37.8% of U.S. residents.

[2] https://www.labor.ny.gov/stats/LSLAUS.shtm



Chapter 2: Population Health Status

Based on its health factors, including socioeconomic determinants, health behaviors, clinical care, and physical environment, Nassau County was ranked 1st in the state by the 2019 Wisconsin County Health Ranking, a well-known public health reference. Nassau, the nation's 13th wealthiest county, received this ranking relative to the 62 other counties in New York State based on morbidity (i.e. hospitalizations) and mortality data.[3] For Nassau County, this landscape of wellness is not every resident's health reality. Nassau has populations which suffer significantly more from disease morbidity and mortality. This can be true for minority populations. In some cases, the affluence of the county masks the needs of those severely underserved within Nassau County.

Chronic Disease

Chronic diseases are long-lasting conditions that can be controlled but not cured. These largely preventable conditions are also our nation's leading causes of death and disability. Furthermore, according to the Centers for Disease Control and Prevention (CDC),[4] as a nation, 90% of our healthcare dollars go to the treatment of these pathologies. Nassau County, in general, has a lower burden of disease compared to New York State as a whole. This relationship changes slightly when New York City (NYC) is excluded from the state statistics. However, in Nassau County's minority population, the burden of many chronic diseases is disproportionately higher than that of the county as a whole.

[3] http://www.countyhealthrankings.org/
[4] https://www.cdc.gov/chronicdisease/about/costs/index.htm

Cancer

In general, site-specific cancer rates in Nassau County are less than NYS excluding NYC, and NYS as a whole. However, incidence rates for breast and prostate cancer are significantly higher in Nassau County compared to both state categories. Within Nassau County, mortality and incident rates were higher for Blacks with colorectal and breast cancer compared to other race/ethnicity categories. Colorectal screening in Nassau County does not meet the Prevention Agenda objective, as established by the NYSDOH.

Community Health Indicators (CHIRS) 2013-2015	Nassau		NYS excluding NYC		New York State	
	Number	Rate (or) Percent	Rate (or) Percent	Significant Difference	Rate (or) Percent	Significant Difference
Age-adjusted all cancer incidence rate per 100,000	26,319	510.5	508.1	No	485.6	Yes
Age-adjusted all cancer mortality rate per 100,000	7,417	136.4	155.4	Yes	149.2	Yes
Age-adjusted lip, oral cavity and pharynx cancer incidence rate per 100,000	512	9.8	11.6	Yes	10.9	Yes
Age-adjusted lip, oral cavity and pharynx cancer mortality rate per 100,000	74	1.4	2	Yes	2.1	Yes
Age-adjusted colon and rectum cancer incidence rate per 100,000	2,055	38.6	39	No	39.3	No
Age-adjusted colon and rectum cancer mortality rate per 100,000	682	12.3	13	No	13.1	No
Age-adjusted lung and bronchus cancer incidence rate per 100,000	2,860	54.4	66.3	Yes	59.2	Yes
Age-adjusted lung and bronchus cancer mortality rate per 100,000	1,656	30.8	41.6	Yes	36.9	Yes
Age-adjusted female breast cancer incidence rate per 100,000	3,929	147.6	139.5	Yes	132.8	Yes
Age-adjusted female breast cancer mortality rate per 100,000	596	20	18.9	No	19.2	No
Age-adjusted female breast cancer late stage incidence rate per 100,000	1,125	43.5	43.3	No	43.4	No
Age-adjusted cervix uteri cancer incidence rate per 100,000	133	5.6	7	Yes	7.8	Yes
Age-adjusted cervix uteri cancer mortality rate per 100,000	28	1.1	1.9	Yes	2.2	Yes
Age-adjusted ovarian cancer incidence rate per 100,000	314	11.4	12.5	No	12.2	No
Age-adjusted ovarian cancer mortality rate per 100,000	222	7.5	7.5	No	7.1	No
Age-adjusted prostate cancer incidence rate per 100,000	3,323	134.5	121.8	Yes	123.4	Yes
Age-adjusted prostate cancer mortality rate per 100,000	330	14.6	16.6	Yes	17.8	Yes
Age-adjusted prostate cancer late stage incidence rate per 100,000	469	18.8	21.5	Yes	22.1	Yes
Age-adjusted melanoma cancer mortality rate per 100,000	121	2.3	2.4	No	1.9	No
Percentage of women aged 21-65 years receiving cervical cancer screening based on 2012 guidelines (2016)	N/A	86.7	83.5	No	82.2	No
Percentage of women aged 50-74 years receiving breast cancer screening based on recent guidelines (2016)	N/A	79.7	79.2	No	79.7	No
Percentage of women (aged 50-74 years) who had a mammogram between 10/1/14 – 12/31/16 (2016)	N/A	65.7	65	No	71.2	Yes

Nassau County Health Indicators by Race/Ethnicity, 2013-2015					
	Non-Hispanic				
Health Indicator	White	Black	Asian/Pacific Islander	Hispanic	Total
Lung cancer incidence per 100,000 population, age-adjusted	61	42	26.5	28.2	54.4
Colorectal cancer mortality per 100,000 population, age-adjusted	12.6	14.5	9.6	7.4	12.3
Colorectal cancer incidence per 100,000 population, age-adjusted	40.7	44.9	26.2	24.4	38.6

Female breast cancer mortality per 100,000 female population, age-adjusted	20.4	24.6	11.4	13.9	20
Female late stage breast cancer incidence per 100,000 female population, age-adjusted	44.7	52.3	31.8	31.6	43.5
Cervical cancer incidence per 100,000 female population, age-adjusted	4.9	8.6	6.7	7.7	5.6

Prevention Agenda (PA) Indicator, 2016	Nassau County Percent	NYS (excl NYC) Percent	PA 2018 Objective Percent
Percentage of adults who received a colorectal cancer screening based on the most recent guidelines - Aged 50-75 years	68.2	69.7	80

Red – Does not meets PA objective Green- Meets PA objective

Cardiovascular Disease

Mortality and hospitalization rates due to cardiovascular disease, diseases of the heart, and coronary heart disease are significantly higher in Nassau County compared NYS excluding NYC. Most cardiovascular disease indicators are lower than NYS as a whole. However, within the county, mortality and hospitalization rates related to diseases of the heart, stroke, and coronary heart disease are highest among Blacks.

Community Health Indicators (CHIRS) 2014-2016	Nassau		NYS excluding NYC		New York State	
	Number	Rate (or) Percent	Rate (or) Percent	Significant Difference	Rate (or) Percent	Significant Difference
Age-adjusted cardiovascular disease mortality rate per 100,000	13,744	225.9	218.5	Yes	220.2	Yes
Cardiovascular disease premature death (aged 35-64 years) rate per 100,000	1,436	85.8	101	Yes	102.4	Yes
Age-adjusted cardiovascular disease hospitalization rate per 10,000 (2016)	22,483	124.4	120.3	Yes	125.6	No
Age-adjusted disease of the heart mortality rate per 100,000	11,566	189.6	174.4	Yes	178.1	Yes
Disease of the heart premature death (aged 35-64 years) mortality rate per 100,000	1,213	72.5	82.8	Yes	83.4	Yes
Age-adjusted disease of the heart hospitalization rate per 10,000 (2016)	15,852	87.2	81.6	Yes	83.7	Yes
Age-adjusted coronary heart disease mortality rate per 100,000	9,269	152.3	120.1	Yes	136.2	Yes
Coronary heart disease premature death (aged 35-64 years) rate per 100,000	1,061	63.4	60.5	No	66.4	No
Age-adjusted coronary heart disease hospitalization rate per 10,000 (2016)	5,243	28.9	27.4	Yes	29	No
Age-adjusted heart attack hospitalization rate per 10,000 (2016)	2,060	11.3	14.8	Yes	13.9	Yes
Age-adjusted heart attack mortality rate per 100,000	1,019	17.3	30.8	Yes	27.5	Yes
Age-adjusted congestive heart failure mortality rate per 100,000	901	13.9	17.4	Yes	13	Yes
Congestive heart failure premature death (aged 35-64 years) rate per 100,000	28	1.7	3.3	Yes	2.5	No
Age-adjusted congestive heart failure hospitalization rate per 10,000 (2016)	3,380	17.8	19.4	Yes	20.4	Yes
Age-adjusted cerebrovascular disease (stroke) mortality rate per 100,000	1,386	23.1	28.3	Yes	25.6	Yes
Cerebrovascular disease (stroke) premature death (aged 35-64 years) rate per 100,000	120	7.2	10.3	Yes	10.5	Yes
Age-adjusted cerebrovascular disease (stroke) hospitalization rate per 10,000 (2016)	3,132	17.1	20.8	Yes	21.2	Yes
Hypertension hospitalization rate per 10,000 - Aged 18 years and older (2016)	1,086	10.2	9.4	Yes	9.7	No
Hypertension hospitalization rate per 10,000 (any diagnosis) - Aged 18 years and older (2016)	45,118	423.5	450.9	Yes	401.8	Yes

Hypertension emergency department visit rate per 10,000 - Aged 18 years and older (2016)	4,775	44.8	40.2	Yes	49.7	Yes
Hypertension emergency department visit rate per 10,000 (any diagnosis) - Aged 18 years and older (2016)	98,071	920.6	1,012.6	Yes	973.8	Yes
Age-adjusted percentage of adults with cardiovascular disease (heart attack, coronary heart disease, or stroke), 2016	N/A	6.4	7.2	No	7	No
Age-adjusted percentage of adults ever had blood cholesterol checked (2013-2014)	N/A	85.9	83.2	No	83.4	No
Age-adjusted percentage of adults with physician diagnosed high blood pressure (2016)	N/A	28.2	29.4	No	28.9	No

Nassau County Health Indicators by Race/Ethnicity					
Health Indicator	Non-Hispanic				
	black	Black	Asian/Pacific Islander	Hispanic	Total
Diseases of the heart mortality per 100,000 population, age-adjusted (2014-2016)	194.9	206.2	108.2	110.8	189.6
Diseases of the heart hospitalizations per 10,000 population, age-adjusted (2012-2014)	92.4	111	44.3	88.7	95.5
Cerebrovascular disease (stroke) mortality per 100,000 population, age-adjusted (2014-2016)	22.3	29.1	17.3	19.6	23.1
Cerebrovascular disease (stroke) hospitalizations per 10,000 population, age-adjusted (2012-2014)	18.8	34.1	10.8	26.1	21.3
Coronary heart disease mortality per 100,000 population, age-adjusted (2014-2016)	154.9	178.5	93.5	92.4	152.3
Coronary heart disease hospitalizations per 10,000 population, age-adjusted (2012-2014)	31.9	35.2	21.9	27.2	33.3
Congestive heart failure mortality per 100,000 population, age-adjusted (2014-2016)	15	10.5	7.4	4.3	13.9
Congestive heart failure hospitalizations per 10,000 population, age-adjusted (2012-2014)	19.3	33.3	9	29.5	21.8

Prevention Agenda (PA) Indicator, 2014	Nassau County	NYS (excl NYC)	PA 2018 Objective
	Rate	Rate	Rate
Age-adjusted heart attack hospitalization rate per 10,000 population	13.3	14.8	14

Red – Does not meets PA objective Green- Meets PA objective

Cirrhosis, Diabetes, and Kidney Disease

Diabetes hospitalization and mortality rates are significantly lower in Nassau County compared to New York State and lower than New York excluding New York City. In Nassau County, Blacks and Hispanics have higher rates of hospitalizations due to diabetes compared to other groups. Rates of cirrhosis (liver disease) mortality is significantly lower in Nassau County than New York State and New York State excluding New York City. Chronic kidney disease hospitalization rates are also significantly lower than both NYS categories.

Community Health Indicators (CHIRS), 2016	Nassau		NYS excluding NYC		New York State	
	Number	Rate (or) Percent	Rate (or) Percent	Significant Difference	Rate (or) Percent	Significant Difference
Age-adjusted cirrhosis mortality rate per 100,000 (2014-2016)	261	5	7.4	Yes	6.8	Yes
Age-adjusted cirrhosis hospitalization rate per 10,000	399	2.5	2.8	No	3	Yes
Age-adjusted diabetes mortality rate per 100,000 (2014-2016)	551	9.9	15.2	Yes	17	Yes
Age-adjusted diabetes hospitalization rate per 10,000 (primary diagnosis)	1,837	11.5	13.8	Yes	15.9	Yes
Age-adjusted diabetes hospitalization rate per 10,000 (any diagnosis)	32,065	180.5	188.9	Yes	209.9	Yes
Diabetes Short-term Complications hospitalization rate per 10,000 – Aged 18+ Years	247	2.3	4.1	Yes	4	Yes

Age-adjusted chronic kidney disease hospitalization rate per 10,000 (any diagnosis)	18,274	99.1	107.3	Yes	114.8	Yes
Age-adjusted chronic kidney disease emergency department visit rate per 10,000 (any diagnosis)	17,517	95.4	116.9	Yes	123.8	Yes
Age-adjusted percentage of adults with physician diagnosed diabetes	N/A	6.9	8.5	No	9.5	Yes

Nassau County Health Indicators by Race/Ethnicity					
Health Indicator	Non-Hispanic			Hispanic	Total
	White	Black	Asian/Pacific Islander		
Diabetes mortality per 100,000 population, age-adjusted (2014-2016)	9	20.4	5.6	7.9	9.9
Diabetes (primary diagnosis) hospitalizations per 10,000 population, age-adjusted (2012-2014)	9.6	35.6	3.6	16.4	13.1
Diabetes (any diagnosis) hospitalizations per 10,000 population, age-adjusted (2012-2014)	144.3	333.4	103.5	224.3	175.1
Diabetes short-term complications hospitalizations per 10,000 population aged 18+ years (2012-2014)	2.8	11.3	0.7	4.9	4

Prevention Agenda (PA) Indicator, 2012-2014	Nassau County	NYS (excl NYC)	PA 2018 Objective
	Rate	Rate	Rate
Rate of hospitalizations for short-term complications of diabetes per 10,000 – Aged 6-17 years	2	2.9	3.06
Rate of hospitalizations for short-term complications of diabetes per 10,000 – Aged 18+ years	4	6.1	4.86

Red – Does not meets PA objective Green- Meets PA objective

Respiratory Diseases

The hospitalization and mortality rates for chronic lower respiratory disease (CLRD) is significantly lower in Nassau County than in New York State and New York State excluding New York City. However, in Nassau County, Blacks and Hispanics have higher hospitalization rates of CLRD than Whites. Asthma hospitalization rates are significantly lower in Nassau County than in New York State and significantly higher than New York State excluding New York City. Yet in Nassau County, Blacks and Hispanics have higher hospitalization rates than other groups.

Community Health Indicators (CHIRS), 2016	Nassau		NYS excluding NYC		New York State	
	Number	Rate (or) Percent	Rate (or) Percent	Significant Difference	Rate (or) Percent	Significant Difference
Chronic lower respiratory disease mortality rate per 100,000, (2014-2016)	1,194	29.3	45.4	Yes	34.8	Yes
Age-adjusted chronic lower respiratory disease mortality rate per 100,000, (2014-2016)	1,194	20.6	34.6	Yes	28.9	Yes
Chronic lower respiratory disease hospitalization rate per 10,000	3,497	25.7	28	Yes	30.6	Yes
Age-adjusted chronic lower respiratory disease hospitalization rate per 10,000	3,497	21.7	23.4	Yes	27.6	Yes
Asthma hospitalization rate per 10,000	1,201	8.8	6.3	Yes	10.8	Yes
Age-adjusted asthma hospitalization rate per 10,000	1,201	9.2	6.8	Yes	11.4	Yes
Asthma hospitalization rate per 10,000 – Aged 5-64 years	728	6.9	5.2	Yes	8.7	Yes
Asthma hospitalization rate per 10,000 – Aged 15-24 years	70	3.9	3.1	No	5.5	Yes
Asthma hospitalization rate per 10,000 – Aged 25-44 years	177	5.6	4.5	Yes	5.6	No
Asthma hospitalization rate per 10,000 – Aged 45-64 years	266	6.8	5.1	Yes	9.2	Yes
Asthma hospitalization rate per 10,000 – Aged 65 years or older	201	8.7	4.4	Yes	8.9	No
Asthma mortality rate per 100,000, (2014-2016)	39	1	1.1	No	1.5	Yes

Age-adjusted asthma mortality rate per 100,000, (2014-2016)	39	0.9	0.9	Yes	1.3	Yes
Age-adjusted percentage of adults with current asthma	N/A	5.9	10.4	Yes	9.6	Yes

Nassau County Health Indicators by Race/Ethnicity, 2014-2016					
Health Indicator	Non-Hispanic				
	White	Black	Asian/Pacific Islander	Hispanic	Total
Asthma hospitalizations per 10,000 population, age-adjusted (2012-2014)	9.1	33.3	6.8	17.5	13.3
Chronic lower respiratory disease mortality per 100,000 population, age-adjusted	23.2	13.6	5.2	8.9	20.6
Chronic lower respiratory disease hospitalizations per 10,000 population, age-adjusted (2012-2014)	21	46.9	9.5	34.2	25.3

Prevention Agenda (PA) Indicator	Nassau County	NYS (excl NYC)	PA 2018 Objective
	Rate	Rate	Rate
Asthma emergency department visit rate per 10,000 population (2014)	37.8	49.1	75.1

Red – Does not meets PA objective Green- Meets PA objective

Injury

Nassau County injury rates are generally lower than NYS. However, Nassau County rates for unintentional injury hospitalization significantly exceed NYS in both categories. In Nassau County, Whites have higher rates of injury compared to other groups, except in the case of motor vehicle accidents where Blacks and Hispanics reflect higher mortality rates.

Community Health Indicators (CHIRS), 2016	Nassau		NYS excluding NYC		New York State	
	Number	Rate	Rate	Significantly Different	Rate	Significantly Different
Age-adjusted suicide mortality rate per 100,000 (2014-2016)	295	6.8	9.6	Yes	8	Yes
Age-adjusted self-inflicted injury hospitalization rate per 10,000	343	2.5	4.2	Yes	3.5	Yes
Self-inflicted injury hospitalization rate per 10,000 - Aged 15-19 years	50	5.6	8.7	Yes	7.6	No
Age-adjusted homicide mortality rate per 100,000 (2014-2016)	66	1.8	2.8	Yes	3.5	Yes
Age-adjusted assault hospitalization rate per 10,000	258	2.1	2.2	No	3.2	Yes
Age-adjusted unintentional injury mortality rate per 100,000 (2014-2016)	1,325	29.6	36.5	Yes	30.2	Yes
Age-adjusted unintentional injury hospitalization rate per 10,000	10,299	60.3	57	Yes	55.7	Yes
Unintentional injury hospitalization rate per 10,000 - Aged <10 years	343	22.2	18.1	Yes	18.9	Yes
Unintentional injury hospitalization rate per 10,000 - Aged 10-14 years	116	13.5	12.5	No	13.6	No
Unintentional injury hospitalization rate per 10,000 - Aged 15-24 years	477	26.7	23.1	Yes	23.1	Yes
Unintentional injury hospitalization rate per 10,000 - Aged 25-64 years	2,927	41.2	42.7	No	41.3	No
Unintentional injury hospitalization rate per 10,000 - Aged 65 years and older	6,436	277.4	239.3	Yes	227.9	Yes
Age-adjusted falls hospitalization rate per 10,000	6,804	37	32.8	Yes	32.2	Yes
Falls hospitalization rate per 10,000 - Aged <10 years	182	11.8	6.5	Yes	7.4	Yes
Falls hospitalization rate per 10,000 - Aged 10-14 years	42	4.9	3.6	No	4.5	No
Falls hospitalization rate per 10,000 - Aged 15-24 years	88	4.9	4.2	No	4.8	No
Falls hospitalization rate per 10,000 - Aged 25-64 years	1,264	17.8	17.4	No	17	No
Falls hospitalization rate per 10,000 - Aged 65-74 years	934	73.9	75.2	No	73.8	No
Falls hospitalization rate per 10,000 - Aged 75-84 years	1,599	239.1	213.2	Yes	203.3	Yes
Falls hospitalization rate per 10,000 - Aged 85 years and older	2,695	695.8	567.5	Yes	534.4	Yes
Age-adjusted poisoning hospitalization rate per 10,000	842	6	7	Yes	6.9	Yes
Age-adjusted motor vehicle mortality rate per 100,000 (2014-2016)	247	5.8	6.8	Yes	5.3	Yes
Age-adjusted non-motor vehicle mortality rate per 100,000 (2014-2016)	1,078	23.8	29.7	Yes	24.9	Yes

Age-adjusted traumatic brain injury hospitalization rate per 10,000	1,584	10	7.5	Yes	7.6	Yes
Alcohol related motor vehicle injuries and death rates per 100,000 (2014-2016)	1,401	34.3	38.8	Yes	29.9	Yes

Nassau County Health Indicators by Race/Ethnicity					
Health Indicator	Non-Hispanic			Hispanic	Total
	White	Black	Asian/Pacific Islander		
Motor vehicle-related mortality per 100,000 population, age-adjusted (2014-2016)	5.6	8.6	na	6.2	5.8
Unintentional injury mortality per 100,000 population, age-adjusted (2014-2016)	36.4	21.5	8.5	20.9	29.6
Unintentional injury hospitalizations per 10,000 population, age-adjusted (2012-2014)	64	57.6	24.1	74.2	65.5
Poisoning hospitalizations per 10,000 population, age-adjusted (2012-2014)	10	10.3	3	6.7	9.2
Fall hospitalizations per 10,000 population, aged 65+ years (2012-2014)	246.4	101.7	70.1	217	228.3
Suicide mortality per 100,000 population, age-adjusted (2014-2016)	8.2	3.5	3.8	4.7	6.8

Prevention Agenda (PA) Indicator	Nassau County	NYS (excl NYC)	PA 2018 Objective
	Rate/Ratio/ Percent	Rate/Ratio /Percent	Rate/Ratio /Percent
Rate of hospitalizations due to falls per 10,000 - Aged 65+ years (2014)	225.5	188.7	204.6
Rate of emergency department visits due to falls per 10,000 - Aged 1-4 years (2014)	420.3	442.7	429.1
Assault-related hospitalization rate per 10,000 population (2012-2014)	2.6	2.4	4.3
Rate of occupational injuries treated in ED per 10,000 adolescents - Aged 15-19 years (2014)	14.5	28.2	33

Red – Does not meets PA objective Green- Meets PA objective

Child and Adolescent Health

Childhood health indicators reflect that Nassau County children are healthy as demonstrated by both mortality and hospitalization rates. Only gastroenteritis hospitalizations are higher within the county compared to NYS. Both lead screening and well visits indicate that Nassau County children visit their doctors regularly. Though higher than the state, the well visit indicators do not meet the Prevention Agenda objective. However, in Nassau County Black and Hispanic children have higher rates of asthma.

Community Health Indicators (CHIRS)	Nassau		NYS excluding NYC		New York State	
	Number	Percent (or) Rate	Percent (or) Rate	Significant Difference	Percent (or) Rate	Significant Difference
Mortality rate per 100,000 - Aged 1-4 years (2014-2016)	22	12.3	19.4	No	18.2	No
Mortality rate per 100,000 - Aged 5-9 years (2014-2016)	12	5	9.7	No	10	Yes
Mortality rate per 100,000 - Aged 10-14 years (2014-2016)	30	11.5	11.5	No	11.4	No
Mortality rate per 100,000 - Aged 5-14 years (2014-2016)	42	8.3	10.6	No	10.7	No
Mortality rate per 100,000 - Aged 15-19 years (2014-2016)	77	28.1	32.6	No	31.1	No
Asthma hospitalization rate per 10,000 - Aged 0-4 years (2016)	272	36.9	27.4	Yes	43.5	Yes
Asthma hospitalization rate per 10,000 - Aged 5-14 years (2016)	215	12.9	9.5	Yes	18.7	Yes
Asthma hospitalization rate per 10,000 - Aged 0-17 years (2016)	508	17.2	12.9	Yes	23.5	Yes
Diabetes short-term complications hospitalization rate per 10,000 - Aged 6-17 Years (2016)	50	2.4	3.4	No	3.2	No
Gastroenteritis hospitalization rate per 10,000 - Aged 0-4 years (2016)	90	12.2	8.1	Yes	10.6	No
Otitis media hospitalization rate per 10,000 - Aged 0-4 years (2016)	16	2.2	2	No	2.2	No
Pneumonia hospitalization rate per 10,000 - Aged 0-4 years (2016)	158	21.4	24.4	No	30.9	Yes

Percentage of children born in 2013 with a lead screening aged 0-8 months (2016)	223	1.6	1.2	Yes	1.9	Yes
Percentage of children born in 2013 with a lead screening - aged 9-17 months (2016)	10,385	75.1	71.7	Yes	74.8	No
Percentage of children born in 2013 with a lead screening - aged 18-35 months (2016)	10,329	74.7	71.4	Yes	75.4	No
Percentage of children born in 2013 with at least two lead screenings by 36 months (2016)	7,535	54.5	55.9	Yes	62.8	Yes
Incidence of confirmed high blood lead level (10 micrograms or higher per deciliter) - rate per 1,000 tested children aged <72 months (2014-2016)	109	1.4	8	Yes	4.3	Yes
Percentage of children with recommended number of well child visits in government sponsored insurance programs (2016)	39,939	77.4	72.7	Yes	74	Yes
Percentage of children (aged 0-15 months) with recommended number of well child visits in government sponsored insurance programs (2016)	2,970	87.1	82.8	Yes	80.1	Yes
Percentage of children (aged 3-6 years) with recommended number of well child visits in government sponsored insurance programs (2016)	12,951	85.3	82.3	Yes	84.3	No
Percentage of children (aged 12-21 years) with recommended number of well child visits in government sponsored insurance programs (2016)	24,018	72.7	66.5	Yes	68.1	Yes
Percentage overweight but not obese (85th-<95th percentile) - Students (with weight status information in SWSCRS) in elementary, middle and high school, (2014-2016)	9,976	16.1	16.5	N/A	N/A	N/A
Percentage obese (95th percentile or higher) - Students (with weight status information in SWSCRS) in elementary, middle and high school, (2014-2016)	9,657	15.6	17.3	N/A	N/A	N/A
Percentage overweight or obese (85th percentile or higher) - Students (with weight status information in SWSCRS) in elementary, middle and high school, (2014-2016)	19,633	31.8	33.8	N/A	N/A	N/A
Percentage overweight but not obese (85th-<95th percentile) - Students (with weight status information in SWSCRS) in elementary school, (2014-2016)	5,656	15.3	15.9	N/A	N/A	N/A
Percentage obese (95th percentile or higher) - Students (with weight status information in SWSCRS) in elementary school, (2014-2016)	5,775	15.6	16.3	N/A	N/A	N/A
Percentage overweight or obese (85th percentile or higher) - Students (with weight status information in SWSCRS) in elementary school, (2014-2016)	11,431	31	32.2	N/A	N/A	N/A
Percentage overweight but not obese (85th-<95th percentile) - Students (with weight status information in SWSCRS) in middle and high school, (2014-2016)	4,500	17.7	17.3	N/A	N/A	N/A
Percentage obese (95th percentile or higher) - Students (with weight status information in SWSCRS) in middle and high school, (2014-2016)	3,930	15.4	18.5	N/A	N/A	N/A
Percentage overweight or obese (85th percentile or higher) - Students (with weight status information in SWSCRS) in middle and high school, (2014-2016)	8,430	33.2	35.8	N/A	N/A	N/A
Percentage of children (aged 2-4 years) enrolled in WIC watching TV 2 hours or less per day, (2014-2016)	12,556	85.3	85	No	85.3	No

Nassau County Health Indicators by Race/Ethnicity

Health Indicator	Non-Hispanic			Hispanic	Total
	White	Black	Asian/Pacific Islander		
Asthma hospitalizations per 10,000 population, aged 0-17 years (2012-2014)	12.7	52.3	13.5	26	21.4
Diabetes short-term complications hospitalizations per 10,000 population aged 6-17 years (2012-2014)	1.9	4	N/A	1.3	2

Prevention Agenda (PA) Indicator	Nassau County	NYS (excl NYC)	PA 2018 Objective
	Rate/Ratio/ Percent	Rate/Ratio/ Percent	Rate/Ratio/ Percent
Percentage of children who have had the recommended number of well child visits in government sponsored insurance programs (2016)	77.4	72.7	76.9
Percentage of children aged 0-15 months who have had the recommended number of well child visits in government sponsored insurance programs (2016)	87.1	82.8	91.3
Percentage of children aged 3-6 years who have had the recommended number of well child visits in government sponsored insurance programs (2016)	85.3	82.3	91.3
Percentage of children aged 12-21 years who have had the recommended number of well child visits in government sponsored insurance programs (2016)	72.7	66.5	67.1
Percentage of children (aged under 19 years) with health insurance (2016)	97.9	97.4 (NYS)	100
Percentage of third-grade children with evidence of untreated tooth decay (2009-2011)	27.1	24	21.6

Red – Does not meets PA objective Green- Meets PA objective

Family Planning, Natality, Maternal, and Infant Health

Indicators surrounding birth and infant health are favorable for the county, as a whole. Although Nassau County has good rates of prenatal care, early and adequate prenatal care among Black and Hispanics is lower. In addition, Blacks, Hispanics and Asians have higher rates of premature and low birthweight births compared to Whites. Pregnancies in general are higher in the Black and Hispanic population as well as teen pregnancy. Infant mortality among Blacks is significantly higher than all other races/ethnicities. Nassau County does not meet the Prevention Agenda objectives for premature births and maternal mortality.

Community Health Indicators (CHIRS) 2014-2016	Nassau		NYS excluding NYC		New York State	
	Number	Percent, Ratio (or) Rate	Percent, Ratio (or) Rate	Significant Difference	Percent, Ratio (or) Rate	Significant Difference
Percentage of live births conceived within 18 months of a previous live birth	5,086	27.7	33	Yes	31.2	Yes
Percentage of births to teens - Aged 15-17 years	283	0.7	1.1	Yes	1	Yes
Percentage of births to teens - Aged 15-19 years	955	2.2	4.2	Yes	3.8	Yes
Percentage of births to women aged 35 years and older	12,536	29.2	20.2	Yes	22.1	Yes
Fertility rate per 1,000 females - Aged 15-44 years	42,888	57.6	57.2	No	58.5	Yes
Teen fertility rate per 1,000 (births to mothers aged 10-14 years/female population aged 10-14 years)	10	0.1	0.2	No	0.2	Yes
Teen fertility rate per 1,000 (births to mothers aged 15-17 years/female population aged 15-17 years)	283	3.4	6	Yes	6.6	Yes
Teen fertility rate per 1,000 (births to mothers aged 15-19 years/female population aged 15-19 years)	955	7.2	13.3	Yes	14.6	Yes
Teen fertility rate per 1,000 (births to mothers aged 18-19 years/female population aged 18-19 years)	672	13.2	22.9	Yes	25.6	Yes
Pregnancy rate per 1,000 (all pregnancies/female population aged 15-44 years)	55,685	74.8	72.8	Yes	83.8	Yes
Teen pregnancy rate per 1,000 females aged 10-14 years	32	0.3	0.4	Yes	0.6	Yes
Teen pregnancy rate per 1,000 females aged 15-17 years	612	7.4	11	Yes	15.1	Yes
Teen pregnancy rate per 1,000 females aged 15-19 years	2,057	15.4	22.3	Yes	29.8	Yes
Teen pregnancy rate per 1,000 females aged 18-19 years	1,445	28.4	37.5	Yes	50.1	Yes
Abortion ratio (induced abortions per 1,000 live births) - Aged 15-19 years	1,037	1,085.90	653.3	Yes	990.8	Yes
Abortion ratio (induced abortions per 1,000 live births) - All ages	9,409	219.4	231.7	Yes	370.9	Yes
Percentage of births to women aged 25 years and older without a high school education	3,412	9	10.3	Yes	12.8	Yes

Percentage of births to out-of-wedlock mothers	11,769	27.4	38.7	Yes	39.3	Yes
Percentage of births that were first births	17,294	40.3	38.9	Yes	41.2	Yes
Percentage of births that were multiple births	1,937	4.5	4	Yes	3.7	Yes
Percentage of births with early (1st trimester) prenatal care	36,259	85.1	77	Yes	75.2	Yes
Percentage of births with late (3rd trimester) or no prenatal care	1,285	3	4.1	Yes	5.6	Yes
Percentage of births with adequate prenatal care	35,201	85.2	75.7	Yes	74	Yes
Percentage of pregnant women in WIC with early (1st trimester) prenatal care, (2009-2011)	9,742	83.7	86.9	Yes	86.5	Yes
Percentage of pregnant women in WIC who were pre-pregnancy underweight (BMI less than 18.5), (2010-2012)	385	3.1	4.1	Yes	4.7	Yes
Percentage of pregnant women in WIC who were pre-pregnancy overweight but not obese (BMI 25 to less than 30), (2010-2012)	3,998	31.7	26.3	Yes	26.6	Yes
Percentage of pregnant women in WIC who were pre-pregnancy obese (BMI 30 or higher), (2010-2012)	2,973	23.6	28	Yes	24.2	No
Percentage of pregnant women in WIC with anemia in 3rd trimester, (2009-2011)	442	33.3	36	No	37.3	Yes
Percentage of pregnant women in WIC with gestational weight gain greater than ideal (2009-2011)	5,457	47.1	47.1	No	41.7	Yes
Percentage of pregnant women in WIC with gestational diabetes (2009-2011)	917	7.8	5.8	Yes	5.5	Yes
Percentage of pregnant women in WIC with hypertension during pregnancy (2009-2011)	1,024	8.7	9	No	7.1	Yes
Percentage of WIC infants breastfeeding at least 6 months	1,322	36.4	30.7	Yes	40.3	Yes
Percentage of infants fed any breast milk in delivery hospital	32,328	87.7	83	Yes	87.3	No
Percentage of infants fed exclusively breast milk in delivery hospital	13,592	36.9	52.4	Yes	45.2	Yes
Percentage of births delivered by cesarean section	16,523	38.5	34.2	Yes	33.5	Yes
Mortality rate per 1,000 live births - Infant (<1 year)	143	3.3	5	Yes	4.5	Yes
Mortality rate per 1,000 live births - Neonatal (<28 days)	102	2.4	3.6	Yes	3.1	Yes
Mortality rate per 1,000 live births - Post-neonatal (1 month to 1 year)	41	1	1.5	Yes	1.5	Yes
Mortality rate per 1,000 live births - Fetal death (20 weeks gestation or more)	142	3.3	4.3	Yes	6	Yes
Mortality rate per 1,000 live births - Perinatal (20 weeks gestation - <28 days of life)	244	5.7	7.9	Yes	9.1	Yes
Mortality rate per 1,000 live births - Perinatal (28 weeks gestation - <7 days of life)	145	3.4	5.3	Yes	5.1	Yes
Maternal mortality rate per 100,000 live births	11	25.6	18.9	No	20.4	No
Percentage very low birthweight (<1.5 kg) births	516	1.2	1.3	Yes	1.4	Yes
Percentage very low birthweight (<1.5kg) singleton births	376	0.9	1	No	1	Yes
Percentage low birthweight (<2.5 kg) births	3,433	8	7.6	Yes	7.9	No
Percentage low birthweight (<2.5kg) singleton births	2,362	5.8	5.7	No	6	No
Percentage of premature births with <32 weeks gestation	550	1.3	1.5	Yes	1.5	Yes
Percentage of premature births with 32 - <37 weeks gestation	3,407	7.9	7.4	Yes	7.3	Yes
Percentage of premature births with <37 weeks gestation	3,957	9.2	8.9	No	8.8	Yes
Percentage of births with a 5-minute APGAR <6	205	0.5	0.8	Yes	0.7	Yes
Percentage of WIC infants breastfeeding at least 6 months	1,322	36.4	30.7	Yes	40.3	Yes

Nassau County Health Indicators by Race/Ethnicity, 2014-2016

Health Indicator	Non-Hispanic			Hispanic	Total
	White	Black	Asian/Pacific Islander		
Number of births per year (3-year average)	6,938	1,640	1,638	3,872	14,296
Percentage of births with early (1st trimester) prenatal care	92.10%	76.60%	83.80%	77.00%	85.10%
Percentage of births with adequate prenatal care (Adequacy of Prenatal Care Utilization Index)	89.00%	79.70%	83.40%	81.60%	85.20%
Percentage of premature births (< 37 weeks gestation - clinical estimate)	8.50%	13.40%	9.20%	8.80%	9.20%
Percentage of low birthweight births (< 2.5 kg)	7.00%	12.50%	9.80%	7.10%	8.00%

Teen pregnancies per 1,000 females aged 15-17 years	1.6	16.7	N/A	21.6	7.4
Pregnancies per 1,000 females aged 15-44 years	61.6	87.3	58.5	96.6	74.8
Fertility per 1,000 females aged 15-44 years	51.3	47.4	57.9	77.9	57.6
Infant mortality per 1,000 live births	2.5	8.7	2.4	2.5	3.3

Prevention Agenda (PA) Indicator, 2014-2016	Nassau County	NYS (excl NYC)	PA 2018 Objective
	Rate/Ratio/Per cent	Rate/Ratio/Per cent	Rate/Ratio/Per cent
Percentage of preterm births (2016)	10.6	10.5	10.2
Premature births: Ratio of Black non-Hispanics to White non-Hispanics	1.61	1.65	1.42
Premature births: Ratio of Hispanics to White non-Hispanics	1.3	1.28	1.12
Premature births: Ratio of Medicaid births to non-Medicaid births	1.31	1.1	1
Percentage of infants exclusively breastfed in the hospital	40.1	50.9	48.1
Exclusively breastfed: Ratio of Black non-Hispanics to White non-Hispanics	0.66	0.55	0.57
Exclusively breastfed: Ratio of Hispanics to White non-Hispanics	0.58	0.57	0.64
Exclusively breastfed: Ratio of Medicaid births to non-Medicaid births	0.53	0.68	0.66
Maternal mortality rate per 100,000 live births	25.6	18.9	21
Adolescent pregnancy rate per 1,000 females - Aged 15-17 years (2016)	8	9.9	25.6
Adolescent pregnancy: Ratio of Black non-Hispanics to White non-Hispanics (2014-2016)	10.72	4.28	4.9
Adolescent pregnancy: Ratio of Hispanics to White non-Hispanics (2014-2016)	13.81	3.53	4.1
Asthma emergency department visit rate per 10,000 - Aged 0-4 years (2014)	114.4	117.2	196.5

Red – Does not meets PA objective Green- Meets PA objective

Obesity

In general, Nassau County's obesity burden is not significantly different from NYS both including and excluding NYC.

Community Health Indicators (CHIRS), 2016	Nassau	NYS excluding NYC		New York State	
	Percent	Percent	Significant Difference	Percent	Significant Difference
Age-adjusted percentage of adults overweight or obese (BMI 25 or higher)	62.0	63.6	No	60.5	No
Age-adjusted percentage of adults with obesity (BMI 30 or higher)	22.9	27.5	No	25.5	No
Age-adjusted percentage of adults who participated in leisure time physical activity in the past 30 days	72.1	75	No	74	No
Age-adjusted percentage of adults who report consuming less than one fruit or vegetable daily (no fruits and vegetables)	31.7	29	No	31.5	No

Communicable Diseases

The prevention and control of communicable or infectious disease is essential to public health. In Nassau County, an effective and efficient surveillance system has largely decreased the prevalence of most of these conditions for the county. Nassau County rates for tuberculosis, early syphilis, HIV, and AIDS are significantly higher than NYS excluding NYC. In addition, Nassau County does not meet the Prevention Agenda objectives related to childhood and adult immunizations. No race/ethnicity data is available for communicable diseases.

Community Health Indicators (CHIRS), 2014-2016	Nassau		NYS excluding NYC		New York State	
	Number	Percent	Percent	Significant Difference	Percent	Significant Difference
Pneumonia/flu hospitalization rate per 10,000 - Aged 65 years and older (2016)	2,007	86.5	93.7	Yes	87.3	No

Pertussis incidence per 100,000	189	4.6	6.5	Yes	5.1	No
Mumps incidence per 100,000	61	1.49	0.7	Yes	1.1	No
Haemophilus influenza incidence per 100,000	78	1.9	1.7	No	1.5	No
Hepatitis A incidence per 100,000	24	0.6	0.4	No	0.5	No
Acute hepatitis B incidence per 100,000	13	0.3	0.3	No	0.5	No
Tuberculosis incidence per 100,000	111	2.7	1.8	Yes	3.9	Yes
E. coli Shiga Toxin incidence per 100,000	56	1.4	1.9	Yes	1.6	No
Salmonella incidence per 100,000	420	10.3	12	Yes	11.6	Yes
134-Shigella incidence per 100,000	179	4.4	2.5	Yes	3.9	No
Lyme disease incidence per 100,000	328	8	58.6	Yes	38	Yes
Percentage of adults 65 years and older with flu immunization in the past year (2016)	N/A	53.2	59.6	No	59.5	No
Percentage of adults aged 65 years and older with pneumococcal immunization (2016)	N/A	65.9	73.8	No	69.3	No
Newly diagnosed HIV case rate per 100,000	344	8.4	6.9	Yes	16	Yes
Age-adjusted Newly diagnosed HIV case rate per 100,000	344	9	7.2	Yes	16	Yes
AIDS case rate per 100,000	149	3.7	3.3	No	7.8	Yes
Age-adjusted AIDS case rate per 100,000	149	3.7	3.4	No	7.7	Yes
AIDS mortality rate per 100,000	38	0.9	1.1	No	3	Yes
Age-adjusted AIDS mortality rate per 100,000	38	0.8	0.9	Yes	2.6	Yes
Early syphilis case rate per 100,000	491	12	7.9	Yes	25.1	Yes
Gonorrhea case rate per 100,000 males - Aged 15-44 years	896	119.6	189	Yes	377.5	Yes
Gonorrhea case rate per 100,000 females - Aged 15-44 years	501	67.3	173.1	Yes	191	Yes
Gonorrhea case rate per 100,000 - Aged 15-19 years	231	84.3	209.6	Yes	305.8	Yes
Chlamydia case rate per 100,000 males - Aged 15-44 years	3,210	428.5	569.3	Yes	875.7	Yes
Chlamydia case rate per 100,000 males - Aged 15-19 years	504	358	607.5	Yes	922.5	Yes
Chlamydia case rate per 100,000 males - Aged 20-24 years	1,312	984.7	1,199.1	Yes	1,638.0	Yes
Chlamydia case rate per 100,000 females - Aged 15-44 years	7,360	988.5	1,300.1	Yes	1,577.4	Yes
Chlamydia case rate per 100,000 females - Aged 15-19 years	2,061	1,545.9	2,299.9	Yes	3,147.6	Yes
Chlamydia case rate per 100,000 females - Aged 20-24 years	3,134	2,411.1	2,833.4	Yes	3,424.6	Yes
Percentage of sexually active young women (aged 16-24) with at least one chlamydia test in Medicaid program (2016)	5,068	76.9	67.7	Yes	74.3	Yes
Pelvic inflammatory disease (PID) hospitalization rate per 10,000 females - Aged 15-44 years (2016)	41	1.7	1.9	No	2.5	Yes

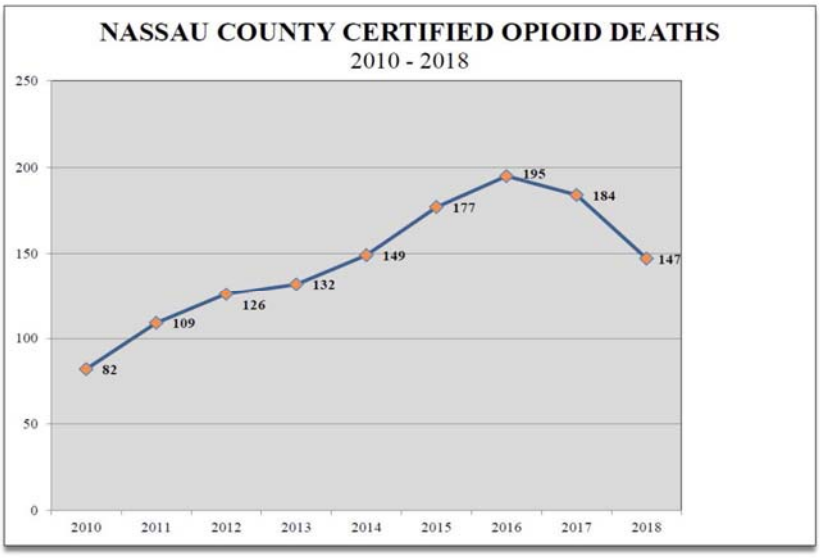
Prevention Agenda (PA) Indicator, 2016	Nassau County	NYS (excl NYC)	PA 2018 Objective
	Rate/Ratio/Percent	Rate/Ratio/Percent	Rate/Ratio/Percent
Percentage of children with 4:3:1:3:3:1:4 immunization series - Aged 19-35 months	51.6	64	80
Percentage of adolescent females that received 3 or more doses of HPV vaccine - Aged 13-17 years	36.4	41.7	50
Percentage of adults with flu immunization - Aged 65+ years	53.2	59.6	70
Newly diagnosed HIV case rate per 100,000 population (2014-2016)	8.4	6.9	16.1
Difference in rates (Black and White non-Hispanic) of newly diagnosed HIV cases (2014-2016)	16.5	20.1	46.8
Difference in rates (Hispanic and White non-Hispanic) of newly diagnosed HIV cases (2014-2016)	14.8	14	26.6
Gonorrhea case rate per 100,000 women - Aged 15-44 years	72.8	197.1	183.4
Gonorrhea case rate per 100,000 men - Aged 15-44 years	131.9	230	199.5
Chlamydia case rate per 100,000 women - Aged 15-44 years	1,050.90	1,351.60	1,458
Primary and secondary syphilis case rate per 100,000 men	9.7	9.1	10.1
Primary and secondary syphilis case rate per 100,000 women	0.4*	0.5	0.4

Red – Does not meets PA objective Green- Meets PA objective

Opioid Use

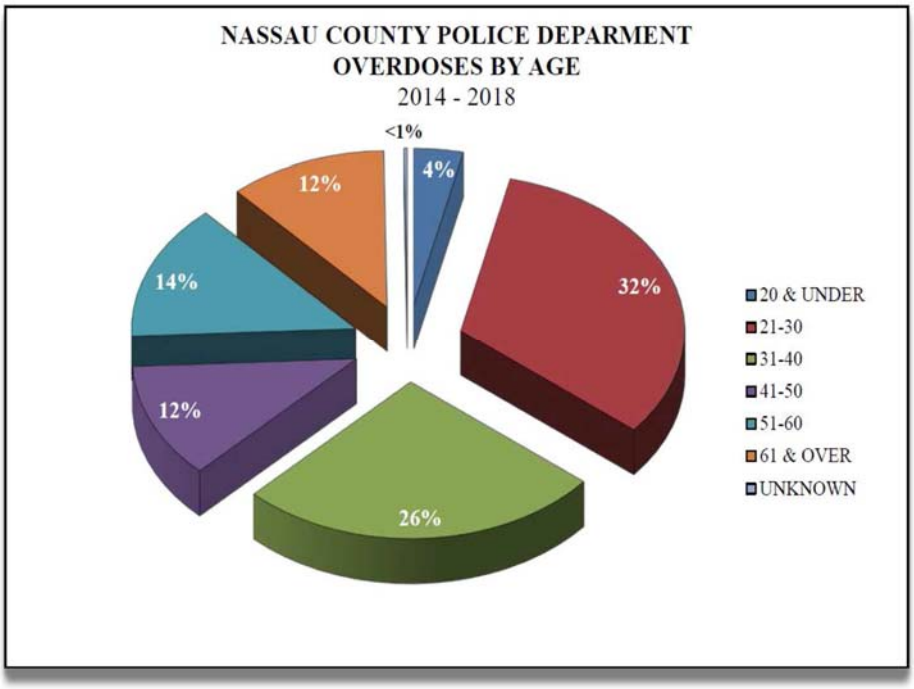
The Washington Post recently compiled a database reflecting prescription pain pills distribution for the U.S.[5] The Washington Post analyzed shipments of oxycodone and hydrocodone pills, which account for three-quarters of the total opioid pill shipments to pharmacies. According to the data, in New York State two pharmacies located in Long Beach, NY distributed the most in the state. In addition, 28 pills/person/year were supplied to Nassau County compared to the range of 11 pills/person/year to Kings County, NY and 50 pills/person/year to Sullivan County, NY.

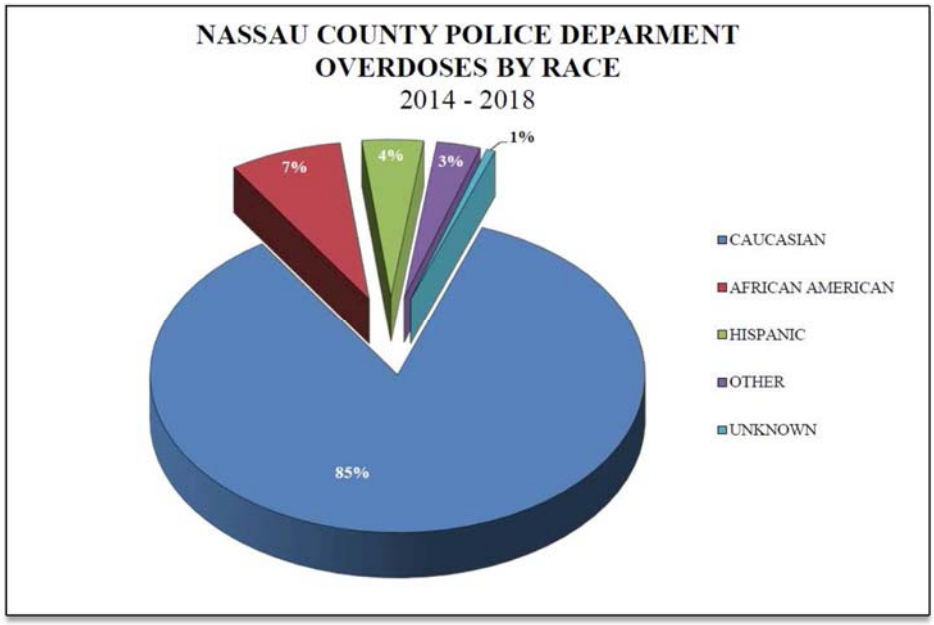
As reported in the Nassau County Opioid Crisis Task Force Action Plan Report from October 2019[6], the following graphs demonstrate that opioid deaths peaked in 2016 in Nassau County and are now declining. Most overdoses occur in those 21-30 years-old and among Whites.



Source: Nassau County Medical Examiner's Office

[5] https://www.washingtonpost.com/graphics/2019/investigations/dea-pain-pill-database/?utm_term=.846e751923b0
[6] https://www.nassaucountyny.gov/DocumentCenter/View/26743/Nassau-County-Opioid-Crisis-Action-Plan-Task-Force-Report?bidId=


NASSAU COUNTY POLICE DEPARMENT
OVERDOSES BY AGE
2014 - 2018
<1%
4%
32%
26%
12%
14%
12%
20 & UNDER
21-30
31-40
41-50
51-60
61 & OVER
UNKNOWN


NASSAU COUNTY POLICE DEPARMENT
OVERDOSES BY RACE
2014 - 2018
1%
7%
4%
3%
85%
CAUCASIAN
AFRICAN AMERICAN
HISPANIC
OTHER
UNKNOWN

Leading Causes of Death

The top five leading causes of death are the same in Nassau, NYS and NYS excluding NYC, for the time period of 2008-2016, with the sole exception of 2009 in NYS. In Nassau County, from 2008-2016, heart disease and cancer are the leading causes of death. Unintentional injury, CLRD and stroke are the also top causes but have differed rank over the same time period. The county has a higher rate of deaths due to heart disease than NYS both including and excluding NYC. All other causes have lower rates in Nassau than both NYS categories.

Leading Causes of All Deaths for Total Population
Selected Counties: Nassau

Top 5 Causes

		Number of deaths and age-adjusted death rate					
		Total Deaths	#1 Cause of Death	#2 Cause of Death	#3 Cause of Death	#4 Cause of Death	#5 Cause of Death
Nassau	2016	Total Deaths 10,979 570.5 per 100,000	Heart Disease 3,756 183.0 per 100,000	Cancer 2,457 133.0 per 100,000	Stroke 484 23.8 per 100,000	Unintentional Injury 451 30.9 per 100,000	CLRD 406 21.0 per 100,000
	2015	Total Deaths 11,031 574.7 per 100,000	Heart Disease 3,956 194.1 per 100,000	Cancer 2,470 134.6 per 100,000	Stroke 472 23.4 per 100,000	Unintentional Injury 443 29.1 per 100,000	CLRD 380 19.7 per 100,000
	2014	Total Deaths 10,578 558.9 per 100,000	Heart Disease 3,854 191.6 per 100,000	Cancer 2,430 134.7 per 100,000	Unintentional Injury 431 28.9 per 100,000	Stroke 430 22.0 per 100,000	CLRD 408 21.2 per 100,000
	2013	Total Deaths 10,586 566.9 per 100,000	Heart Disease 3,852 195.0 per 100,000	Cancer 2,537 142.2 per 100,000	Unintentional Injury 422 27.6 per 100,000	CLRD 403 21.7 per 100,000	Stroke 403 20.8 per 100,000
	2012	Total Deaths 10,967 594.4 per 100,000	Heart Disease 3,985 202.3 per 100,000	Cancer 2,596 147.3 per 100,000	Stroke 454 24.1 per 100,000	CLRD 447 24.4 per 100,000	Unintentional Injury 409 27.6 per 100,000
	2011	Total Deaths 10,688 587.9 per 100,000	Heart Disease 4,112 213.3 per 100,000	Cancer 2,466 142.3 per 100,000	CLRD 437 24.2 per 100,000	Stroke 427 22.8 per 100,000	Unintentional Injury 379 25.3 per 100,000
	2010	Total Deaths 10,598 593.5 per 100,000	Heart Disease 4,135 219.2 per 100,000	Cancer 2,539 147.1 per 100,000	CLRD 417 23.2 per 100,000	Stroke 398 21.7 per 100,000	Unintentional Injury 350 23.4 per 100,000
	2009	Total Deaths 10,419 587.1 per 100,000	Heart Disease 3,963 211.7 per 100,000	Cancer 2,503 145.8 per 100,000	CLRD 421 23.5 per 100,000	Stroke 400 21.9 per 100,000	Unintentional Injury 255 16.6 per 100,000
	2008	Total Deaths 10,836 635.5 per 100,000	Heart Disease 4,364 247.2 per 100,000	Cancer 2,581 153.1 per 100,000	CLRD 437 25.5 per 100,000	Stroke 418 23.9 per 100,000	Unintentional Injury 389 27.1 per 100,000

CLRD: Chronic Lower Respiratory Diseases
*Rates based on fewer than 10 events in the numerator are unstable.
Note: Ranks are based on numbers of deaths, then on mortality rates. Where county's death counts and rates are tied, '(tie)' appears at the bottom of the corresponding cells, and causes are further ranked alphabetically.
If a cell is blank, then there were no deaths from any of the 25 causes used in our tables. These causes are listed in the technical notes.

Source: Vital Statistics Data as of May 2018

Leading Causes of Death, New York State (excluding NYC), 2008-2016

Top 5 Causes

	Number of deaths and age-adjusted death rate					
	Total Deaths	#1 Cause of Death	#2 Cause of Death	#3 Cause of Death	#4 Cause of Death	#5 Cause of Death
2016	Total Deaths 99,793 676.7 per 100,000	Heart Disease 26,569 172.7 per 100,000	Cancer 22,422 152.4 per 100,000	CLRD 5,137 34.4 per 100,000	Unintentional Injury 5,041 41.7 per 100,000	Stroke 4,290 28.1 per 100,000
2015	Total Deaths 99,837 680.6 per 100,000	Heart Disease 26,929 176.8 per 100,000	Cancer 22,177 152.3 per 100,000	CLRD 5,286 35.7 per 100,000	Unintentional Injury 4,420 35.8 per 100,000	Stroke 4,284 28.4 per 100,000
2014	Total Deaths 96,120 661.9 per 100,000	Heart Disease 26,214 173.8 per 100,000	Cancer 22,271 155.1 per 100,000	CLRD 4,885 33.5 per 100,000	Stroke 4,258 28.5 per 100,000	Unintentional Injury 3,998 32.1 per 100,000
2013	Total Deaths 95,620 666.0 per 100,000	Heart Disease 26,545 178.2 per 100,000	Cancer 22,615 159.9 per 100,000	CLRD 5,124 35.6 per 100,000	Stroke 4,228 28.6 per 100,000	Unintentional Injury 3,917 31.5 per 100,000
2012	Total Deaths 96,452 681.2 per 100,000	Heart Disease 26,741 181.6 per 100,000	Cancer 23,006 165.4 per 100,000	CLRD 5,323 37.7 per 100,000	Stroke 4,373 30.2 per 100,000	Unintentional Injury 3,842 30.9 per 100,000
2011	Total Deaths 95,761 688.4 per 100,000	Heart Disease 27,169 188.6 per 100,000	Cancer 22,556 165.0 per 100,000	CLRD 5,117 37.1 per 100,000	Stroke 4,375 30.6 per 100,000	Unintentional Injury 3,683 29.8 per 100,000
2010	Total Deaths 94,061 688.2 per 100,000	Heart Disease 26,888 190.3 per 100,000	Cancer 22,684 168.8 per 100,000	CLRD 5,052 37.2 per 100,000	Stroke 4,621 32.2 per 100,000	Unintentional Injury 3,322 27.1 per 100,000
2009	Total Deaths 93,425 697.1 per 100,000	Heart Disease 26,597 192.4 per 100,000	Cancer 22,543 170.6 per 100,000	CLRD 5,129 38.6 per 100,000	Stroke 4,319 31.5 per 100,000	Unintentional Injury 2,881 23.7 per 100,000
2008	Total Deaths 94,461 716.5 per 100,000	Heart Disease 28,070 207.0 per 100,000	Cancer 22,862 176.4 per 100,000	CLRD 5,214 39.8 per 100,000	Stroke 4,322 32.0 per 100,000	Unintentional Injury 3,401 28.4 per 100,000

CLRD: Chronic Lower Respiratory Diseases
*Rates based on fewer than 10 events in the numerator are unstable.
Note: Ranks are based on numbers of deaths, then on mortality rates. Where death counts and rates are tied, '(tie)' appears at the bottom of the corresponding cells, and causes are further ranked alphabetically.
If a cell is blank, then there were no deaths from any of the 25 causes used in our tables. These causes are listed in the technical notes.
The tables do not present rates for the Native American/Alaska Native population due to small population size.

Source: Vital Statistics Data as of May 2018

Leading Causes of Death, New York State, 2008-2016

Top 5 Causes

	Number of deaths and age-adjusted death rate					
	Total Deaths	#1 Cause of Death	#2 Cause of Death	#3 Cause of Death	#4 Cause of Death	#5 Cause of Death
2016	Total Deaths 153,684 637.9 per 100,000	Heart Disease 43,869 177.0 per 100,000	Cancer 35,170 146.7 per 100,000	Unintentional Injury 7,334 34.2 per 100,000	CLRD 6,808 28.2 per 100,000	Stroke 6,197 25.3 per 100,000
2015	Total Deaths 153,623 644.0 per 100,000	Heart Disease 44,141 180.3 per 100,000	Cancer 34,795 147.1 per 100,000	CLRD 7,066 29.7 per 100,000	Unintentional Injury 6,372 29.5 per 100,000	Stroke 6,216 25.7 per 100,000
2014	Total Deaths 149,086 632.7 per 100,000	Heart Disease 42,836 177.1 per 100,000	Cancer 35,084 150.5 per 100,000	CLRD 6,738 28.8 per 100,000	Stroke 6,132 25.8 per 100,000	Unintentional Injury 5,820 27.1 per 100,000
2013	Total Deaths 147,445 634.0 per 100,000	Heart Disease 43,119 180.8 per 100,000	Cancer 35,078 152.9 per 100,000	CLRD 6,977 30.1 per 100,000	Stroke 5,961 25.3 per 100,000	Unintentional Injury 5,553 26.0 per 100,000
2012	Total Deaths 147,390 644.8 per 100,000	Heart Disease 43,262 184.2 per 100,000	Cancer 35,600 158.2 per 100,000	CLRD 6,986 30.8 per 100,000	Stroke 6,029 26.1 per 100,000	Unintentional Injury 5,455 25.8 per 100,000
2011	Total Deaths 147,105 656.0 per 100,000	Heart Disease 43,963 191.4 per 100,000	Cancer 35,032 158.6 per 100,000	CLRD 6,902 31.2 per 100,000	Stroke 6,153 27.1 per 100,000	Unintentional Injury 5,249 25.0 per 100,000
2010	Total Deaths 144,913 658.6 per 100,000	Heart Disease 44,557 198.0 per 100,000	Cancer 35,092 161.6 per 100,000	CLRD 6,775 31.1 per 100,000	Stroke 6,120 27.6 per 100,000	Unintentional Injury 4,720 22.7 per 100,000
2009	Total Deaths 144,874 659.6 per 100,000	Heart Disease 46,312 206.6 per 100,000	Cancer 34,822 160.5 per 100,000	CLRD 6,661 30.7 per 100,000	Stroke 5,823 26.2 per 100,000	Pneumonia and Influenza 4,460 20.0 per 100,000
2008	Total Deaths 147,460 670.3 per 100,000	Heart Disease 49,133 218.0 per 100,000	Cancer 35,100 162.6 per 100,000	CLRD 6,841 31.5 per 100,000	Stroke 5,882 26.4 per 100,000	Unintentional Injury 4,988 24.1 per 100,000

CLRD: Chronic Lower Respiratory Diseases
*Rates based on fewer than 10 events in the numerator are unstable.
Note: Ranks are based on numbers of deaths, then on mortality rates. Where death counts and rates are tied, '(tie)' appears at the bottom of the corresponding cells, and causes are further ranked alphabetically.
If a cell is blank, then there were no deaths from any of the 25 causes used in our tables. These causes are listed in the technical notes.
The tables do not present rates for the Native American/Alaska Native population due to small population size.

Source: Vital Statistics Data as of May 2018

Chapter 3: Social Determinants of Health

The health status of a population is the result of multiple, dynamically integrated factors that carry different weights at different times. In identifying the main health challenges facing the community, input was sought through community engagement. Community-wide surveys (Long Island and Eastern Queens Community Health Assessment Survey), key informant interviews from community-based organizations, focus groups, and on-going conversations with membership from the Long Island Health Collaborative provided the qualitative data used in this assessment. These reports are found in the Appendix. Community engagement yielded insight into the perception of barriers to and determinants of health at the community level. Social determinants of health are defined as the conditions in which people are born, live, grow, work, and age. These conditions can affect a wide range of health risks and outcomes. The five key domains of social determinants of health include: economic stability, education, social and community context, health and health care, and neighborhood and built environment. It is important to note that these categories are not mutually exclusive; factors and outcomes overlap.

Economic Stability

As described in the demographics section of this document (Chapter 1), Nassau County's median income ranks as one of the highest in the country. These riches are counterbalanced by the county's high property taxes. Concomitant with national unemployment rates, Nassau County's unemployment rate has decreased, and is considered as among the lowest in the state at 3.1% as of May 2019.[7] However, also during this time period, many communities have unemployment rates that exceed Nassau County and the state indicating a consistent disparity (Hempstead Village, 3.7%; Freeport, 3.5%).[8] Income differences are severe within the county (See Chapter 1) and often translate to poorer health outcomes. Home ownership also provides a similar profile where the value of owner-occupied houses was high for the county, $460,700 from 2013-2017. Yet, ownership was much lower for some communities within the county such as Uniondale's value of $337, 900 and Roosevelt's value of $278,00.[9]

The Focus Group analysis and In-Depth Interviews with community-based organizations reflected similar findings and can be further reviewed in Appendix. According to the Focus Group analysis, economic stability was

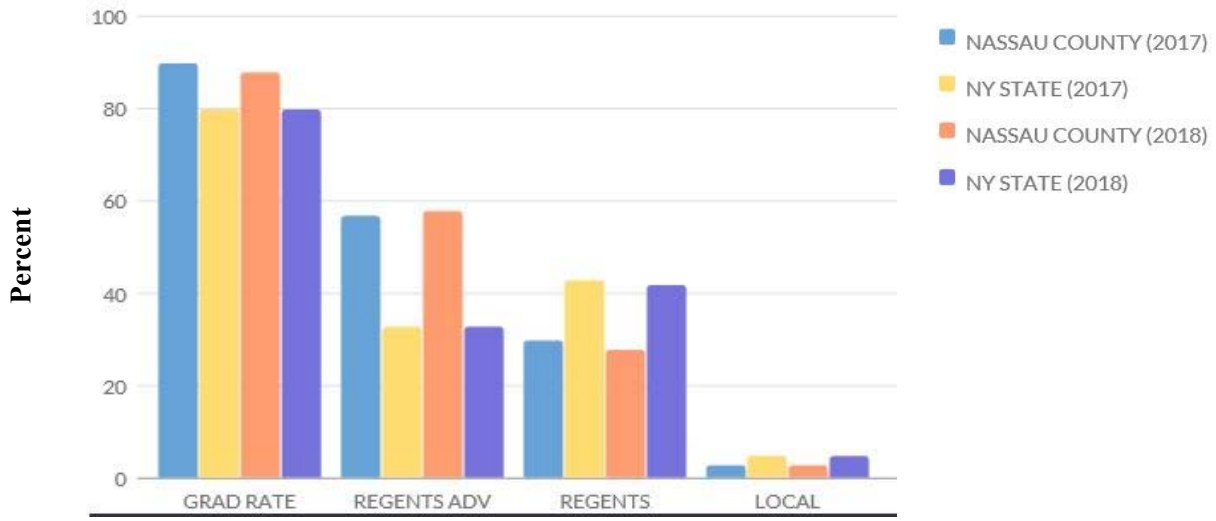
[7] https://www.labor.ny.gov/stats/LSLAUS.shtm
[8] Ibid; submit by selected area
[9] https://www.census.gov/quickfacts/

hindered by lack of money, costly food and housing. When In-Depth Interviews were conducted with community-based organizations, economic instability was demonstrated in citing homelessness and cost of food as a barrier to good health. In terms of population most at risk, organization leaders highlighted the difficulty in those with disabilities finding employment and the seniors who often are trying to live with reduced incomes. Furthermore, lack of good transportation networks was also discussed as a barrier to health. Commuting travel time was 36 minutes in Nassau County compared to New York State (33 minutes) and the United States (26 minutes).[10] For those who commute to the city by train, the Long Island Rail Road had its worst on-time performance in 2018 than at any other time, reporting delays and cancellations.[11] But, for many Nassau County residents who do not have cars and must rely on public transportation *within* the county in order to meet the needs of shopping for food, clothing, and work, there is limited public transportation. As described, this public transportation provides an additional stressor when seeking healthcare according to community.

Education

Educational attainment is the strongest predictor of health in a community. Education rates within the county are higher than that of NYS, and Nassau County's public-school system sees graduation rates that exceed the state as a whole (see graph below).[12]

Graduation Rates and Types of Degree



[10] https://www.census.gov/quickfacts/fact/table/US,NY,nassaucountynewyork/LFE305217
[11] https://www.osc.state.ny.us/localgov/pubs/economicprofile/long-island-region.pdf
[12] https://data.nysed.gov/gradrate.php?year=2018&county=28

Nevertheless, disparities exist when the data is further stratified by economic disadvantage. Those who are classified as economically disadvantaged have a graduation rate considerably less than those who are not economically disadvantaged (80% vs 92%, 2018) and Black students have a lower graduation rate compared to White students (85% vs 94%, 2018).[13] Two of the most troubled school districts in the state with graduation rates at 41% (Hempstead, USFD) and 64% (Roosevelt, USFD) are found within the county's boundaries. In both cases, NYS Department of Education have intervened.

Education, in terms of language fluency, is an important determinant of health as well. As found from the interviews of community-based organization (see Appendix), language proficiency was a top concern when discussing education. According to the report, a substantial number of residents speak a language other than English and community leaders discussed that this was a barrier to health care.

Finally, the interviews also identified that nutrition education and food deserts (areas where affordable and good quality food is not easily available) were the biggest health concern among organizations in the education field (Appendix). In 2017, in Nassau County, the food insecurity rate in Nassau County was among the lowest in the state at 5.4%.[14] In addition, Nassau County hosts 19 Farmer's Markets, from summer to fall, four of which accept SNAP (Supplemental Nutrition Assistance Program) and five of which are located in economically disadvantaged communities.[15]

Social and Community Context

Social and community context include factors such as social integration, support systems, community engagement, discrimination, and stress. Community resources that include community engagement are available to residents. In Nassau County, there is an abundance of programs available to the population especially in underserved areas. Nevertheless, the community's perception is that these programs are lacking, or not relevant to their needs. The focus groups pointed to issues regarding the impact of incarceration of a parent or guardian and the role of social media in minimizing social cohesion among people (See Appendix). According to the Reentry Council,[16] individuals with criminal

[13] https://data.nysed.gov/gradrate.php?year=2018&county=28
[14] https://map.feedingamerica.org/county/2017/overall/new-york
[15] https://www.eatsmartnyli.com/index.php?id=farmers-markets
[16] https://www.ny.gov/criminal-justice-reform/new-york-state-council-community-re-entry-and-reintegration

convictions continue to face significant economic and social barriers to their successful reintegration into society. In NYS, more than 25,000 people are released from prison each year. Programs to connect this population to services include legal and social services.[17] Furthermore, results from a seminal report indicate that over 70% of newly released prisoners used social services and over 50% used family as support.[18] Issues regarding employment, housing, healthcare, and education continue to be barriers to integration into society and can have implications for family stability.

Community leaders pointed to the immigrant population on Long Island as a special consideration when discussing this determinant of health (See Appendix). According to their feedback, immigrants may be reluctant to use services because of fear of deportation. Such stressors can therefore impact health. This is highlighted by a recent study from University of Michigan demonstrating a higher risk of low birth weight among newborns after 37 weeks gestation following an immigration raid.[19] Such a trend has been well documented among racial minorities suffering from chronic stress and lack of resources. For example, that racial disparities exist in perinatal outcomes and maternal mortality. NYS DOH has issued a report to address these issues, some of which stem from systemic racism and chronic stress.[20] Data described in Chapter 2 further demonstrate that a similar trend is seen in Nassau County.

All forms of overt or covert bigotry, including racism, xenophobia, sexism, LGBTQ discrimination have been and continue to be a problem. Therefore, all forms of bias and prejudice towards any one group will continue to hurt these populations of all types when trying to access healthcare, social services and safety.

Health and Healthcare

Access to quality healthcare has expanded within the county with the recent expansion of the federally qualified health centers that are part of NuHealth Nassau Health Care Corporation. NuHealth is a public benefit corporation managing the operations of Nassau University Medical Center, A. Holly Patterson Extended Care and a network of family health centers that bring primary and specialty care out into the community. Nassau County has 11 hospital locations

[17] http://www.nysba.org/reentryreport/
[18] https://www.hks.harvard.edu/centers/wiener/programs/criminaljustice/research-publications/incarceration-social-context-and-consequences
[19] https://news.umich.edu/immigration-fears-among-latinos-can-impact-baby-size-at-birth/
[20] https://health.ny.gov/community/adults/women/task_force_maternal_mortality/docs/maternal_mortality_report.pdf

within the county. The county hospitals offer community services, such as perinatal services, child safety, health screening, healthy aging and wellness programs and smoking cessation efforts.

The linkage of uninsured patients to managed care programs, including Medicaid and Medicare services, is supported by the Nassau County Department of Social Services. Consistent with New York State as a whole and as a function of the Marketplace which opened in 2013,[21, 22] the uninsured population continues to drop and is estimated to be 5.8% of the total population in Nassau County. The Affordable Care Act is currently not accessible to undocumented individuals. However, they can receive Emergency Medicaid when eligible. Without the support of insurance, this population imposes an additional burden on hospital and healthcare services who provide emergency care.

According to the Focus Groups and In-Depth Interviews conducted in Nassau County, access, financial and insurance barriers to care were the leading challenges seen in the county (See Appendix). According to the community, no insurance or being unable to afford co-pays and deductibles prevents residents from accessing medical treatment. When asked to list the factors most likely to make it difficult to access healthcare services, participants mentioned affordability, including insurance co-pays and expensive medications as a leading reason. Navigating complex health insurance requirements also posed a barrier, to some focus group members. And accessing mental healthcare provides a challenge because of insurance and stigma that persists. The reports comments that participants who speak languages other than English or Spanish, have difficulty finding a doctor who speaks their language. Some stressed the importance of teaching immigrants English to improve access to healthcare and health information. Participants also spoke about health behaviors perceived as related to one's cultural or religious practice, emphasizing the need for cultural sensitivity from healthcare providers. Finally, transportation was also a concern. Participants stated that most people in their communities cannot afford a car and are forced to take expensive and crowded public transportation which often requires a lot of time.

Neighborhood and Built Environment

The community infrastructure includes several aspects including housing, parks and recreation, safety, and walkability. Affordable housing is necessary for a community to thrive. According to a recent report from the Comptroller's office,[23] while the homes were of higher value in Nassau County compared to NYS ($460,000 vs $293,000,

[21] https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_S2701&prodType=table
[22] https://www.health.ny.gov/press/releases/2019/2019-05-15_historically_low_uninsurance.htm
[23] https://www.osc.state.ny.us/localgov/pubs/economicprofile/long-island-region.pdf

respectively) it can put a large financial strain on the homeowner with 43% of the homeowners with housing costs exceeding 30% of their income. According to the most recent foreclosure data report, [24] Nassau County, which had a high foreclosure rate, also saw a sharp drop, falling from 2.6 percent at the beginning of 2016 to 0.75 percent by the middle of 2017. Since then, however, Nassau's rate has leveled off. Parks and recreational facilities are plentiful around the county. According to its website,[25] Nassau County manages more than 70 parks, preserves, museums, historic properties, and athletic facilities comprising 6,000 acres throughout the county. These range from the 930-acre Eisenhower Park in East Meadow to the renovated 2-acre Centennial Park in Roosevelt to the Garvies Point Museum and Preserve in Glen Cove.

According to the Long Island Health Collaborative Community Member Survey Summary of Findings, a summary report for the Long Island Eastern Queens Community Health Assessment Survey, and the Focus Group and In-Depth Interview reports, structural challenges related to violence, access to healthy food, and access to affordable housing were concerns (See Appendix). In fact, promotion of a healthy and safe environment was the second highest priority, mostly in terms of concerns related to violence. In addition, some of the residents voiced concern about pollution in water or air. Nassau County Department of Health provides services and oversight to protect the county's environment. Ongoing regulation of recreational, residential and commercial sites through inspection and the enforcement of laws, codes and ordinances maintain safe food, water and air quality within the county.

The table below provides general health status statistics and social determinants of health indicators.

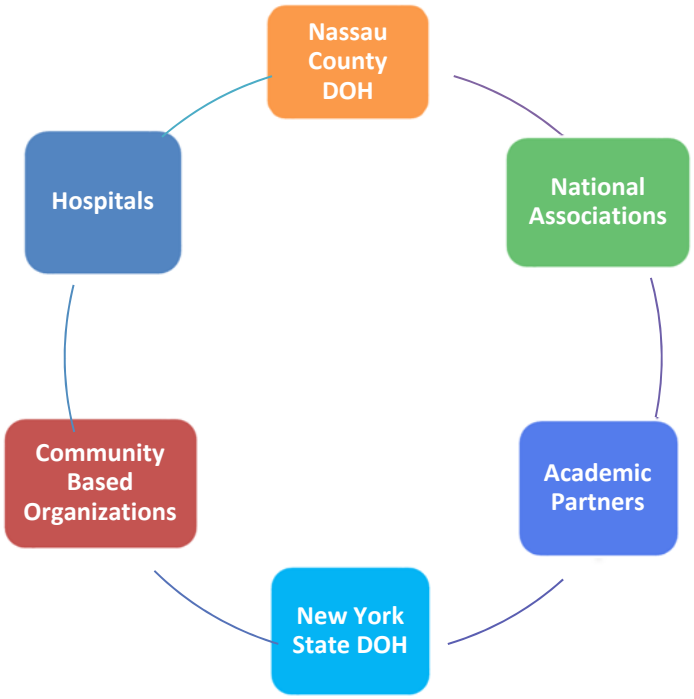
		Nassau		NYS excluding NYC		New York State	
Community Health Indicators (CHIRS)	Data Years	Number	Percent (or) Rate (or) Ratio	Percent (or) Rate (or) Ratio	Significant Difference	Percent (or) Rate (or) Ratio	Significant Difference
Birth rate per 1,000 population	2014-2016	42,888	10.5	10.7	Yes	11.9	Yes
Total mortality rate per 100,000	2014-2016	32,588	798.4	877.2	Yes	769.8	Yes
Age-adjusted total mortality rate per 100,000	2014-2016	32,588	568	673.1	Yes	638.2	Yes
Percentage premature deaths (aged less than 75 years)	2014-2016	10,702	32.8	38.8	Yes	40.7	Yes
Years of potential life lost per 100,000	2014-2016	175,958	4,674.4	6,069.4	Yes	5,697.6	Yes
Percentage of population with disability	2012-2016	112,830	8.4	N/A	N/A	11.2	N/A
Percentage of children under 18 years old with disability	2012-2016	7,071	2.4	N/A	N/A	3.8	N/A
Percentage of population in poverty	2016	N/A	6.1	N/A	N/A	14.8	Yes
Percentage of children aged <18 years below poverty	2016	N/A	8.1	N/A	N/A	20.8	Yes

[24] https://www.osc.state.ny.us/localgov/pubs/research/foreclosure-update.pdf
[25] https://www.nassaucountyny.gov/1768/About-Parks

Percentage of population who did not have access to a reliable source of food during the past year (Food insecurity)	2015	81,420	6	N/A	N/A	12.6	N/A
Percentage of households receiving Food Stamp/SNAP benefits in the past 12 months	2012-2016	22,109	5	N/A	N/A	15.4	N/A
Percentage of population with low income and low access to supermarket or large grocery store	2015	6,273	0.5	N/A	N/A		N/A
Percentage of renter occupied units in which gross rent is 30% or more of household income	2012-2016	46,246	57	N/A	N/A	53.6	N/A
Monthly median gross rent	2012-2016		$1,603	N/A	N/A	1,159.00	N/A
Percentage of population who lived in a different residence one year ago	2012-2016	87,173	6.5	N/A	N/A	10.7	N/A
Percentage of disconnected youths	2012-2016	14,225	8.9	N/A	N/A	12.1	N/A
Percentage of population aged 5 years and older who speaks English very well or English only	2012-2016	1,132,819	88.3	N/A	N/A	86.5	N/A
Index crime case rate per 100,000	2016	15,275	1,121.90	1,807.80	Yes	1,909.40	Yes
Violent crime case rate per 100,000	2016	1,826	134.1	222.3	Yes	375	Yes
Age-adjusted percentage of adults with poor mental health for 14 or more days in the past month	2016	N/A	10.8	11.2	No	10.7	No
Total emergency department visit rate per 10,000	2016	419,200	3,079.00	3,865.60	Yes	4,169.10	Yes
Age-adjusted total emergency department visit rate per 10,000	2016	419,200	3,009.30	3,850.40	Yes	4,133.40	Yes
Total hospitalization rate per 10,000	2016	157,529	1,157.00	1,125.30	Yes	1,154.40	No
Age-adjusted total hospitalization rate per 10,000	2016	157,529	1,058.80	1,043.70	Yes	1,081.50	Yes

Chapter 4: Assets and Resources

The public health system addresses health issues in the county through the combined efforts of community-based organizations and academic partnerships, as it is only through collaboration that the county will be able to improve the health of its citizens.



Nassau County Department of Health - Administration

The Health Commissioner and Administrative staff are responsible for the overall direction of the Nassau County Department of Health. The fiscal and human resources divisions are important units within administration and are responsible for budget and workplace support.

Community and Maternal Child Health Services

The Division of Community and Maternal Child Health Services provides a combination of direct services and administrative support to community-based programs and facilitates the coordination and integration of services for children and families. The Division includes the Office of Children with Special Needs, which encompasses four programs: Early Intervention, Preschool Special Education, the Physically Handicapped Children's Program (PHCP), and Child Find. The Division is also comprised of the Child Fatality Review Team (NCCFRT), 1 in 9: Hewlett House, the Childhood Lead Poisoning Prevention Program and the Women, Infants, and Children (WIC) Program. The latter is a federal program that provides food and formula vouchers to qualifying mothers and children, with the county health department acting as contractor for these services.

Communicable Disease

The Division of Communicable Disease Control protects the public from the spread of communicable diseases through education, surveillance, investigation, and intervention. Some of the actions taken to prevent outbreaks include education, post-exposure prophylaxis, immunization, recommendations, isolation, and quarantine. Communicable Disease Control also maintains a 24-hour public health consultation service for the reporting of reportable communicable diseases and physician consultation.

Communication and Health Information

The Office of Communications and Health Information is responsible for educating Nassau County residents about health issues to support a safe and healthy community and is dedicated to answering the public's questions and providing clear and accurate information. The Department of Health's website provides health information for residents in many languages.

Environmental Health

The Environmental Health Division promotes safe food, drinking water, air quality, and safe recreational, commercial, and residential environments through the regulation, inspection and enforcement of the New York State Public Health Law, State Sanitary Code, and the Nassau County Public Health Ordinance. It protects the community from the adverse effects of environmental pollution, unsanitary conditions and unsafe practices. It regulates the safe and sanitary conditions of public water systems, food service establishments, residential environments, temporary residences, hotels, motels, and recreational spaces, such as children's camps, public pools and beaches that provide quality environments for community members of all ages to exercise and maintain a healthy lifestyle. The Division provides education to food handlers and investigates food-borne disease outbreaks. It certifies tattoo and body piercing artists and prevents the sale of tobacco products to minors. The Division also investigates complaints of rodent and insect infestations and conducts mosquito and rabies surveillance. The county's water is derived from the sole source aquifer, making the protection of the county's water especially vital. The Division monitors the drinking-water quality, investigates soil and groundwater contamination, and regulates the storage of toxic and hazardous materials; lead abatement also falls within the Division's purview. The Division reviews and approves engineering plans for water systems, public pools, residential developments of five lots or more, and commercial development in non-sewer areas. As a participant in the New York Metropolitan Air Quality Initiative, Nassau has actively worked to improve air quality through the reduction of automobile emissions.

Environmental Laboratory Services

The Division of Environmental Laboratory assesses the status of community health in Nassau County through analytic and diagnostic laboratory services. Equipped with the necessary instruments and the expertise to use them, this Division tests for the presence of bacterial and chemical contaminants in the environment. The Laboratory is available to respond to public health emergencies 24 hours a day, 7 days a week.

Epidemiology and Planning

This Division contains the Bureaus of Analytics, STD and HIV Control, and Tuberculosis Control. The Bureau of Analytics analyzes hospitalization data and vital statistics for the county. Additionally, it partners with hospitals, schools, and other entities to carry out research, provide trainings, and apply for grants. This Bureau is responsible for the

Community Health Assessment, the Community Health Improvement Plan, the departmental Strategic Plan and accreditation. Nassau County's Bureau of Tuberculosis Control successfully monitors and mitigates the spread of tuberculosis, one of the world's deadliest diseases, through case management, Directly Observed Therapy (DOT), contact investigation, the immigrant program, education, isolation and quarantine, and consultation. The Bureau of STD and HIV Control focuses on a comprehensive approach to STD and HIV intervention, including risk reduction, counseling and education, early identification, and partner notification. These activities are conducted in partnership with healthcare providers, community organizations, schools, and other county agencies. Bureau staffers have extensive experience in field work, case interviews, confirmation of treatment, partner elicitation and notification, counseling and referral services, and have the capacity to use innovative approaches to case and partner investigations.

Health Equity

The Office of Health Equity, established in November 2019, works to eliminate health inequities within Nassau Country by providing leadership and guidance on best practices to reduce health inequities in vulnerable, underserved communities of Nassau County. The office envisions a data-driven and community-focused learning culture that creates and promotes sustainable opportunities for health equity.

Public Health Emergency Preparedness

The Health Department is invested in developing and maintaining individual and community preparedness for public health hazards and events. The Public Health Emergency Preparedness Division leads and coordinates the Department in emergency preparedness and response. The Division coordinates and staffs the Medical Reserve Corps, a volunteer organization through which medical professionals can volunteer their time and expertise in preparing for and responding to public health emergencies.

Hospitals Systems in Nassau County

Nassau County maintains a robust hospital system and a high density of physicians. Nassau County has 11 hospitals with 4,112 beds. These hospitals include those within the Northwell Health and Catholic Health Services of Long Island. As designated by the New York State Department of Health, Northwell-Manhasset and Winthrop University Hospital are level I Adult Trauma Centers. South Nassau Communities Hospital is a level II Adult Trauma Center, while Nassau University Medical Center is a Regional Trauma Center.

The county's perinatal centers are specialized, depending on the complexity of pregnancy--Regional Perinatal Centers, like Northwell-Manhasset and Winthrop-University Hospital, are equipped to treat the most complex obstetric and neonatal cases, whereas Level 3 Perinatal Centers, like Nassau University Medical Center, and Mercy Medical Center, treat mothers and neonates who require a sophisticated level of care. Level 2 Perinatal Centers, such as South Nassau Communities Hospital, treat cases of moderately complex pregnancies and deliveries. Level 1 Perinatal Centers treat relatively typical obstetric cases; all centers, except those with a Level 1 designation, have Neonatal Intensive Care Units.

Both Nassau University Medical Center and Northwell-Manhasset serve as AIDS Centers, which provide out-patient and in-patient care to those infected with HIV and AIDS. Cardiac Catheterization Centers, like Winthrop-University Hospital, South Nassau Communities Hospital, Mercy Medical Center, Nassau University Medical Center, St. Francis Hospital and Northwell-Manhasset, provide adult cardiac care. Nassau University Medical Center is the county's only burn center, but the aforementioned 11 hospitals are Stroke Centers and serve as primary care providers. NuHealth runs Nassau University Medical Center and community health centers, which are federally qualified. Nassau County Department of Health relies on these partnerships to provide direct care to the community. In particular, the Nassau County Department of Health works closely with NuHealth to provide care to the underserved and uninsured population within the county.

Furthermore, the Nassau – Suffolk Hospital Council helps support island-wide hospitals and is an important collaborative team member of the health department and the public health system. It enhances healthcare for all Long Islanders by representing the interests of its member hospitals before lawmakers, regulatory agencies, the media, and the public. The Council's objectives include serving as an expert voice on all healthcare issues pertaining to members and the region, providing application assistance to Medicaid, Child Health Plus and Family Health Plus, participating in regional emergency preparedness efforts and maintaining relationships with allied associations, business partners, and community groups. As part of the efforts of the Community Health Improvement Plan, the hospitals and health departments of both Nassau and neighboring Suffolk County have entered into a collaboration to provide resources to the region, known as the Long Island Health Collaborative. This collaboration was funded by NYS and is now also known as the Population Health Improvement Program.

Nursing Homes and Adult Care Facilities

For people who need round-the-clock care, nursing homes provide supervision and care outside of a hospital setting. Some facilities provide specialized services beyond the basic level of care—there are homes that cater to those who are living with AIDS or require a ventilator. In Nassau County, there are 37 nursing homes with a total certified bed capacity of 7,505. For those adults who require long-term, non-medical residential services who are substantially unable to live independently due to physical, mental, or other limitations associated with age or other factors, there are 34 adult care facilities in Nassau County, providing 4,752 beds.

Private Physicians and other Healthcare Providers

While there is no single source that tracks the number of physicians and other healthcare providers practicing in the county, the New York State Education Department maintains a list for licensing purposes. As of July 1, 2019, there were 9,437 registered licensed physicians and 1,936 physician's assistants;[26] 2,452 nurse practitioners;[27] and 2,042 licensed dentists in Nassau County.[28]

Academic Partnerships

With several colleges and universities in and around the county, Nassau is a region of characterized by higher learning. The health department works closely with six universities and colleges. In fact, legal agreements, Memoranda of Understandings (MOU), have been formed with many of the schools to be sites for Points of Dispensing (PODS) for emergency events, or academic research to address varied health outcomes. Beyond the county's borders, additional university systems support the health department and community in terms of outreach, research and trainings.

Community-Based Organizations and Associations

Nassau County has an active faith-based, health issue-driven, grassroots effort to address multiple health disparities and needs throughout the community. There are several community-based organizations (CBOs) located within the county. Nassau County Department of Health has engaged many of these agencies to participate in this assessment, as well as in the continued effort to move forward with plans to address poor health outcomes.

[26] http://www.op.nysed.gov/prof/med/medcounts.htm
[27] http://www.op.nysed.gov/prof/nurse/nursecounts.htm
[28] http://www.op.nysed.gov/prof/dent/dentcounts.htm

Chapter 5: Process and Methods to Conduct Community Health Assessment

The Collaborative Process

In 2013, hospitals and both County Departments of Health on Long Island convened to work collaboratively on the Community Health Assessment. Over time, this syndicate grew into an expansive membership of academic partners, community-based organizations, physicians and other community leaders who hold a vested interest in improving community health and supporting the NYS Department of Health Prevention Agenda. Designated the Long Island Health Collaborative, this multi-disciplinary entity has been meeting monthly to work collectively toward improving health outcomes for Long Islanders. In 2015, the LIHC was awarded the Population Health Improvement Program grant by the New York State Department of Health. The PHIP pledged to pursue the New York State of Health's Prevention Agenda, making the program a natural driver for the Community Health Assessment cycle. In 2018, members of the LIHC met and selected Prevention Agenda priorities for the 2019-2021 Community Health Assessment cycle.

Quantitative Data

Unlike previous cycles, this CHA is not framed by comparing aggregated selected community data to the rest of the county. The data were not available to the Nassau County Department of Health to make this analysis. Rather, this version contains publicly available data from NYSDOH website. Data tables are derived from the NYSDOH Community Health Indicators: https://www.health.ny.gov/statistics/chac/indicators/. Where possible, race and ethnicity data were used, NYS Community Health Indicators by Race/Ethnicity: https://www.health.ny.gov/statistics/community/minority/county/.

Demographic data came from the 2017 American Community Survey (ACS). Morbidity and mortality data were from the Community Health Indicators and Community Health Indicators by Race/Ethnicity tables on the NYSDOH website. The Prevention Agenda Objectives were used to track progress, NYSDOH Prevention Agenda is found at: https://www.health.ny.gov/prevention/prevention_agenda/2019-2024/index.htm.

Qualitative Data

To collect input from community members and measure the community-perspective as to the biggest health issues in Nassau County, the LIHC distributed the Long Island and Eastern Queens Community Health Assessment Survey. This survey was distributed via survey monkey, an online survey tool, and hard copy formats. The survey was written with adherence to Culturally and Linguistically Appropriate Standards (CLAS). It was translated into several languages and large print copies were available to those living with vision impairment. In addition, community Focus Groups and

In-Depth interviews of CBO representatives were conducted to understand the perspectives of Nassau residents. All these reports can be found in the Appendix.

Chapter 6: Distribution of the Community Health Assessment to the Community

Preliminary results, presentations and reports of components from this Community Health Assessment were presented to the hospitals, community-based organizations, academic institutions and health department staff by the LIHC. The assessment will be available on the Health Department website following its submission to New York State Department of Health. Continued feedback from the public and interested agencies will contribute to the ongoing efforts.

II. The Community Health Improvement Plan

Chapter 7: Priorities and the Strategy

In 2018, members of the Long Island Health Collaborative (LIHC), supported by the NYS Public Health Improvement Program (PHIP), identified Prevention Agenda priorities for the 2019-2021 Community Health Assessment cycle. Community partners selected:

1. **Prevent Chronic Disease**
   Focus Area 4: Chronic Disease Preventive Care and Management

2. **Promote Well-Being and Prevent Mental and Substance Use Disorders**
   Focus Area 2: Mental and Substance Use Disorders Prevention

The health disparity in which partners are focusing their efforts rests on the inequities experienced by those in underserved communities. These communities often remain disproportionately burdened with health conditions which are the often the result and compounded by social determinants of health.

Chapter 8: Workplan: Goals, Objectives, Interventions, Strategies and Activities

Nassau County Department of Health along with the LIHC have continued to promote chronic disease and mental health improvements. With funding secured through the PHIP, the Long Island Health Collaborative has been supported in leading initiatives focused on decreasing rates of chronic disease, specifically those diseases related to obesity and preventive care and management. Initiatives geared to address health disparities and barriers to care are vital to improving health outcomes in Nassau County. Selected initiatives are currently supported and implemented by way of the LIHC network and discussed at monthly Long Island Health Collaborative meetings. LIHC workgroups provide focused expertise and strategizing efforts surrounding the development of specific interventions, strategies, and activities. LIHC workgroup areas include: Public Education, Outreach and Community Engagement, Academia, Data, Nutrition and

Wellness, and Cultural Competency/Health Literacy. Workgroup membership is continually growing, which supports partnerships and diversity of project efforts. Selection of initiatives is data-driven, supported by research and data in alignment with the PHIP's commitment to utilizing evidence-based strategies. Nassau County and PHIP-led initiatives support the NYS Prevention Agenda areas and include:

- "*Are You Ready, Feet?* ™" physical activity/walkability campaign, events and walking portal
- Programming for chronic disease management
- Cultural Competency Health Literacy training
- Live Better-multi-media awareness campaign
- Hewlett House Cancer Support Services
- Cancer Services Program of Nassau County
- Mental Health First Aid USA™ Training, Evidence-based Program
- NARCAN trainings
- Buprenorphine practitioner waiver trainings
- Opioid education to Correctional Facility
- Community Conversations

These evidence-based initiatives are further described in the CHIP Workplan. The references for these interventions are found in the Appendix.

Chapter 9: Sustainability and Partner Engagement

The regional collaborative, LIHC, is committed to maintaining its relationship for programmatic efforts and community engagement. The Long Island Health Collaborative first convened in 2013, with membership and partner-engagement gaining exponentially over time. With funding awarded through the New York State Department of Health, the Long Island Health Collaborative has made enhanced strides in only a few short months. LIHC partners have demonstrated their commitment to maintaining engagement with community-partners by advocating on behalf of the LIHC, promoting LIHC initiatives and bringing counterpart organizations to the table during monthly meetings. As strategies are implemented, progress will be measured on an ongoing basis.

The Nassau County Department of Health, in concert and aligned with the larger collaborative, will continue to subscribe to the following principles:[29]

Principle #1: Development of true partnerships, means creating relationships of mutual cooperation, benefits, and responsibility to ensure that results are achieved

This principle, while providing the foundation for creating partnerships, is also important to the maintenance of relationships and the expansion of the number of engaged stakeholders; formulating group consensus and committee decision are standard to the process.

Principle #2: Attention to community diversity and its role in engagement

Partners should represent a cross-section of the health community and the partnership will expand to continue to include other sectors that are not currently represented. Diversity of perspectives and experiences are necessary for the collaboration to remain strong. Even with diversity in perspectives, it is still necessary to maintain common ground and goals; the prevention agenda provides those shared priorities.

Principle #3: Identification and mobilization of community and stakeholder assets

Each stakeholder has different tools and resources that can be used collectively to address the prevention agenda priorities. Therefore, each stakeholder must be acknowledged for its role and the unique perspective that it brings to the process.

Principle #4: Evaluation of leaders' roles over time

The collaboration process is a long-term effort that requires each stakeholder and representative to remain flexible to the needs of the effort, as they may change during this process.

Principle #5: Participation is a long-term commitment to the collaboration

To maintain participation, in addition to other principles, each member needs opportunities to learn from its counterparts. Designating meetings to facilitate learning and information exchange will encourage each member's continuous engagement.

Principle #6: Participation in review and evaluation

To ensure that goals and objectives are being met, the collaborative group will schedule meetings during which such metrics and strategies will be discussed, and improvements based on lessons learned will be implemented.

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[29] http://www.cdc.gov/phppo/pce/

Principle #7: Coordination and schedule of meetings

The collaboration has decided that monthly meetings will be held and organized by the Nassau-Suffolk Hospital Council. In some cases, smaller groups will be established, *ad hoc*. Examples of workgroups include the metric workgroup, the walking initiative workgroup, etc. These meetings will be prescheduled. The agenda will vary but will cover a plan that includes defining strategies for the prevention agenda, evaluating metrics, adjusting methods or programs, increasing resources for the network and the residents and identifying grants that will further support the collaboration.

Chapter 10: Dissemination of the Plan to the Community

Health Communication Strategies and Transparency are two key roles of the Population Health Improvement Program. The Nassau County Department of Health and The Long Island Health Collaborative websites are designed to engage the community and provide transparency in population health initiatives and data analysis efforts. The CHA and CHIP are available, therefore, on both websites (http://www.nassaucountyny.gov/agencies/Health/; https://www.lihealthcollab.org/). Opportunities for further dissemination of the plan will include the incorporation of key aspects at health department events, presentation to the Board of Health, announcement to health department staff and key partners through email, after it is submitted to the NYS.

Appendix

Included in the appendix are:

Long Island Health Collaborative Community Member Survey Summary of Findings

Focus Group and In-Depth Interviews Report

Nassau County Department of Health CHIP Workplan References and Supporting Evidence

Long Island Health Collaborative/Population Health Improvement Plan Membership Directory

Long Island Health Collaborative
Community Member Survey Summary of Findings

Methodology:

Surveys were distributed by paper and electronically, through Survey Monkey, to community members. The electronic version placed rules on certain questions; for questions 1-5 an individual could select three choices, and each question was mandatory. For question 6, individuals could choose as many responses as they'd like. Although the rules were written on the paper survey, people often did not follow them. On December 15th 2018, we downloaded the surveys from Survey Monkey. We needed to add weights to the surveys which did not follow the rules - for each of the questions that had more than three responses. The weight for each response was 3/x, where x is the count of responses. No weight was applied to questions with less than three responses because they had the option to select more and chose not to do so. With the weight determined, we applied the formula to the data and then added the remaining surveys to the spreadsheet.

Analysis Results:

1. When asked ***what the biggest ongoing health concerns in the community where you live are***:

2018 Rank	Suffolk County	Percentage	Nassau County	Percentage
1	Drugs & Alcohol Abuse**	22.45%	Cancer**	17.08%
2	Cancer**	16.68%	Drugs & Alcohol Abuse**	14.72%
3	Mental Health, Depression, Suicide	12.05%	Diabetes	12.88%
4	Heart disease & stroke**	10.14%	Heart disease & stroke**	11.23%
5	Obesity, Weight Loss Issues**	8.20%	Obesity, Weight Loss Issues**	9.49%
	Sum of Column Percentages	**69.53%**		**65.41%**

** Indicates an option present in the top five for both counties

2. When asked ***what the biggest ongoing health concerns for yourself are:***

2018 Rank	Suffolk County	Percentage	Nassau County	Percentage
1	Heart disease & stroke**	18.57%	Heart Disease & Stroke**	17.90%
2	Obesity, Weight Loss Issues**	14.94%	Cancer**	14.56%
3	Cancer**	14.19%	Obesity / Weight Loss Issues**	13.77%
4	Women's Health & Wellness**	12.63%	Diabetes**	13.26%
5	Diabetes**	8.14%	Women's Health & Wellness**	13.07%
	Sum of Column Percentages	**68.47%**		**72.55%**

** Indicates an option present in the top five for both counties

3. The next question sought to ***identify potential barriers that people face when getting medical treatment***:

2018 Rank	Suffolk County	Percentage	Nassau County	Percentage
1	No Insurance**	20.18%	No Insurance**	20.87%
2	Fear**	17.52%	Unable to Pay Co-pays / Deductibles**	16.05%
3	Unable to Pay Copays or Deductibles**	16.16%	Fear**	14.10%
4	There Are No Barriers**	14.70%	Don't Understand Need to See A Doctor**	13.14%
5	Don't Understand Need to See A Doctor**	11.13%	There Are No Barriers**	10.99%
	Sum of Column Percentages	**79.69%**		**75.15%**

** Indicates an option present in the top five for both counties

4. When asked ***what was most needed to improve the health of your community:***

2018 Rank	Suffolk County	Percentage	Nassau County	Percentage
1	Healthier Food Choices**	15.26%	Healthier Food Choices**	18.11%
2	Drug & Alcohol Rehabilitation Services**	14.71%	Clean Air & Water**	13.46%
3	Clean Air & Water**	12.11%	Mental Health Services**	10.88%
4	Mental Health Services**	11.75%	Drug & Alcohol Rehabilitation Services**	10.05%
5	Job Opportunities	9.87%	Weight Loss Programs	9.55%
	Sum of Column Percentages	**63.70%**		**62.06%**

** Indicates an option present in the top five for both counties

5. When people were asked ***what health screenings or education services are needed in your community***:

2018 Rank	Suffolk County	Percentage	Nassau County	Percentage
1	Drug & Alcohol	14.07%	Blood Pressure	12.00%
2	Mental Health / Depression**	10.74%	Diabetes	9.62%
3	Importance of Routine Well Checkups	8.61%	Cancer**	9.26%
4	Exercise / Physical Activity	8.01%	Cholesterol	8.47%
5	Cancer**	7.99%	Mental Health / Depression**	8.33%
	Sum of Column Percentages	**49.43%**		**47.67%**

** Indicates an option present in the top five for both counties

6. For the final question people were asked ***where do you and your family get most of your health information***:

2018 Rank	Suffolk County	Percentage	Nassau County	Percentage
1	Doctor / Health Professional**	42.74%	Doctor / Health Professional**	39.38%
2	Internet**	20.62%	Internet**	16.09%
3	Family or Friends**	8.62%	Family or Friends**	10.13%
4	Newspaper / Magazines**	5.65%	Newspaper / Magazines**	6.42%
5	Television**	4.76%	Television**	5.97%
	Sum of Column Percentages	**82.39%**		**77.98%**

** Indicates an option present in the top five for both counties

2677 surveys were collected between January 1st and December 31st, 2018. There were 1664 respondents for Nassau, 810 for Suffolk and 203 for Queens.

For a full version of the spreadsheet that includes interactive tables to analyze results based on demographic factors you can visit: https://www.lihealthcollab.org/data-resources.aspx

About the Long Island Health Collaborative

The Long Island Health Collaborative is a partnership of Long Island's hospitals, county health departments, physicians, health providers, community-based health and social service organizations, human service organizations, academic institutions, health plans, local government, and the business sector, all engaged in improving the health of Long Islanders. The initiatives of the LIHC draw funding from the New York State Department of Health through the Population Health Improvement Program grant.

Long Island Health Collaborative,
Population Health Improvement Program for the Long Island Region

Focus Groups and In-Depth Interviews

March 26, 2019

Smart Research Solutions

Table of Contents

This report was prepared in compliance with ISO 20262 International quality standard for market, public opinion, and social research.

1. Executive Summary

The Long Island Health Collaborative, (LIHC), the Population Health Improvement Program (PHIP) for Long Island, contracted with EurekaFacts to conduct a qualitative research study to assist it in the selection of New York State Prevention Agenda Priorities for the 2019-2021 period. They also sought to gather data to inform the Community Health Needs Assessment (CHNA) process and subsequent implementation plans for hospitals and local health departments, understanding the health concerns through the lens of the Social Determinants of Health. The study consisted of several phases of data collection: four two-hour focus groups with Long Island residents who indicated difficulty in accessing healthcare in the previous year, and 15-minute in-depth interviews with 26 leaders of health-related community-based organizations (CBOs) who served these populations. Twelve in-depth interviews of Long Island residents lasting half an hour each were also added as insufficient numbers of participants attended two of the four focus groups.

1.1 Key Findings & Takeaways

Prevention Agenda Priorities

Long Island residents and CBO leaders indicated that there were significant health concerns among all five of the New York State Department of Health Prevention Agenda Priorities. However, both groups indicated that there were key challenges within the prevention of chronic diseases, promotion of a healthy and safe environment, and promotion of well-being and prevention of mental and substance use disorders. Residents expressed numerous concerns within these areas, including cancer, diabetes, violence, access to healthy food, and mental health. CBO leaders discussed the services they provided in these areas and acknowledged numerous structural challenges in play. There may be opportunities to provide health education on key topic areas to interested audiences as well as exploring collaborative efforts to address structural barriers.

Long Island residents and CBO leaders were asked which health concerns were the highest priorities to address. Based on the number of times a topic was referenced during this portion of

the discussion, the top five most commonly referenced specific health concerns are ranked as follows:

Ranking	Specific Health Concern	Number of References	Prevention Agenda Priority
1	Mental health	13	Promote Well-being and Prevent Mental and Substance Use Disorders
2	Violence	12	Promote a Healthy and Safe Environment
3	Substance use disorders	9	Promote Well-being and Prevent Mental and Substance Use Disorders
4	Diabetes	7	Prevent Chronic Diseases
5	Cancer	6	Prevent Chronic Diseases

Table 1: Ranking the top five specific health concerns within the Prevention Agenda Priorities by the number of times it was referenced when asked about the highest priorities to be addressed

Looking more broadly, the number of times that the Prevention Agenda Priorities were referenced while discussing the highest priority health concerns yields the following ranking:

Ranking	Prevention Agenda Priority	Number of References
1	Promote Well-being and Prevent Mental and Substance Use Disorders	23
2	Promote a Healthy and Safe Environment	20
3	Prevent Chronic Diseases	18
4	Prevent Communicable Diseases	7
5	Promote Healthy Women, Infants, and Children	2

Table 2: Ranking the Prevention Agenda Priorities by the number of times it was referenced when asked about the highest priorities to be addressed

Social Determinants of Health

Participants in the focus groups and in-depth interviews, or IDIs, discussed the many ways that each of the Social Determinants of Health impacted community health outcomes. Of the five

determinants explored, residents and CBO leaders agreed that Economic Stability has significant influence in terms of accessible transportation and financial insecurity. Participants agreed that for Health and Healthcare, access to affordable insurance and healthcare were significant challenges. Long Island residents suggested more outreach and health education would help them connect to available resources and address barriers such as fear or stigma. Discussions about Neighborhood and Built Environment emphasized the structural challenges in terms of lack of affordable housing or access to healthy food options. Among residents, key challenges in Social, Family, and Community Context are the many negative impacts of incarceration on the individual and his or her family. Education, in terms of early childhood education or primary or secondary education, received less emphasis than the other four determinants of health.

2. Introduction

Project Goals

The Long Island Health Collaborative (PHIP) contracted EurekaFacts to conduct a series of qualitative focus groups and interviews with underserved residents of Long Island and leaders of community-based organizations (CBOs) who perform work related to this population. Goals of the project were to understand the barriers to healthcare access and community-level priorities of residents who lack healthcare access. The results of this study will be used to guide PHIP's work with the New York State Department of Health Prevention Agenda Priorities 2019-2021. These priorities guide public health efforts for a multi-year period for county health departments, hospitals, and CBOs. The five Prevention Agenda Priorities for 2019-2021 are as follows:

- Prevent chronic diseases
- Promote a healthy and safe environment
- Promote healthy women, infants, and children
- Promote well-being and prevent mental and substance use disorders
- Prevent communicable diseases

Additionally, PHIP wanted to understand barriers to healthcare access and community-level priorities through the lens of Social Determinants of Health. These determinants explore the ways that where people live, work, play, and age directly or indirectly impact their health outcomes. The Social Determinants of Health used in this research were defined as the following:

- *Economic Stability:* Housing security, employment, food security, and transportation
- *Education:* Language and literacy, early childhood education, high school education
- *Health and Healthcare:* Access to health, health literacy, access to a trusted provider, access to primary care
- *Neighborhood and Built Environment:* Access to healthy foods, affordable/quality housing, crime and violence
- Social, Family, and Community Context: Social cohesion, civic participation, incarceration, and institutionalization

The definitions were taken from the New York State Department of Health[1]. The Prevention Agenda Priorities and Social Determinants of Health were used to guide the design of all research instruments and analysis methods.

3. Methodology

3.1 Design

To understand the community-level priorities of residents who experience barriers to healthcare access, this study involved three separate data collection efforts:

1. Focus groups with people facing barriers to healthcare on Long Island;
2. In-depth interviews by phone with the same population as above; and
3. In-depth interviews by phone with leaders of Community-Based Organizations (CBOs) providing services that impact the health of people on Long Island.

All aspects of the study were approved by EurekaFacts' Institutional Review Board (IRB).

Long Island Residents

Focus Groups

To understand the barriers to healthcare and community-level priorities of residents, a series of two-hour focus groups were held on Long Island with people from Nassau and Suffolk Counties: Freeport (Nassau), Elmont (Nassau), Riverhead (Suffolk), and Wyandanch (Suffolk). These groups aimed to include people primarily from the communities of Elmont, Freeport, Roosevelt, Hempstead, Wyandanch, Central Islip, Brentwood, and Riverhead. The Nassau groups had 12 participants each, while the Suffolk groups had four participants. Focus group topics included discussion around the five Prevention Agenda Priorities, barriers to seeking healthcare, Social Determinants of Health, and sources of health information.

As two of the four focus groups had fewer than the minimum of eight participants, twelve 30-minute phone interviews were conducted with people in both counties to supplement the data. Using a mixed approach of focus groups and in-depth interviews has been demonstrated to result in more detailed, relevant, and useful data, as focus group participants excel at group

[1] Categories and definitions taken from New York State Department of Health CBO Directory: https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/vbp_library/cbo_directory.htm

brainstorming and discussing novel solutions, while in-depth interviews provide richer and more detailed data[2].

In-Depth Interviews

Semi-structured in-depth interviews were held with 12 residents of Long Island who met the same eligibility criteria as focus group participants. The in-depth interviews were designed as a phenomenological qualitative study, in which the research team sought to understand a community or population's experience around a specific phenomenon. In this case, the research focused on the experience of health and healthcare on Long Island among underserved populations viewed through the lens of the five Prevention Priority areas and the Social Determinants of Health. Although the number of in-depth interviews required to reach an adequate depth of understanding of an issue is greatly debated, Guest and colleagues[3] conducted a systematic examination of the number of interviews required to establish overarching themes within a nonprobabilistic sample from a demographically-defined group for qualitative research, although not for a phenomenological study specifically. Their results indicated that twelve interviews were required to establish saturation, although basic themes were evident after six interviews. Starks and Trinidad[4] note that sizes for interview samples in phenomenological studies are often ten or smaller, an approximate range which is echoed elsewhere[5]. While acknowledging that perspectives on qualitative sample differ, the research team felt confident that twelve interviews would provide a rich dataset and clear themes.

Similar to the focus group discussion, the interview topics included the five Prevention Agenda Priorities, barriers to seeking healthcare, Social Determinants of Health, and sources of health information.

Community-Based Organizations

[2] Sugovic, M., Nooraddini, I., Sherehiy, B. (2016). Evaluation of safety label design: Comparison between cognitive interviewing versus focus group methods. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 60*(1), 1632-1636.
[3] Guest, G., Bunce, A. and Johnson, L. (2006). How many interviews are enough?: An Experiment with Data Saturation and Variability. Field Methods, 18(1), pp. 59-82.
[4] Starks, H. and Trinidad, S. B. (2007.) Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research, 17*(10), 1372-1380.
[5] Morse, J. 1994. Designing funded qualitative research. In Handbook for qualitative research, ed. N. Denzin and Y. Lincoln, 220–35. Thousand Oaks, CA: Sage.

To identify areas of need from the perspective of CBOs, the third data collection effort included 26 phone interviews lasting 15 minutes each with leaders of CBOs. Interview topics included a brief description of the organization and the interviewee's role, health concerns related to the Social Determinants of Health, specific populations impacted by them, and barriers and facilitators to health from the perspective of the Social Determinants of Health.

3.2 Participants

Long Island Residents

The research team sought to recruit 8-12 participants for each of the four focus groups. Participants were required to meet certain characteristics, including household income, geography, and access to healthcare. Household income eligibility was determined as the median income for the county plus one standard deviation. The maximum eligible household income in Suffolk County was $74,999 and $99,999 for Nassau County. To determine whether a potential participant faced barriers to healthcare, and was thus eligible for this research, recruitment agents asked the following question: "During the past 12 months, was there ever a time when you felt that you needed health care, but you could not receive it because of cost, transportation, or some other reason?"[6] Initially, participants who did not reside in the four locations for the focus groups were screened out, but this practice generated low recruitment numbers. PHIP and EurekaFacts agreed to modify the screener and allow others from Long Island into the groups. As noted above, to achieve data saturation with qualitative interviews, the recommended sample size of 12 interviews needs to occur within a demographically-defined group. This sample was considered eligible due to the geographic location, income (defined as the median income level plus one standard deviation), and self-reported challenges in accessing healthcare. Within this sample, there was a mix of demographics in terms of gender, race, ethnicity, and education level.

Recruitment

Eligible participants were found through the following methods, in decreasing order of importance: lists of phone numbers, social media advertising, referrals, advertising and outreach

[6] Adapted from Law, M., et al. (2005.) Meeting health need, accessing health care: The role of the neighbourhood. *Health & Place, 11*, 367-377.

by CBOs, and in-person recruitment. Focus group participants received a $75 Visa gift card incentive for participation and were eligible for an additional incentive for referrals, while interview participants received a $40 Visa gift card.

Challenges encountered – Focus Groups and Residents IDIs

EurekaFacts attempted to recruit up to 12 participants in each of the four focus group locations: Hempstead, Elmont, Riverhead, and Wyandanch. Recruitment efforts included the use of a purchased list of 4,000 cell phone records distributed evenly across the four locations, Craigslist and Facebook advertisements, referrals, and assistance from local CBOs who provide services to the target population. Challenges included lower than expected response rates to our social media campaigns and Craigslist advertisements, as well as the reluctance of CBOs to agree to meet with EurekaFacts representatives or permit on-site recruitment. Additionally, the recruiting team faced logistical challenges in reserving spaces at public libraries.

Steps taken to address challenges

In consultation with LIHC staff, recruitment agents shifted through the process to respond to challenges in using the phone list and social media advertisements. New strategies included enlisting the help of community organizations based on Long Island, such as workforce development organizations, to provide access to their members, display our flyer on their website and physical premises, and allow EurekaFacts to conduct on-site recruitment at their premises. Referral incentives were also added to facilitate snowball sampling. In consultation with LIHC staff, the focus group screener was modified to remove zip code restrictions and allow participants from various regions withon Long Island to participate in the study, given that they met other qualifying criteria. All changes in recruitment methods were submitted and approved by the EurekaFacts internal IRB.

Community-Based Organizations

The list of CBOs for interviews was provided in a file by PHIP, which also indicated the Social Determinants of Health addressed by the CBOs. The determinant used for the focus of the in-depth interviews was initially assigned based on the list from PHIP and confirmed with the organization prior to the facilitation of interviews. The research team intended to have equal representation across the five Social Determinants of Health and between both counties.

Recruitment

CBOs were recruited using a 5-minute phone screener which followed an initial email contact from either LIHC or EurekaFacts. CBOs were selected from a list of 111 CBOs provided by LIHC, as well as a supplemented lists of food pantries and libraries once the original list was exhausted.

Challenges encountered – Community-Based Organizations

EurekaFacts attempted to recruit 26 CBOs from a larger list of 111 organizations that PHIP provided. Challenges encountered during this recruitment effort were mainly related to fulfilling quotas for geography and social determinants of health. The main challenge for geography requirement was having fewer organizations primarily serving Suffolk County, although 16 of the 26 CBOs interviewed were active in both counties. Additionally, there were many organizations in the health and healthcare segment and very few in the economic stability or the social and community context segments. Other challenges included unwillingness of some of the organizations to participate, and a large number of unreturned voicemails. After making three call attempts on each of the records on the list, EurekaFacts decided that no more calls should be made according to best practices and company policy, and PHIP was notified.

Steps taken to address challenges

EurekaFacts worked more closely with PHIP to address issues related to low response rates from CBOs, and to encourage more participation from these organizations. PHIP personally reached out to several CBOs, after which they received written approval from some organizations to be interviewed. EurekaFacts then contacted and scheduled interviews with these organizations. During the interviews, EurekaFacts interviewers prompted some organizations who were active in more than one Social Determinant of Health area to be interviewed on a topic with less representation, therefore fixing some of the quota challenges faced. Because interviews with CBOs reflected that 16 of the 26 organizations were active in both counties, it was concluded after discussion with PHIP that both counties were adequately represented. Likewise, since the average organization reported working in 2.5 determinants of health areas, it was also safe to conclude that all areas were sufficiently covered. All changes in recruitment methods were submitted to and approved by the EurekaFacts internal IRB.

3.3 Materials Development

Long Island Residents

Focus Group Discussion Guide Design

The discussion guide was developed in close consultation with the members of the Long Island Health Collaborative's (LIHC) Community Health Needs Assessment (CHNA) Preparation Workgroup. A list of concepts to explore was first generated and shared with the group for approval. After receiving feedback, revising, and gaining approval from the members of the workgroup, this list was expanded into a complete discussion guide using the Delphi Method to gain consensus. This focus group guide was submitted and approved by the workgroup as well as the EurekaFacts Internal IRB. The guides explore perceptions for the highest priority community health concerns, barriers to treatment, health impacts of the Social Determinants of Health, and sources of information. It is important to note that the decision to exclude questions about health and healthcare as a Social Determinant of Health were made at the time of the discussion guide concept list generation, as the focus of much of the interview was on issues related to access to health, health literacy, and access to a trusted provider.

Delphi Method

Focus groups were conducted using the Delphi methodology, wherein participants wrote answers down in private and passed their answers into a box, with the moderator selecting answers, placing them on a flipchart, and then leading a discussion on the answers without identifying the source of the answer. This methodology allowed sensitive topics—including health concerns and barriers to healthcare in the community, the topic of discussion—to be discussed candidly with a veil of anonymity, even around peers or relatives.

The Delphi methodology involves multiple steps. First, participants answer a question anonymously by submitting written comments on post-it notes. Second, these responses are reported back to the group for discussion. Third, participants are provided the opportunity to anonymously submit their answers again, during which they may choose to revise their answers due to the discussion. At this time, there may be additional discussion identifying the common themes. If there is insufficient consensus, the process may be repeated multiple times until the group has reached a conclusion. Due to time constraints, the full Delphi protocol was used for the highest priority items, such as the discussion, "Top Health Concerns in their Community." For other topics, EurekaFacts used a truncated version in which we follow the first two steps – anonymously writing answers and discussing them – but did not repeat the third anonymous

written answer submission. This truncated version can be seen for “Barriers to Getting Treatment.” For all other items, participants only discussed the topic, without a written component. This approach, blending the full and modified Delphi methodology with the traditional focus group approach of discussion, mitigates some of the challenges in focus groups while capitalizing on group consensus-building.

Residents In-Depth Interview Discussion Guide Design

The in-depth interview guide for Long Island residents was adapted from the focus group discussion guide. The interview guide and focus group guide addressed the same topics but questions were modified from a group discussion to an individual interview. Topics covered included community health priorities, barriers to treatment, Social Determinants of Health, and sources of health information. This interview guide was submitted and approved by the CHNA workgroup as well as the EurekaFacts Internal IRB.

CBO Discussion Guide Design

The interview discussion guide was developed in close consultation with LIHC CHNA Preparation Workgroup. As with the focus group discussion guide, a list of concepts to explore was first generated and shared with the workgroup members for approval. After receiving feedback, revising, and gaining approval from the workgroup, this list was expanded into a complete interview guide. The 15-minute interviews provide descriptions of the organizations’ work and the challenges related to the Social Determinants of Health facing the communities they serve, examples of factors that support communities in becoming healthier, and suggestions for how to address the barriers communities face to receiving healthcare. This interview guide was submitted and approved by the workgroup as well as the EurekaFacts Internal IRB.

3.4 Procedure

Focus Groups

Two-hour focus groups were held in publicly accessible locations: hotel conference rooms and public libraries in Freeport (Nassau), Elmont (Nassau), Riverhead (Suffolk), and Wyandanch (Suffolk). Participants signed an informed consent form to participate and have the conversation recorded prior to their participation. A highly experienced moderator was trained on the project

and discussion guide before facilitating the focus groups. All focus groups were audio recorded and transcribed for analysis.

In-Depth Interviews with Long Island Residents

Interviews were conducted by phone and lasted 30 minutes. Interviewees gave verbal consent to participate and have the conversation recorded. Interviews were conducted by the Project Director or a member of the research team who was trained in conducting interviews for qualitative research and closely monitored for quality assurance. Interviews were audio recorded and extensive notes from the interviews were used as the basis for analysis. In-depth interview participants were assigned unique identifiers to protect their identities.

In-Depth Interviews with Community-Based Organizations

Fifteen-minute phone interviews with leaders of CBOs were conducted to gather their insights. Participants were asked to self-identify which of the five Social Determinants of Health their organization worked on to fulfill recruitment quotas. Participants verbally agreed to participate and allow for the conversation to be audio recorded. Like the interviews with residents, interviews were conducted by the Project Director or a member of the research team who was trained in conducting interviews for qualitative research and closely monitored for quality assurance. Participants were assigned a unique identifier to preserve their confidentiality. Extensive notes were taken during interviews, which were used as the basis for qualitative analysis.

3.5 Analysis

The research team used Directed Content Analysis (DCA) for coding and analysis, which is an ideal approach when there is an existing framework or theory which needs to be validated or expanded[7]. With this approach, codes are pre-defined based on theories, frameworks, or previous research and applied during analysis, although new codes are created on an ad hoc basis as well. For the purposes of this project, codes were based on the Prevention Agenda Priorities, Social Determinants of Health, as well as the LIHC's Community Health Assessment Survey.

[7] Hsieh, H.F. & Shannon, S. E. (2005.) Three approaches to qualitative content analysis. *Qualitative Health Research, 15*,(9), 2177-1288.

Both the focus groups transcripts and in-depth interview notes were analyzed using the NVivo Software, Version 10. The coding effort for this project was scaled according to available resources. A team of four coders trained in DCA analyzed focus group transcripts independently, such that each transcript was analyzed by two different coders. After coding, coders compared codes and discussed discrepancies in coding before reaching a consensus. Data were reviewed at least twice to ensure saturation of coding. The same analytical codebook was used to analyze the focus group transcripts and in-depth interviews with codes representing the Prevention Agenda Priority areas as well as subtopics, Social Determinants of Health, geography, barriers to treatment, and sources of health information. Word clouds were generated from focus group participant comments and written notes from the Delphi Method. These word clouds contain exact words and phrases from participants to show the range of topics discussed.

The analysis was reviewed by the focus groups moderator to ensure accuracy. Likewise, notes from the in-depth interviews with residents and CBO leaders were analyzed using the same methods. The analytical codebook for CBO leader interviews included the Prevention Agenda Priority areas as well as subtopics, Social Determinants of Health, geography, barriers to treatment, healthcare services provided, and special populations.

4. Results

4.1 Long Island Residents

Focus Groups

Group Description

The four focus groups were held in the Freeport Memorial Library (Freeport), the Riverhead Free Library (Riverhead), the Floral Park Motor Lodge (Elmont), and the Radisson Hotel Hauppauge-Long Island (Wyandanch) during the week of January 28th through February 1st. There were twelve participants in the Elmont focus group, five men and seven women. The Riverhead focus group had two men and two women, a total of four participants. The Freeport focus group had twelve participants, four men and eight women. The Wyandanch focus group had four women and no men. Table 3 shows the demographics for the focus group participants.

Demographic	FG Count		Demographic	FG Count
Total	33		Less than $10,000	6
			$10,000 to $14,999	7
Female	22		$15,000 to $24,999	6
Male	11		$26,000 to $34,999	3
			$35,000 to $44,999	4
Not Hispanic	28		$45,000 to $54,999	1
Hispanic	5		$55,000 to $64,999	1
			$65,000 to $74,999	3
Asian	1		$75,000 to $99,999	2
Black or African American	24			
Other	4		0 through 12th grade (no diploma)	3
White	4		High school graduate (or equivalent)	13
			Post-high-school vocational or technical training	2
18 – 24-year old	2		Some college (no degree) or 2-year college degree	8
26 – 34-year old	4		College graduate (4-year degree)	4
35 – 44-year old	8		Graduate or professional degree	3
45 – 54-year old	6			
55 – 64-year old	10			
65 or over	3			

Table 3: Demographic characteristics of focus group participants

Priority Health Concerns

Chronic Disease

Figure 1: Results from the Delphi Method for discussing Chronic Illnesses

Participants were asked to brainstorm for common chronic diseases. Results from this brainstorm are shown in the word cloud in Figure 1, which represents exact words and phrases used by participants in response to the question. All groups easily identified many different diseases, though with some confusion over type or category. Overall, cancer, hypertension, and arthritis were widely mentioned across all four locations. Cancer was often mentioned along with stress. Additionally, participants frequently voiced their concern about the cause and effect relationship between the difficulty of access to healthy foods and chronic diseases such as cancer, hypertension, and obesity. Smoking and tobacco use were rarely mentioned as chronic diseases for all four focus groups.

Communicable Disease

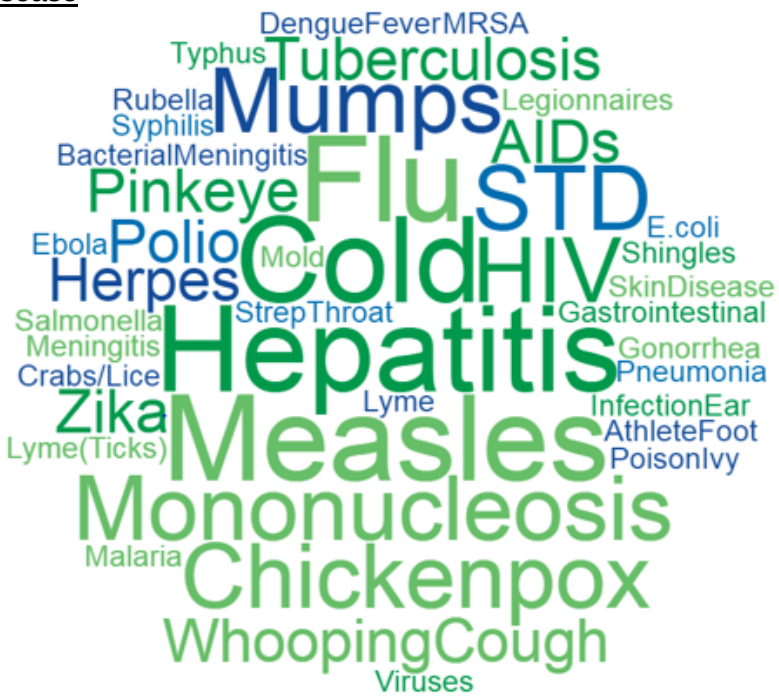

Figure 2: Results from the Delphi Method for discussing Communicable Diseases

Participants were also asked to brainstorm for communicable diseases. Results from this brainstorm are shown in the word cloud in Figure 2, which represents exact words and phrases used by participants in response to the question. Most participants mentioned sexually transmitted infections, hepatitis, and HIV. Chickenpox, the cold, and the flu were the most frequently mentioned infectious diseases, while the flu and measles were frequently mentioned for access to immunizations.

Healthy Women, Infants, and Children

Figure 3: Results from the Delphi Method for discussing Women, Infants, and Children

Participants were asked to list what they believed to be top health concerns affecting women, infants, and children. Results from this brainstorm are shown in the word cloud in Figure 3, which represents exact words and phrases used by participants in response to the question. Breast and ovarian cancers were the leading concerns voiced by participants regarding women's health. Poor sex education and unsafe sex practices, as well as lack of using protection, were cited as the main causes of teen pregnancy and the spread of sexually-transmitted diseases STDs. Mental health, bullying, mumps, measles, and lead poisoning were among the most cited concerns affecting children. There were no health concerns discussed that affected infants.

Mental Health, Well-Being, and Substance use

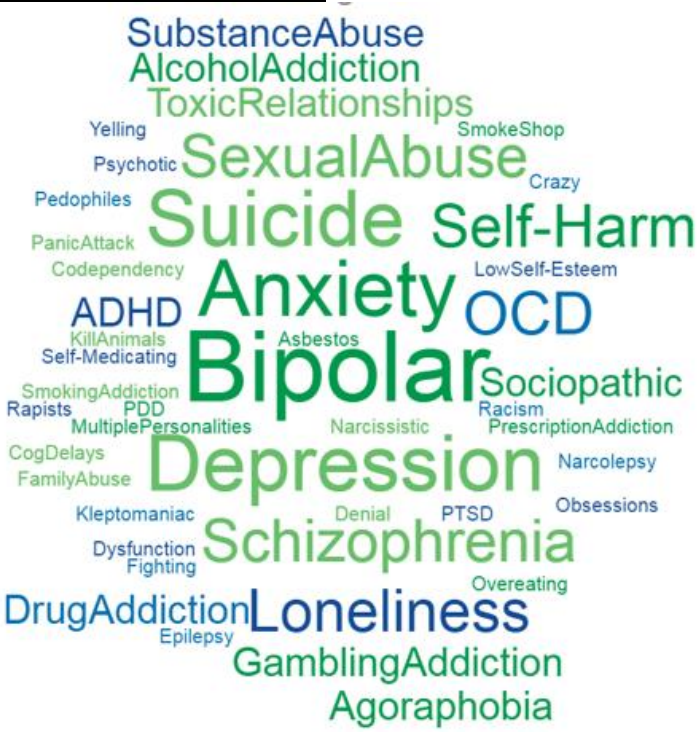

Figure 4: Results from the Delphi Method for discussing Mental Health Well-Being, and Substance Use

Participants were also asked to list what they believed to be top health concerns related to mental health, well-being, and substance use. Results from participants' brainstorming of important mental health and substance use issues in their community are shown in the word cloud in Figure 4, which represents exact words and phrases used by participants in response to the question. Mental illnesses were widely cited by participants as being a main issue affecting their respective communities, especially given the far-reaching social and economic consequences that usually accompany mental illness, and the stigma associated with seeking treatment. Participants also discussed the cause and effect relationship that they believed exists between poverty, homelessness, incarceration, or bullying on one hand and mental health on the other hand. Depression, bipolar disorder, schizophrenia, suicidal thoughts, obsessive-compulsive disorder (OCD), and anxiety were among the leading mental health concerns discussed during the focus group sessions. Additionally, alcohol and substance use disorder – including opioids and prescription medication abuse – were said to be significant risks that are becoming commonplace in the focus group communities. Drug abuse and violence were said to be closely-related especially during the Riverhead discussion group.

Healthy and Safe Environment

Figure 5: Results from the Delphi Method for discussing Healthy Environment

When asked to identify factors affecting the general health environment, participants mentioned air and water quality, food safety, violence, and distracted driving as the leading issues affecting their respective communities. Results from this brainstorm are shown in the word cloud in Figure 5, which represents exact words and phrases used by participants in response to the question. Smoking in public areas was cited as a concern, as were rodent and insect infestations, litter, asbestos, and abandoned homes, especially in the Hempstead area. Participants also voiced their concern with the increasing gang violence, which was particularly significant in the Riverhead focus group session. Abusive relationships and bullying were also mentioned. Speeding and failure to stop at a stop sign were a main concerns for traffic safety. Regarding food safety, participants mentioned chemically-treated produce, genetically-modified food, and lack of access to organic food in most low-income communities as the top food safety

concerns. Participants also expressed concerns about the lack of control or knowledge concerning food ingredients, including whether food labels are accurate, clear, and understandable. Chemically contaminated water was the main source of concern when it came to water quality.

Priority Concerns

Figure 6: Results from the Delphi Method for discussing Top Concerns

After participants finished discussing all their health concerns in the community, they were asked to narrow the list and to point out the biggest priorities for health in their community. Results from this conversation are shown in the word cloud in Figure 6, which represents exact words and phrases used by participants in response to the question. Homelessness, cancer, mental illness, and violence were the top concerns that were frequently mentioned by participants across all four locations.

Homelessness

Homelessness was frequently cited by participants when asked to list the biggest health concerns in their community. Participants believe problems such as mental illness, inadequate housing, and poverty are the reasons for homelessness. Participants often mention the circular relationship between homelessness and crime. One participant from the Freeport explained this relationship, “If people who don't have anywhere to live, then you have more crime... It's a vicious cycle, and it keeps getting worse and worse.” Another participant from Wyandanch pointed out the benefit of housing homeless individuals by sharing the following personal experience with the group:

> *“I had a client that he was horrible. He couldn't take care of his health, hygiene. He was all the time sick, and he was homeless. Once we got housing for him, you talk to him, and it's another person. He could organize himself. He's taking care of his health. Has a big difference, big difference on him.”*

Cancer

Another concern that was frequently cited by participants when asked to list the biggest health concerns in their community is cancer. When discussing cancer, the emerging themes usually involved the uncertainty of the causes of cancer and the phenomena of an increasing amount of cancer patients. Pollution and difficulty of access to healthy food are often talked about as the main suspect of causing cancer. One participant from Riverhead expressed his/her concern on the topic by stating:

> *“Why do we have so many cancer clusters here? Why are so many breast cancer people here? ...where factories left polluted products on the earth and just left it there and forgot about it. And then years later, developed cancer clusters.”*

Mental illness

As previously mentioned, mental illnesses were widely cited by participants as being the main issue affecting their respective communities. When discussing anxiety and depression, a participant from Wyandanch pointed out the stigma associated with seeking treatment by stating “I think that a lot of people suffer from it . . . and might not know it because they don't go to therapies, or they don't have access to a therapist to go and assess that.” Social and economic consequences such as homelessness, poverty/unemployment, incarceration, and violent episodes between people or with the police are often mentioned along with mental illness.

Violence

Violence is another top concern pointed out by participants across all four locations, with particular significance in the Riverhead focus group session. Drug and gang activity are often talked along with violence. Besides worrying about physical safety, the negative impact of violence on children's development is also a big concern. One participant from Riverhead illustrated this concern by stating:

> *"I'm afraid to let my child go out because they might be influenced when I'm not there, they might be grabbed up by a gang. If they're going through a tough time in their life, which children and teenagers usually do, they might end up in a gang because that might be the easy way out."*

Barriers to Treatment

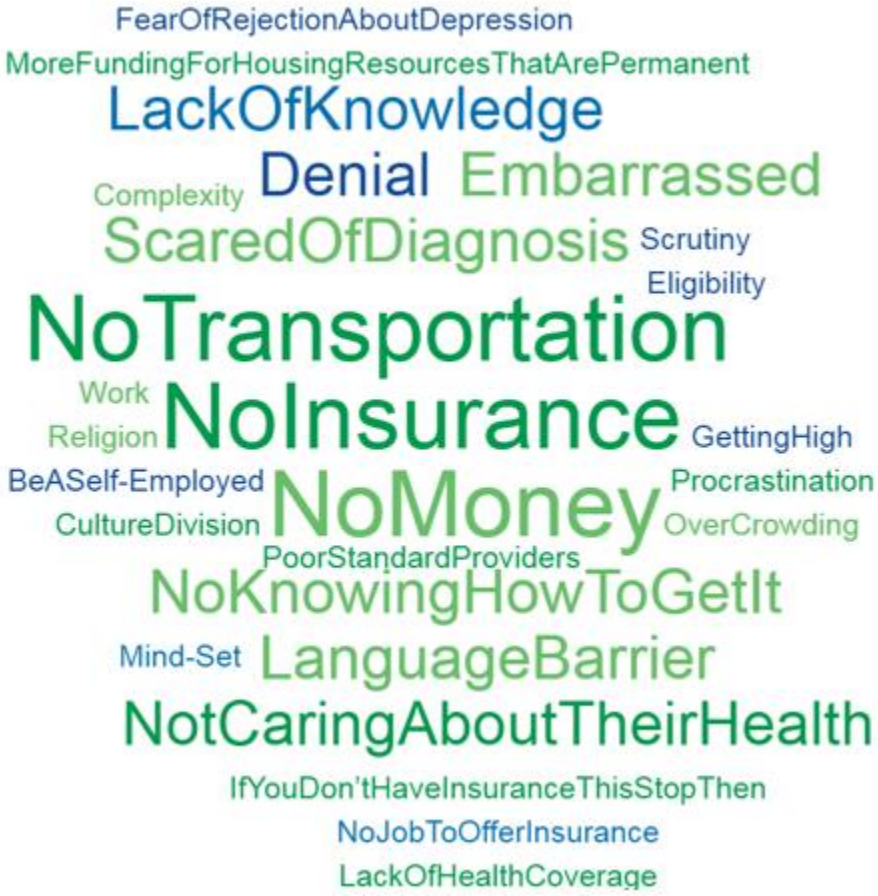

Figure 7: Results from the Delphi Method for discussing Barriers to Treatment

When asked to list the factors most likely to make it difficult to access healthcare services, participants mentioned affordability, including insurance co-pays and expensive medications as a leading reason. Results from this brainstorm are shown in the word cloud in Figure 7, which represents exact words and phrases used by participants in response to the question. Not having medical insurance and the partial or no coverage for some treatment plans, medical conditions, or medications, in addition to long waiting lists were also among the barriers cited. Other factors included difficulty finding a doctor who speaks their language, especially when the spoken language is neither English nor Spanish. Some participants stressed the importance of teaching immigrants English because this will allow them wider access to healthcare (including to understand advice, information, results, etc.) and to be able to read the instructions and medication labels that are usually written in English. Participants also spoke about health behaviors perceived as related to one's cultural or religious practice, emphasizing the need for cultural sensitivity from healthcare providers.

Difficulty navigating health insurance related complexities and a lack of sufficient health education were also listed as possible treatment barriers. Some participants in Freeport and Elmont mentioned that some men tend to not seek medical attention unless it was an emergency or after their condition has advanced; while some in Riverhead noted the use of emergency departments for non-emergency care. Stereotypes and stigma were cited as social barriers to seeking treatment, especially for mental health. Transportation was also a concern. Participants stated that most people in their communities can't afford a car, so they end up relying on expensive and overcrowded public transportation while traveling to receive treatment, which can often be inconvenient. Participants also mentioned that they are less likely to call an ambulance during emergencies because they can't afford the bill. Some participants also stressed that lack of education about the importance of vaccines in preventing disease, or lack of information and knowledge regarding treatment options for diseases were preventing some people from seeking treatment they really need. Others cited fear of bad health news as a reason to not seek information or care. Still, others spoke about a lack of time as most parents worked long hours to pay rent, which prevented them from seeking medical care for themselves or their children.

Priority Barriers and Solutions

Participants were asked to list the most common barriers from what was discussed during this section of the focus group discussion. Affordability, not seeing the benefit in going or being afraid to go, lack of health insurance, not knowing how to find providers, and lack of convenient transportation were the leading causes for not having sufficient access to healthcare services.

Participants were also asked to propose solutions to help overcome the barriers that were discussed earlier. Participants from Elmont and Freeport believed education in schools would address the barriers of not seeing the benefit in going or being afraid to go, not knowing how to find providers. They also believed that outreach and support from churches or social services agencies could help people obtain and afford insurance and where to get culturally-sensitive care. Participants from Riverhead proposed a solution of having a "navigator," which helps residents understand how their insurance works. Most proposed solutions for affordability are leaning toward the themes of more local job opportunities and universal free healthcare.

Social Determinants of Health

Economic Stability

Figure 8: Results from the Delphi Method for discussing Economic Stability

Participants were asked to list the main issues that affect their economic and financial stability as it relates to health in their community. Results from this brainstorm are shown in the word cloud in Figure 8, which represents exact words and phrases used by participants in response to the question. Unemployment, poverty, homelessness, lack of affordable housing, and access to healthy food were among the leading concerns that came up during the discussions.

Access to healthy food

The difficulty of affordability and access to healthy foods was a dominant theme when discussing economic stability. When healthy foods are difficult to access, residents choose to go to stores and restaurants that are closer and more easily accessible but do not feature healthy foods, such as fast food restaurants. Even when healthy foods are accessible, the majority of the participants think healthy foods or organic foods are too expensive.

Homelessness and lack of affordable housing

When discussing homelessness, many participants express their concern for their personal safety from people who are homeless. Lack of affordable housing was described as also being related to mental illness.

Unemployment and Poverty

Unemployment and poverty were often mentioned together throughout the discussion across all four locations. Many participants believe unemployment and poverty are tied closely with many health concerns in their community. One participant from the Freeport focus group stated “You have poor employment, now you have poor housing. And you have poor food.” Other participants also mentioned the negative impact of poverty on mental health, as demonstrated by one participant from Wyandanch in the following quote:

> *“I think that lack thereof, poverty it causes mental health problems... You're probably not going to be seeking healthcare and trying to go to a doctor if you don't have a house. Going to try to find a home.”*

Education

Figure 9: Results from the Delphi Method for discussing Education

When asked to speak about education-related challenges in their communities and the effect of these challenges on participants' perceived wellbeing and access to healthcare, participants mentioned leading concerns including poor school systems and education quality and illiteracy, as well as lack of adequate health education about diseases, treatment options, healthy food, and providers. Results from this brainstorm are shown in the word cloud in Figure 9, which represents exact words and phrases used by participants in response to the question.

Lack of adequate health education

Lack of adequate health education about diseases, treatment options, healthy food, and insurance was commonly mentioned concerns regarding the lack of adequate health education. When discussing the topic, participants from Freeport expressed their concern on the importance of health education for the parents. They believe parents' behaviors have impacts on their children. Regarding education on healthy foods, one participant from Freeport stated, "If the parents keep on going to McDonald's and all this kind of potato chips all the time. The parents need to have education."

Education quality and Illiteracy

Concerns regarding education quality were mainly around large class sizes and the lack of healthy and safe class/school activities. The following discussion on education quality was quoted from the Freeport discussion group:

> *"I think sometimes that maybe some of the classrooms [sic] are a bit large for the teachers to handle. Make the classrooms a little bit smaller."*

Most participants believe illiteracy has a cause and effect relationship with poverty or low income. Many also believe that parents have a great influence on children's educational path, as one participant from Freeport stated the following:

> *"That's with the parents, who may be embarrassed because they have a lack of education, and they have fear. They don't want to be upset or pushed to the side. Or they don't want their children to be embarrassed or have fear. So that empowerment and that lack of knowledge and education, that's when all that comes in."*

Neighborhood and Built Environment

Figure10: Results from the Delphi Method for discussing Neighborhood and Built Environment

Participants were asked to speak about factors in their neighborhood and environment that they believed to affect their health and wellbeing. Results from this brainstorm are shown in the word

cloud in Figure 10, which represents exact words and phrases used by participants in response to the question. Contaminated air and water, asbestos, access to quality food, gang violence, drugs and crime, and affordable housing were among the leading concerns mentioned.

Access to Healthy Food

Many participants indicated difficulty in accessing and affording healthy food. Participants stated that affordable pricing and accessibility of fast food restaurants resulted in increased consumption in such foods, which could potentially lead to chronic diseases such as diabetes and obesity in the long run. One participant from Riverhead explained this phenomenon:

> *"A lot of times when... if healthy food is so costly, that a lot of people go to the junk food, which is not. And I have nothing against Taco Bell, but I'm just saying. You know, the Taco-Bell's, the Wendy's, the Burger King, all that stuff is not good for us. Do we eat it? Yeah. But daily, it's got fats; it's got fried everything. Popeyes is, I think, coming into town now. I mean, these are just not good for the health. And they lead to diabetes. Ketchup, soda, sugar all leads to disease if they're consumed too much. And that's what's happening to our communities and has been for a while."*

Crime and Violence

Numerous participants indicated that gang violence was of significant concern, particularly on the exposure of drug and gang violence on children, which could potentially lead children to model violent behavior. Several participants indicated that afterschool activities could help children from getting involved with gang violence. One participant from Riverhead described the concern of gang violence:

> *"Because it's gangs and crime and it's no good for kids growing up. What they see, what they have to see. They have to see these things, going to their friend's house or whatever, they have to-- it's there. There's no avoiding it sometimes."*

Pollution

Several participants expressed concerns about pollution. One participant stated that industrial chemical waste had been connected to cancer. Other participants had concerns about air pollution from cars' emission. As one participant from Riverhead described:

> *"Shoreham used to have a Kodak plant, a photography plant. And some of my friends used to play in the water that had the chemicals within it. They'd bring the dolls home,*

and a number of friends of mine died of cancer later on through the years. So for me, it had a huge impact because then we were like, "Where did that person go? What happened to that person and that person and that person?" They had a common thread. So it's just a huge issue for me because I just know about it…We have a lot of groundwater problems on Long Island."

Social, Family, and Community Context

Figure 11: Results from the Delphi Method for discussing Social, Family, and Community

Participants were also asked to speak about social, family, or community-related challenges and the effects of those challenges on their perceived wellbeing and quality of life. Results from this brainstorm are shown in the word cloud in Figure 11, which represents exact words and phrases used by participants in response to the question. Education, lack of parental involvement (sometimes due to their own health issues or other poverty-related challenges), incarceration, and racism were among the leading concerns. Participants also expressed concerns about the adverse effects of social media, including addiction to social media, lack of face to face interaction, and cyberbullying on children.

Incarceration

Multiple participants commented on the mental impacts of incarceration on other family members. One participant from Elmont stated the following on the mental impact of having a

family member in jail: “Incarceration. I guess if you have a family member go away that leaves you stressed. You can't eat. Mentally, that messes you up.”

Incarceration of mental illness patients was another significant concern. Serval participants noted that authorities often mistreat individuals with mental illnesses. Instead of receiving proper treatment for their mental health, these individuals often end up in prison. The following quotes illustrate participants’ views of incarceration of mental illness patients: “Yeah. People being incarcerated for mental health issues when they should be getting help for their mental health issues instead of being incarcerated” (participant from Elmont). Another participant stated: “When they're being criminalized, it's not, ‘Oh, this person may have had anxiety. This person may suffer from mental health.’ No. It's just… they're just going to jail “(participant from Wyandanch).

Social Cohesion

Many participants described their communities as friendly but noted that nevertheless, groups did not mix. One concern revolved around people’s unwillingness to help others that were undergoing difficult circumstances. One participant from Wyandanch provided an example:

> *“And I want to share also that I was a victim of domestic violence. And when that happened to me, I went to-- literally knocking on the neighbor’s door, and they didn't open the door for me.”*

Several participants also referenced the connection between discrimination and stress. One participant from Riverhead explained:

> *“I'm with [Participant 2]. I mean, I think it's stressful if you are-- if a person is a particular color, and they think, ‘Gee people are going to assume things about me,’ or certain sex, ‘They're going to assume things about me.’ Or they're heavy, or they're thin, or they're old. They're going to fear discrimination, and that could lead to stress everyday walking around. They're going to go, ‘Oh, that person must be filled in the blank.’ And they don't even know that person. That person might be the nicest, best person in the world that has their back but because they're a certain look or they wear certain clothes we judge, they're judged.”*

Health and Healthcare

As the topic of the focus groups was Health and Healthcare, participants were not explicitly asked about this as a Social Determinant of Health. Therefore, there is no word cloud accompanying this Social Determinant of Health. Based on the focus group discussion, access to health and health literacy are major themes across participants.

Access to Health

Two of the largest concerns regarding access to health were the affordability of health insurance and lack of knowledge about health insurance. Participants usually quickly reached consensus with statements such as:

> *"I think it's [health insurance] still not affordable for everybody. I know a lot of people cannot afford, and when they seek, they go to the doctor, they pay for 150, 200 for the consultation, but they cannot afford to pay $400 every month" (participant from Elmont).*

Lack of knowledge about health insurance results in unknowing the benefits of different health insurances and which would best address them. Participants also mentioned healthcare disparity, which is associated with the concern for affordability. As one participant from Elmont described, "You have poor healthcare in inner-city neighborhoods. Their healthcare is not the same as saying as if you live [in other neighborhoods]. Their medication is not the same."

Health Literacy

Knowledge of prevention of diseases, healthy diet, and how to seek help are commonly mentioned concerns regarding health literacy. Many participants from Elmont said that some people do not know why they were sick and how they can seek help to make the situation better. A participant from Elmont described his/her concern regarding health literacy: "Some of them don't know. They just don't know. They may be sick, and they don't even know to go get it."

General education was often mentioned when discussing health literacy. Many participants see a strong correlation between general education and health literacy. One participant from Elmont expressed his/her opinion on the relationship between a healthy diet and education by stating the following:

"They put out a warning, "Don't eat these certain things." So, if you're not educated, you don't know what 10 grams of sugar is. You don't know what 0 trans-fat is, carbohydrates. You can't even read the words."

Other Health Concerns

Some health concerns which were moderately mentioned related to poor dental care – including gum disease and cavities – and disabilities, mainly childhood associated disabilities such as congenital disabilities, Down Syndrome, pervasive developmental disorders, and other intellectual disabilities.

Sources of Health Information

As the concluding topic for discussion during the focus groups, the moderator asked participants to discuss the various sources they use to obtain health-related information. The following is a summary of that discussion, though a key finding is how some believe it necessary to corroborate information across multiple sources.

Community: Schools, churches, libraries, and hospitals were the most cited sources of information within the community, and in some cases, people wanting to help others avoid the bad experiences that they endured by encouraging them to seek information from hospitals and schools.

Doctors: People across all four locations indicated that they also relied on doctors, nurses, dieticians, and other medical practitioners for health-related information. A majority of participants emphasized that information from doctors is the most trustworthy.

Family: People across all four locations indicated that they used family advice for health-related issues. Grandmothers were the most commonly cited go-to family members for health information.

Google: People across all four locations reported using Google to search their symptoms. However, much skepticism emerged about how online health information exaggerates the severity of issues, conditions, etc.

Health Websites: WebMD was the most cited website for seeking health-related information.

News Sources: Television, magazines, and newspapers were cited as common news sources for seeking health-related information. For instance, a respondent from Riverhead identified a local television personality who speaks with authority about health issues.

Peers: People reported asking or receiving health-related information from trusted peers. Yet there were discussions with respect to keeping information about one's health private in efforts to avoid stigma, embarrassment, isolation, etc.

Social Media: YouTube and the Centers for Disease Control and Prevention's social media pages were the most cited social media sources for seeking health-related information.

In-Depth Interviews

Sample Description

Twelve residents of Long Island were interviewed from February 12th through February 20th. There were three men and nine women, and the sample was split evenly between Nassau and Suffolk Counties. Five of the six participants in Nassau County came from the Hempstead area and one came from Elmont. In Suffolk County, three participants lived in or around Brentwood, two in Riverhead, and one in Mastic. Table 4 shows the demographics for the in-depth interview participants.

Top Health Concerns

Priority Health Concerns Identified by Participants

Similar to the focus group discussions, participants discussed important community health concerns for each of the five Prevention Agenda items. At the conclusion of the discussion, participants indicated what they believed to be the highest community health priorities. Across the 12 participants, chronic illness was highly represented as a high priority, along with cancer, diabetes, and obesity. Mental health and substance use were also indicated to be high priorities, as were HIV/AIDS, crime and violence, and the cross-cutting issue of difficulty accessing care.

Chronic Disease

Cancer

Cancer was identified as a high priority on Long Island. Participants indicated that they perceived cancer to be a common and severe health concern, particularly for breast cancer.

Demographic	IDI Count		Demographic	IDI Count
Total	12		Less than $10,000	1
			$10,000 to $14,999	2
Female	8		$15,000 to $24,999	1
Male	4		$26,000 to $34,999	3
			$35,000 to $44,999	3
Not Hispanic	9		$45,000 to $54,999	1
Hispanic	3		$55,000 to $64,999	1
			$65,000 to $74,999	0
Asian	0		$75,000 to $99,999	0
Black or African American	6			
Other	3		0 through 12th grade (no diploma)	1
White	3		High school graduate (or equivalent)	2
			Post-high-school vocational or technical training	0
18 – 24-year old	1		Some college (no degree) or 2-year college degree	5
26 – 34-year old	2		College graduate (4-year degree)	2
35 – 44-year old	4		Graduate or professional degree	2
45 – 54-year old	1			
55 – 64-year old	3			
65 or over	1			

Table 4: Demographic characteristics of in-depth interview participants living on Long Island

Participants indicated concerns about accessing diagnostic and treatment services for cancer. Specifically, for diagnosis, there were concerns that cancer may be difficult to detect and multiple participants indicated a lack of access to affordable mammograms. Participants also expressed concerns that health insurance did not adequately cover treatment. Several participants had personal experience with cancer, either through a loved one or themselves receiving a diagnosis. As one participant from Riverhead described,

> *"Well, one of the things is breast cancer. The hospitals where you could go to get mammograms in my community, in Riverhead, stopped giving mammograms and you're supposed to go up island to a place that is about 45 minutes to an hour away…That's not good. It makes it difficult to get a very important screening, and you know, most doctors' offices don't have the equipment to give a mammogram."* (Participant ID PHIP-R-DD021219)

Diabetes

Diabetes was another health topic indicated as a high priority in participants' communities. Participants indicated that diabetes was common and resulted in severe consequences. As with cancer, participants discussed concerns over the degree to which diabetes could be diagnosed early and that health insurance does not cover treatment sufficiently. Several participants also expressed personal experience with diabetes.

Obesity

Obesity was the third form of chronic illness identified by participants as a high priority. Participants indicated that obesity was very common in their communities. Participants discussed obesity both in terms of personal decisions and the structural environment. Multiple participants stated that obesity was related to life choices or parenting, due to eating too much unhealthy food, and observing that typically both parents and children experience obesity as parents pass unhealthy behaviors to their children. Other participants drew a connection between obesity and the lack of access to affordable, healthy food, and being forced to eat fast food or other types of unhealthy options. As one participant from Hempstead described, "There's not the best access to affordable healthy food in my hood, it's there, but not everyone can afford it. So a lotta people eat fast food. And therefore we see a lot of childhood obesity." (Participant ID PHIP-R-TTS021519). Participants did not discuss physical activity relating to obesity.

Other Chronic Illnesses

During the discussions, a few other health conditions were identified as important in their communities. One participant from Riverhead spoke at length about the risks involved in Lyme Disease, noting its severe outcomes and susceptibility, "It is easy to get a tick from numerous sources and likewise easy to overlook a tick." Other participants noted high blood pressure as a concern but did not discuss the condition in detail.

<u>Communicable Disease</u>

HIV/STIs

Participants identified HIV and other sexually transmitted infections (STIs) as significant health concerns in their communities. They discussed the lack of available information about HIV/AIDS, HPV, and herpes. Multiple participants noted that many people engaged in risk

behaviors of unprotected sex with multiple partners, not understanding the risk involved. A participant from Elmont described:

> *"People need to know more about them, even docs need to know more about what unprotected sex can cause. A lotta people are sexually active without understanding risk factors. A lot of it can be dangerous, it can destroy lives. If you have numerous partners, you have to check yourself out for STDs on the regular. If you have partners across the years, you have to check yourself out to make sure you don't give it to others." (Participant ID PHIP-R-CSN021419,)*

These individuals also lack a sense of susceptibility to STIs. Participants stated that there is a need for people to be open about their HIV status to their partners. Other concerns noted were a need for healthcare and health insurance to effectively manage HIV, as well as concerns about the HPV vaccine only being available for younger people. Other participants indicated that concerns for HIV and STIs were associated with younger people, and stated that due to their age and life stage, it was no longer a significant concern for them.

Other Communicable Diseases

In addition to HIV, participants identified a few other concerns related to communicable diseases. Several participants noted that few people get the flu vaccine. One participant expressed anxiety about the safety of the vaccine and stated that while she did not get the vaccine, she ensured her children were vaccinated. Participants also noted the risks of passing the flu to others when people were forced to go to work or school while sick with the flu, also observing that people were at a higher risk of catching the flu because they were mentally and physically exhausted. One participant with cancer expressed concern about catching the flu from someone in his immunocompromised state.

<u>Healthy Women, Infants, and Children</u>

Children's Health

Participants identified numerous important health concerns related to children, many of which included an underlying component of economic hardship. Obesity was a key concern, related to parenting choices as well as an unhealthy environment with little exposure to healthy and affordable options. Several participants noted that families could not afford healthy food options and faced challenges, such as not meeting eligibility requirements for food stamps, trying to

support multiple children on a single income, or having incarcerated or addicted parents. Participants also stated that there were significant challenges in accessing affordable healthcare in the form of dentists or pediatricians, as well as the need for more affordable health insurance for children.

Social and community factors were also identified as key health concerns related to children. Multiple participants identified concerns related to gangs and violence, noting that children witness and may mimic violent behavior. Participants identified the need for safe afterschool activities to give children a place to go as well as a prevention method for getting involved in gangs or violence.

Many participants identified children's mental health as a significant concern. They discussed the negative impact of substance use and parental incarceration on children, resulting in children having to raise themselves, manage their school work and other stresses alone. The impacts of these stressors manifest in children having suicidal ideation and engaging in substance use.

Schools were identified as a key component for child health and wellness as several participants stated concerns about the impact of schools on children's well-being. Several participants indicated that children were in overcrowded classrooms, impacting their ability to learn. Some also discussed the presence of fighting on the playground. A few participants stated the potentially negative influence of teachers who were more concerned about living paycheck to paycheck rather than caring for the children, as well as the influence of those who were too quick to discipline children. These participants believed that these teachers' negative behavior could harm the trust between students and teachers.

Women's Health

The areas of greatest concern for women's health were access to cancer screenings. Multiple participants indicated that breast cancer is a specific concern on Long Island, and that lack of affordable mammograms were a challenge to access. Some local hospitals had stopped providing mammography services, resulting in the need to travel significant distances to find affordable mammography. One participant indicated that free or low-cost mammograms were available in Brooklyn and Queens, hoping that this service would be provided to Long Island residents as well. Similarly, several participants noted that while pap smears were important, many women did not get them.

Family Planning/Teen Pregnancy

Family planning or teen pregnancy were rarely discussed among participants. Comments included the need for access to sex education, as children in middle school were getting pregnant. There were mixed perspectives on the availability of reproductive health services, as one participant indicated that these services were available but inconvenient, while another indicated that her local Planned Parenthood fulfilled this need.

Mental Health, Well-Being, and Substance Use

Mental Health

Nearly every participant discussed mental health challenges as being a high priority, often relating them to the result of living in a state of economic instability. One participant from Hempstead described:

> *"I don't know anyone that is depressed but…I'm sure on some level you kind of are – because of the way things are going, it just seems like there is no end… Life on Long Island, you know, every time you turn around, the taxes going up, your healthcare going up, everything going up except for your income. Sooner or later, you get to that tipping point. That's a lot of stress."* (Participant ID PHIP-R-KP021219)

Participants also noted that many people could not focus on their mental health needs until they had taken care of other concerns such as paying for insurance or caring for children and other family members.

Access to treatment was also a significant concern for mental health. Many participants noted the stigma around seeking mental healthcare, preferring to handle their problems "in house" instead. Within the Hispanic community, seeking mental healthcare was particularly stigmatized, with many people holding the view that people like them did not have problems with mental health, and were "tougher" than that. Many participants emphasized the need to talk about mental health to address the stigma as well as receiving more health education so that people could recognize mental health concerns, take them seriously, and obtain care. One participant also noted the challenges with seeking mental healthcare, even with insurance, as she had been receiving mental health services from a community organization but could no longer do so when the organization stopped accepting her insurance. Another participant stated that she had

experienced intimate partner violence but had been unable to locate an affordable treatment provider to help her cope.

As previously stated, children's mental health and the impacts of incarceration were also key themes. Participants noted that children who were growing up without parents present due to substance use disorders or incarceration, were experiencing suicidal ideation, developing substance use disorders, and generally feeling alone and isolated. Participants noted that incarceration had a negative effect on adults as well, as they could not receive adequate care and treatment while in prison. Incarceration could also result in the development of lasting mental health concerns.

One participant had experienced a brief psychiatric hospitalization. She indicated that the experience was extremely negative and potentially harmful to those with mental illness. It took many hours to see the psychiatrist who indicated that she should be released immediately. The participant stated that the hospital conditions included rooms overcrowded with uncomfortable beds, and lack of secure storage, resulting in the need to sleep with eyeglasses on and fully clothed. The participant used the anecdote to illustrate the need for access to better mental health services.

Substance Use

Substance use was commonly cited as a community health concern. Participants specifically named opiates, including heroin, as well as marijuana, and crack cocaine as being the most abused in their communities. There was also a need for increased treatment access, but also the need for treatment access for people who were incarcerated. Several participants noted that while incarcerated, people were unable to access substance use treatment. Interview participants also stated that substance use was a barrier to being able to work.

Alcohol Abuse

Fewer participants discussed alcohol abuse, although several indicated that it was very common. Participants noted that there were many overlapping issues between mental health, substance use, and alcohol abuse.

<u>Healthy and Safe Environment</u>

Violence

Multiple participants indicated that gang violence was a significant concern in their communities, and frequently covered by local news stories. Participants were concerned about modeling of violence to children and the need for safe afterschool activities. There was some anxiety about speaking up about violence out of concern for family or personal safety.

Health Environment

Nearly all participants commented on the lack of access to stores with healthy food options. Stores with healthy foods were further away and located in neighborhoods where the individual would not necessarily feel comfortable shopping. Lack of reliable transportation presented a significant barrier to accessing stores with healthy foods. Due to these barriers, many people in the communities ate fast food. Participants also noted the strong influence of their environment in shaping their health choices and outcomes.

Additional Concerns Related to Environment

Participants also expressed concerns about the influence of other environmental factors. One participant stated that there was a relationship between cancer and the agricultural sector: fertilizers would get into the aquifer and lead to breast cancer. Another participant was concerned about the impact of noise pollution from a nearby racetrack and a train. Other participants worried about possible air pollution from chemical plants or fumes from other sources, such as a local dump or automotive sources.

<u>Other Concerns: Access to Healthcare</u>

Access to primary, specialty, and dental care was another high priority concern expressed by interviewees. Participants noted challenges in finding affordable local healthcare practitioners. Some Participants indicated having to travel up to 20 miles to access care, a trip which requires taking multiple connecting buses. As previously discussed, mammograms were a specific service that multiple participants indicated was a challenge to access from an affordable local provider. Significant difficulty in accessing affordable mental healthcare was another important theme mentioned by numerous participants. The upshot to these barriers to accessing treatment is that many people do not get routine tests as part of their healthcare, leading to delayed diagnosis and treatment. Access to healthcare for children was another key theme, as dentists and pediatricians are expensive. One participant also noted that dental care is easily

neglected in children due to parental stress and feeling overwhelmed with their other responsibilities.

Barriers to Treatment

Priority Barriers

Interviewees were asked to identify important barriers to accessing healthcare. Participants indicated that the most significant barriers were the inability to afford care, lack of sufficient health insurance coverage, lack of access to mental healthcare due to stigma or other barriers, inability to qualify for insurance, and challenges in finding a local healthcare provider.

Inability to Afford Health Insurance and Healthcare

High cost was the most significant barrier discussed by participants. They indicated that many people could not afford healthcare, even with governmental subsidies, due to the high cost of co-pays and deductibles. They also noted that while it was too expensive to get insurance for many, particularly for those who were relatively low income, they also could not afford to go without insurance at the risk of further financial hardship or bankruptcy. One participant noted that while people on public assistance had some support in obtaining health insurance, many who were working were caught between the challenges of not qualifying for assistance in obtaining insurance while not being able to afford plans on their own.

There are several services indicated as being too expensive for many residents, including cancer screenings such as mammograms, children's healthcare in terms of going to a pediatrician or dentist, or receiving mental health treatment for a variety of concerns. Participants also indicated that many people could not afford transportation, whether through the public system or otherwise. Undocumented immigrants were indicated as being particularly at risk since they could not obtain health insurance due to their immigration status.

> *"There's certain things that I need, that I can't get because my HMO won't cover it. And I just got approved for the HMO a couple days ago, and I went to my doctor's appointment and the medicines aren't covered. Things the doctor thinks I need to take and then the Medicaid plan doesn't cover it, that's not fair. You shouldn't be treated differently if you don't have sufficient funds available, we all have the same basic human rights. These medicines are available in [another place] but not here, but it's not our fault." (Participant ID PHIP-R-CSN021419, Elmont)*

Participants indicated that the inability to afford care was the result of multiple economic stressors. Due to the high cost of living on Long Island, many people were forced to work multiple jobs, none of which provided health insurance. Medicare and Medicaid were reported as being too expensive and often provided insufficient coverage for medical care. Many interviewees communicated a sense of significant financial vulnerability, such as one participant who reported being dependent on his spouse's job for health insurance. Without this insurance, they had few alternatives for obtaining insurance, as even the options available on state exchanges were out of their price range. Participants reported not being able to afford treatment for their chronic illnesses or transportation to or from medical appointments, resulting in difficulty obtaining necessary medication. Due to these challenges in affording care, many in the community delayed treatment or diagnosis, and got sicker as a result. Many people end up in the emergency room due to delayed treatment, as emergency services became their de facto medical provider. Mental healthcare was particularly impacted by affordability, as residents frequently prioritize other financial requirements such as rent over their mental health needs.

Insurance does not cover services

Another common barrier to treatment discussed by participants was that HMO plans on Medicaid may not cover everything needed or be accepted by various doctors. Multiple participants discussed challenges with doctors or other services opting out of accepting Medicaid. As previously noted, one participant reported receiving treatment for depression at a local community-based organization, but when they stopped accepting her insurance, she was forced to go elsewhere. Several participants stated that Medicaid does not cover the necessary medications for cancer or HIV. Participants discussed the need for better coverage for children's health and wellness as well.

Transportation

Transportation was named as one of the biggest barriers to accessing healthcare. Many participants discussed not being able to many services related to healthcare, including insurance, treatment, or paying for rides to get to appointments when they did not own a car. Lack of access to reliable transportation was also noted as a significant barrier when participants are unable to find local practitioners and are forced to travel long distances for affordable care.

Transportation is a barrier for multiple reasons. Some participants indicated a lack of awareness of existing services, such as being able to take taxis to access healthcare and have the ride covered by insurance. Many participants discussed a public transportation system that was inadequately meeting their needs:

> *"Transportation, I mean they do have Medicaid taxis but people don't like to take them because they have to wait like 2 hours. They come on time to pick you up but then you have to take a 2-hour wait to take you back home. There is public transit, there's buses, there's the railroad. But where I live, I'd have to walk, which I can't because I'm disabled, a 20-minute walk just to get to the bus stop. There're no buses that go down the road that I live off of. And that's a problem in and of itself. And even then the buses come every hour, it's not like the City [of New York] where buses come every 10 min." (Participant ID PHIP-R-MSS021819, Riverhead)*

Don't know how to get treatment

Lack of understanding of how to access resources or services was cited by numerous participants as a barrier. Several participants commented on people who lack functional literacy being unable to navigate the healthcare system or access resources. Many people also do not have an adequate understanding of available services. Participants indicated that immigrants have specific difficulty understanding how to get treatment and other services. Due to the lack of cohesion in many communities, there is little community-level collaboration to navigate the system. On a related noted, one participant noted the complexity in signing up for Medicaid or Medicare. She indicated that it used to be easier to recertify but the procedures have changed so that people have to do an interview and either work on their application online or in person at the office. More complicated procedures result in fewer people getting through the process.

Stigma/afraid to go

Reluctance to obtain healthcare services came down to stigma or fear of medical bills. Mental healthcare is stigmatized, as participants reported that people are embarrassed to seek treatment and are concerned about being treated differently. Some participants reported that this stigma is particularly strong in the Hispanic community. Participants also discussed the fear of receiving large medical bills as a major barrier to seeking services.

Other Barriers

Other barriers discussed by participants include population-specific concerns. Multiple participants commented that many people are immigrants who do not speak the language and have difficulty obtaining Spanish-language health education. One participant indicated that there is a lack of trust in American doctors among some in the immigrant community. American doctors are perceived to care less about how their patients are feeling. She stated that doctors from other cultures take more time with patients while American doctors run tests, state they found nothing, and sent patients home regardless of their pain or discomfort. Another participant noted the challenges faced by homeless populations who lack sufficient documentation (e.g., social security cards, identification) to seek services.

Participants did not indicate that not seeing the benefit in going to medical care, having a lack of time or clinics offering inconvenient office hours, or a lack of childcare were barriers to healthcare access.

Social Determinants of Health

Economic Stability

Transportation

The lack of reliable transportation was a key theme under economic stability and its relationship to community health. Many could not afford cars, car insurance, or public transportation. One participant noted that her region was a bit rural and lacked sufficient public transportation infrastructure. Due to these challenges in accessing transportation, participants indicated that many people were forced to eat unhealthy options because they were close and accessible. Other participants noted the difficulty in maintaining a job without reliable transportation, indicating that without a job, many people cannot afford healthcare.

Employment

In addition to challenges with employment if one lacks reliable transportation, one participant stated that having a previous history of incarceration is a major barrier to finding a job. Without this stable source of employment, many people are forced to go back to selling drugs or stealing, resulting in a self-perpetuating cycle.

Food

Participants indicated that many people do not have enough money for food and are forced to shop at inexpensive but unhealthy places. Food for a family can be very expensive, and despite working multiple jobs, some cannot afford the hundreds of dollars it can cost to purchase one to two weeks' worth of food. Some families do not qualify for SNAP benefits but still need assistance, leading to a situation where they cannot afford to buy food and children go hungry.

> *"People are not making enough money. The average housing income is $60,000 on Long Island, but what is that number based off of? What can health conscious mothers and fathers truly afford? They go shopping at the Dollar Tree…They are just getting food they can afford, Chinese food, they are not having the right mindset for eating habits." (Participant ID PHIP-R-CS021219, Brentwood)*

Finances

Financial insecurity was cited as a major challenge by all participants. Many expressed a sense of significant vulnerability: should someone lose their job, they lose their health insurance and access to healthcare. For example, if someone is reliant on their spouse's income and insurance, they are particularly vulnerable:

> *"You always hear the story – so and so gets sick, dies, there's no health insurance, there's no medical insurance, and now you're a single parent and you've got these bills…plus no insurance." (Participant ID PHIP-R-KP021219, Hempstead)*

This sense of insecurity had a major impact on the mental health of people in the community, as they felt stress from the cost of living continuing to increase while their incomes remained the same. Several participants remarked that it is not possible to take care of one's mental health until other needs have been met, such as paying bills and caring for children or family members. Participants also noted the significant economic impact on a family when a parent is incarcerated, as they potentially lose the breadwinner of the household.

<u>Education</u>

Several participants emphasized the need for early education programs in setting up children for success. Another common theme was the need for afterschool programs and youth centers to give children a safe and healthy activity and as prevention for joining gangs. One noted the need for more encouragement for young people to go to school or get connected to financial aid, such as through assistance completing the FAFSA.

Several participants commented on the lack of quality education, resulting in students graduating high school but not knowing how to read or write. Two participants remarked on the role of teachers in supporting students. They indicated that teachers must care about the children, and not just be living paycheck to paycheck. Likewise, there was a comment about schools needing more funding and improvement to better support teachers. They also indicated that teachers need to take discipline seriously and understand its negative impact on kids. Spanish-speaking children are of particular concern, as they are not receiving sufficient support in school and thus not learning.

Spanish-speaking adults were again highlighted as having specific needs. If individuals cannot speak English, they have difficulty accessing services. There is a need to help more immigrants learn English, as well as to translate more materials to Spanish. There is also a need to educate immigrants on how the healthcare system works, and how to get connected to healthcare services, transportation, and education.

Health and Healthcare

Multiple participants highlighted the importance of health education. Several noted that seeking help is a learned behavior, as children learn from their parents. If the parents are educated, the children will learn as well. There is a need for health education on all types of health conditions, but particularly around safe sex practices, mental health stigma, healthy cooking, and eating. Multiple participants emphasized the need for concrete information, preferably in the form of face to face interaction such as through community meetings. Spanish-speaking populations particularly need health education in their own language. There is also a need for more information on services available and how to get connected. This information is particularly of use for immigrants who are unfamiliar with the American healthcare system.

Access to Care

As previously discussed, access to primary, specialty, and dental concern were significant concerns for many participants. They indicated that many people go without necessary testing such as cancer screenings, because they cannot find an affordable and local healthcare provider. Some people have to travel significant distances to access care. Several participants indicated that accessing health providers for children was difficult due to the cost. Mental healthcare is particularly difficult to access and is also not taken seriously in many communities.

Health Disparities

Multiple participants noted that certain populations face unique challenges which have health implications. Participants expressed the greatest amount of concern for Hispanic populations, including undocumented immigrants and individuals who are Spanish-speaking only. Undocumented immigrants are at particular risk due to their inability to get health insurance. One participant stated that during the work season, immigrants who have come for work live in overcrowded, substandard housing. Individuals who are Spanish-speaking only face particular challenges in accessing health education about safe sex practices and other topics in their language, and many children who only speak Spanish struggle in school because they do not receive the attention and support they require. Participants indicated that these populations face significant challenges in understanding the healthcare system and getting connected to resources. There is a stigma in this community for seeking mental health services as well. These challenges parallel those faced by other minority populations on Long Island, who also fear that their health concerns are not taken seriously by the medical community.

Several other groups were identified as having unique challenges with health implications. One participant spoke at length about the challenges facing seniors, such as having difficulty navigating systems to get access to community and health-related resources. For example, seniors are particularly vulnerable to a lack of adequate transportation infrastructure. This participant indicated the need for a caseworker to help seniors navigate systems and get connected to services. People who are homeless also have difficulties utilizing community healthcare services if they do not have access to documentation, such as social security cards, birth certificates, and forms of identification. Lastly, people with disabilities face unique challenges in public transportation if they cannot get to a bus or rail station. Likewise, affordable housing is a significant challenge for people with disabilities. Without affordable housing, health needs can be delayed or ignored.

<u>Neighborhood and Built Environment</u>

Access to Healthy Options

Many participants indicated the difficulty in accessing stores with healthy food options. Participants indicated that these stores tended to be farther away, requiring transportation to access them. Due to transportation barriers on Long Island, many residents choose instead to go to stores and restaurants that are closer but do not feature healthy foods, such as fast food.

> *"The stores, y'know that do sell unhealthy products, cigarettes, all of this is unhealthy, that's another thing. I believe if you want to be better you got to do better, but how can you do better if you're in an environment like that, you know?" (Participant ID PHIP-R-CSN021419, Elmont)*

Crime and Violence

Crime and violence were key themes in discussion with residents. As previously noted, numerous participants indicated that gang violence was of significant concern, particularly for children who may mimic violent behavior. One participant indicated that some residents feel anxious about speaking up about it out of concern for their safety and that of their families. Several participants indicated the need for safe afterschool activities for children as a form of prevention for getting involved with gang violence.

Pollution

A couple of participants expressed concerns over pollution, particularly as it relates to cancer. One participant stated that she believes that fertilizers from farms get into the water aquifer and have been connected to breast cancer. Other participants had concerns about air pollution from various sources including chemical plants or landfills.

> *"We say that people need to take responsibility for their lives and pull themselves up, and they do, but there are certain things you can't control, you can't control the uncontrollable." (Participant ID PHIP-R-CSN021419, Elmont)*

Insufficient Infrastructure

Numerous participants stated that infrastructure on Long Island was insufficient. There is a significant lack of affordable housing, particularly for people who are young or have disabilities, and this results in in people needing to use shelters.

> *"Housing – they have a lot of people in shelters who can't find a good apartment to stay in. There are lots of people in the streets with nowhere to stay, having to go to shelters." (Participant ID PHIP-R-TH021219, Hempstead)*

> *"Housing is very difficult to find– affordable housing, affordable housing for younger people, affordable housing for disabled people – these are very difficult to find. And I feel like a lot of people who looking for affordable housing and things of that nature, they*

tend to put healthcare on the back burner, you know, having a home, having a shelter, is more important to people than their actual health. I've seen a lot of situations where people were very, you know, neglectful of their health and it was detrimental for their health, but you know, they were seeking housing, seeking employment, and you know, a lot of barriers." (Participant ID PHIP-R-MC021319, Brentwood)

Social, Family, and Community Context

Incarceration

Impacts from incarceration were discussed by most participants. For the individual incarcerated, several participants stated that they receive minimal healthcare and insufficient treatment for mental health or substance use concerns. One participant had a relative who was incarcerated for several years and developed mental health issues as a result, increasing the risk that he may be jailed again later. Several participants commented that having a previous history of incarceration can prevent someone from being able to secure a job, resulting in the individual being forced back to old behaviors of selling drugs or stealing and the possibility of creating a self-perpetuating cycle. Incarceration also has significant impacts on family structure. One participant noted that having a parent jailed can remove the family breadwinner and force the other parent to operate as a single parent. Incarceration, as well as substance use, can result in children growing up without parental support and essentially raising themselves. These children must manage going to school and feeding themselves. Some children go hungry because there is not enough money available.

Social Cohesion

Multiple participants described the diversity in their communities in positive terms but noted challenges. People were unwilling to help each other or share information about available healthcare services. A few of the participants also referenced discrimination in the form of police treating African Americans more harshly or receiving suspicious looks while trying to shop. Numerous interviewees indicated concerns with gang violence and safety.

Family Violence

Domestic violence arose as a topic with a few of the participants. One participant had been in a relationship involving intimate partner violence and was continuing to live with the mental health

effects of the experienced violence. Another participant mentioned that physical and sexual abuse of children was a concern in communities.

Sources of Health Information

Internet sources of health information were cited by every single interviewee. Participants also indicated that doctors were a reliable and trustworthy source of information.

Online

Nearly all participants indicated using Google to search for health information. Many searched by symptoms or keywords to understand health conditions, while others used it to locate healthcare providers and check their reviews. Many participants indicated relying on multiple sources of information, whether by looking at multiple sites online about a given topic or by reading information online and verifying it with knowledgeable and trustworthy people. Several participants specifically referred to government sites as credible sources of information, while others discussed using WebMD to learn about health conditions. Few participants relied on social media as significant sources of health information.

Doctors

Numerous participants indicated that their doctors are helpful and trustworthy sources of information. Several participants indicated including doctors' opinions as they searched for multiple sources of information, either by verifying information with a doctor after reading about it or seeking a second opinion by searching for doctor's opinions online.

Other

Participants were mixed on the role of peers or family as sources of information. Some indicated that their friends and family were credible while others stated that they did not receive health information from them or treated it with some skepticism, wanting to hear the information from at least three sources before accepting it. People were seen as credible sources of information if they were educated in health or had experienced a health condition of interest, such as pregnancy. The public library was cited by one participant as a possible source of health information.

4.2 Long Island Community-Based Organizations

Sample Description

In-depth interviews (IDIs) were conducted with 26 CBO leaders in Nassau and Suffolk County from January 7th until February 13th. 16 CBO leaders were interviewed from Nassau County, and 10 leaders from Suffolk County. These CBOs are distributed roughly across the five Social Determinants of Health, as can be seen in Table 5:

CBO Focus for Interview	Nassau	Suffolk	Total
Neighborhood and Built Environment	2	2	4
Health and Health Care	5	3	8
Social and Community Context	3	1	4
Economic Stability	3	1	4
Education	3	3	6
Total	**16**	**10**	**26**

Table 5: Distribution of participating CBOs according to county and Social Determinant of Health

Many organizations are active across multiple Social Determinants of Health (SDH), with the average organization providing services in 2.5 focus areas. These organizations also provide services related to SDHs that were not captured in screening, for example, by including services in the "Other (Please specify)" option. Almost all interviews touched on issues relating to other SDHs. Likewise, 16 of the 26 CBOs are active in both counties, and their interviews often reflected their work in both counties: 19 interviews explicitly discussed Nassau County and locations therein while 14 explicitly mentioned Suffolk County and locations therein. Therefore, all five Social Determinants of Health and both counties received full representation in this research.

The range of healthcare services provided varied widely from organization to organization and SDH to SDH. That said, several services were provided by many organizations across focus areas. Community education was the most commonly provided healthcare service. Food access and housing were other very commonly provided services, especially by Economic Stability organizations. Among pure healthcare services, many organizations provided mental health services in the form of outpatient counseling and psychotherapy, and some residential care and

psychiatry. Transportation services were also commonly provided by non-education organizations to address the transportation issues on Long Island. Primary care services for children and adults were also commonly provided, even by non-healthcare organizations, which worked to help clients find doctors and set-up appointments. On the other end of the spectrum, family planning services were provided by none of the CBOs interviewed, and dental, prenatal, breastfeeding, and immunization services were also rarely discussed.

Social Determinants of Health

Economic Stability

Health Concerns

Mental health and a healthy environment (used to mean a stable housing situation and access to healthy food) were the two most-cited health concerns by Economic Stability organizations. CBO leaders often noted how the stress caused by being financially insecure and working multiple jobs could lead to mental and sometimes physical health problems. As Nassau County organization leader ALN012819 noted, “There’s this high demand, high output that people feel they need to keep up with – both kids and adults – and self-care becomes secondary.”

In the observation of some CBO leaders, a safe and healthy environment is out of reach for many on Long Island due to lack of money. Several CBOs that addressed homelessness or hunger noted that some on Long Island cannot afford housing and have to sleep on the streets or in their cars.

Populations of Interest

People with disabilities and seniors were the most referenced populations by Economic Stability organizations. Both populations were considered to face significant issues with access with respect to getting around, finding and holding a job, and finding accessible and affordable places to live. As Nassau County organization leader LCN020419 noted, “Disabilities lead to emotional issues which make it difficult to get housing for many people. Even government provided housing requires an ability to function independently.” Seniors also faced particular challenges relating to affordability given that many of them no longer have an income and are living from pensions, social security incomes, or retirement savings. As interviewee ZBS012419

noted, “Seniors are the hardest hit. Access to food is still a challenge for them, as is finding affordable places to shop.”

Barriers

The biggest Economic Stability barrier to accessing healthcare described by the CBOs was transportation. CBOs note that the Island is laid out for cars and that getting around is difficult for those who cannot afford a car. Even for those who have cars, the infrastructure is poor. As Economic Stability organization leader in Nassau County LFN011819 noted, “The roads are bad, so your car will get messed up, if you even have a car.” Frequent reference was also made to the poor state of the Island’s public transportation system, especially with regards to Suffolk County. CBOs note that public transit runs infrequently and does not take people where they need to go, such as the grocery store or doctors’ appointments, especially given that the public transit system is primarily designed to move people East-West. Neighborhood and Built Environment leader CBN020719 explained that “the service is very poor out here. It mostly runs here east and west, so not very accommodating for people who need to go locally, who need to go to grocery store, doctor, or exercise program. The bus program is NICE (Nassau Inter-County Express).” Health and Healthcare organization leader CCS011119 explained that “The main issue with the economic aspect is transport: Long Island is very spread out, and Suffolk is a large county where the public transit system is not great. Buses generally run 9-6 on the hour in the best-case scenario. In rural areas they don’t run as often, not as late, and don’t go where people need to go.”

Facilitators

Government welfare programs, especially the Supplemental Nutrition Assistance Program (SNAP), were cited as facilitating health for Long Islanders by Economic Stability organization leaders. As Suffolk County Economic Stability organization leader YRS011819 said, “Our clients get benefits, and sure that’s helpful. We still have SNAP; cutting that back would be a real issue for us and our clients.”

Education

Health Concerns

Nutrition and eating habits were the biggest health concern mentioned by education organizations. This concern dovetailed with the other most-discussed concerns for education organizations: overweight and obesity, physical activity, and a healthy environment. The focus

on nutrition and eating habits stemmed partially from the fact that some education organizations had community nutrition education as their focus. But it also came up in other interviews as well.

Much of the focus on nutrition centered on access to healthy food, especially given how some of the organizations worked with areas in Nassau and Suffolk Counties that are considered "food deserts" due to the dearth of healthy food and fresh produce options available. One CBO leader in Suffolk, KKS021119, described the lack of healthy food choices rather bluntly: "There's an overwhelming number of bodegas, corner stores, where they entice people to just buy [unhealthy food]." The lack of healthy food choices was found by organization leaders to undermine the positive efforts of healthcare organizations, with Nassau CBO leader JRN020519 saying that "Everybody can get health insurance but that doesn't mean they're healthy; they can get a doctor's visit but they can't address the other things that make people healthy, like healthy food and having income." Access to healthy food was often linked to barriers from other social determinants of health, including transportation, affordability, and culture. Lack of transportation to and from grocery stores, and a general lack of transportation preventing disadvantaged people from leaving their communities to get healthy food, were found to limit access to healthy food. An education organization leader in Suffolk County, ZBS012419, argued that lack of transportation shapes people's food choices in ways that discourage eating fruits and vegetables: "Let's go back to transportation. If you are borrowing someone's car or in a taxi, you'll buy more non-perishable items like non-perishables so they'll last a couple weeks. You won't buy things like fresh fruits and veggies that are healthier but don't last." The high cost of healthy food, both real and perceived, and the generally high cost of living on Long Island leaving working families with no time and money to buy and prepare healthy food, also emerged frequently. Finally, providing nutrition education across cultures can be a challenge to do so in a culturally appropriate manner. One solution identified by a CBO leader is to identify alternative preparation methods of traditional foods that allow members of the community to continue eating culturally important foods while maintaining a high level of nutrition.

Populations of Interest

Children received much attention for education efforts, partly due to collaborative efforts with schools. People with Limited English Proficiency was another priority population. Some organizations discussed providing health education in many languages in addition to English and Spanish. One organization indicated that the majority of residents in communities served speak a language other than English.

Barriers

Language and literacy issues featured prominently in interviews with Education organizations. The need for materials to be translated into other languages, especially Spanish, was stressed by several organizational leaders. AEN012219, an education leader from Nassau County, said that "We need to bridge the gap of language barriers. We work with people speaking 50+ languages, the most common being Spanish, Arabic, Bengali, African dialects, and French/Haitian Creole." Given that a quarter of Long Islanders speak a language other than English at home[8], translating materials into other languages is important. Others noted the lack of sign-language interpreters for the deaf and hard-of-hearing community, which can deny them access to healthcare. As CBO leader VLS021319 of Suffolk County noted, "Healthcare facilities may not be accessible to those with a disability – e.g. a traditional exam table, but if in wheelchair they can't get onto it – impacts the type of medical exam they receive. Visually impaired won't have access to printed materials e.g. preventative info, hearing impairment won't have same access in community to those provide healthcare info. Cognitive impairments – can't interpret info given – so we must take a health literacy perspective: how are healthcare providers communicating to people?" CBOs also encountered issues with literacy, with participant ALS020719 noting that "just because we translate materials into Spanish doesn't mean that the Spanish speaking person can read."

Facilitators

School and school district nutrition coordinators were noted as highly effective by some CBO leaders. These staff were cited as being highly knowledgeable and skilled at nutrition, including the provision of healthy food at low cost. However, the lack of resources available to these coordinators were also discussed.

Health and Healthcare

Health Concerns

The major health concerns brought up by Health and Healthcare organizations were children's health, a healthy environment, and chronic conditions, especially heart disease. Children and their health issues – both physical and mental – were a major focus of organizations across

[8] United States Census Bureau. (2017.) *Language Spoken at Home: 2013-2017 American Community Survey 5-Year Estimates.* Retrieved February 28, 2019 from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_S1601&prodType=table

social determinants of health. The importance of breastfeeding and some of the barriers that prevent it from being more widely practiced (e.g., lack of education and knowledge, drug and alcohol use by mothers, the stigma against breastfeeding in public places denying working mothers the ability to breastfeed their kids, etc.) came up in several interviews. The importance of breastfeeding to the mother as well as to the child was also discussed. The lack of healthy environments, used to mean safe, clean, and drug-free living spaces, was also important. As CBO leader LCN02041 noted:

> *"Not having a stable environment for people with mental illness or chemical dependence challenges is one of the biggest challenges, it's hard to help people without a safe space to sleep at night."*

Just as important as what is being discussed in the interviews is what is left out. Through all 26 IDIs, communicable diseases were only discussed a total of five times across three interviews. Communicable diseases were discussed the most in one Health and Healthcare interview with an organization that provided services to HIV-positive people but were only mentioned twice otherwise.

Populations of Interest

Children and low-income people were cited by Health and Healthcare organizations as populations of interest. Children were the most frequently discussed population across focus areas, although they were of greatest concern to Education and Health and Healthcare organizations. Low-income people were a concern of Health and Healthcare organizations because of how income is a frequent barrier to receiving care, at least in their observation. Several Health and Healthcare organizations work largely or primarily with low-income people because they provide free or reduced cost services.

Barriers

Money – both affordability on the patient side and lack of funding on the organizational side – was the biggest barriers encountered by Healthcare organizations. While several organizations noted that health insurance was freely available for most from the state and federal governments, this was not enough to ensure the affordability of healthcare. As Suffolk County healthcare organization leader SVS012619 noted, "It's not just about access to healthcare, it's about affordability. We have a lot of access, we just don't have a lot of affordable access." Cost

was an especially large issue for specialty services such as dental care or cardiology, which are less likely to be covered by insurance.

On the organization side, lack of funding was both the most cited and most severe issue. Most organizations cited government funding as their main source of income, noting that there was little if any private-sector funding. Furthermore, many did not deem the government funding that is available to be sufficient. When asked about steps that could build on positive factors and promote healthy communities, some organizations gave one-word answers such as "Resources," "Money," or "Funding."

Facilitators

A major factor that helps communities get healthier, according to CBO interviews, is the access to health insurance for citizens, including federal programs such as Medicaid and Medicare as well as state-level programs such as the Children's Health Insurance Program (CHIP).

Neighborhood and Built Environment

Health Concerns

Violence – domestic violence and street crime – came up in several interviews with Neighborhood and Built Environment organizations as a health concern, although it was not focused on to the extent that it was in the focus groups and resident in-depth interviews. Violence was seen to influence other aspects of health. In some communities in Suffolk County, individuals feel unsafe going outside and thus are not physically active. As CBO leader KKS021119 noted, "They face safety issues, they may not be able to get out and get the exercise that they need… If neighborhoods are not safe, kids can't go out into playgrounds, parents won't let their kids out. If there's gang activity or more crime, people can't get out as much." The physical and mental health effects of domestic violence was also noted by an organization that focused on domestic violence. The organization leader, CS0111119, cited the Adverse Childhood Experiences framework to explain how trauma can cause physical health problems and substance use later in life: "More trauma makes one more likely to have adverse outcomes physically such as diabetes and heart disease."

Populations of Interest

People with disabilities were cited by several Neighborhood and Built Environment organizations as populations of interest. Organization leaders cited the lack of accessible environments on Long Island, particularly referencing the physical infrastructure, healthcare

facilities, and transit systems. CBN020719, the leader of a Neighborhood and Built Environment leader in Nassau County, noted:

> *"The buses are obligated to take people with disabilities and provide paratransit. But I had a phone call with a lady in a wheelchair not that long ago who was literally crying because the bus wouldn't come to the curb. If you're in a wheelchair, how are you going to get on the bus if it won't come to the curb? Even if it kneels or has a lift or anything like that. And of course there was no curb cut."*

Another population of interest the leaders spoke about were the elderly. CBN020719 talked about the health risks associated with falling due to poor infrastructure, this risk increases dramatically if the person was older:

> *"Of course one of largest causes of injury is falls, especially among older people but also for all age groups. One of leading causes of falls is that the infrastructure here is in such poor shape. We evaluate infrastructure for safety, look at where to go when walking because walking is good for health. We work with injury prevention coordination at local hospitals and engineering organizations to revise infrastructure."*

Barriers

Transportation was the most commonly cited barrier by Neighborhood and Built Environment organization leaders. Other barriers often mentioned were participants' fear of the "system," used to mean the healthcare system and also social services organizations, as well as not knowing how to find services. Fear of the system was often, though not always, linked to immigration status, as CBOs noted that undocumented immigrants were afraid of using social services lest they be deported. Likewise, the perception that a social services organization is unwelcoming and difficult to navigate for both citizens and non-citizens was cited as an important barrier by multiple participants. Lack of affordable housing was also cited as a barrier facing residents of Long Island, especially low-income groups, and it was said to prevent vulnerable groups and victims of abuse from escaping their situations as one leader CSN011119 noted: "Lack of affordable housing makes it harder to escape situations that they're in, very often trapping people in abusive relationships."

Facilitators

The Neighborhood and Built Environment organizations interviewed gave very different answers to what facilitates the community to become healthier with regards to the Neighborhood and

Built Environment. Some mentioned the usefulness of collaboration within the non-profit sector, a theme that was present in many interviews across Social Determinants of Health. As Nassau County leader DNN012319 noted, "No one can be siloed." CSN011119, a Neighborhood and Built Environment leader in Nassau, explained further that "strong collaboration within the nonprofit sector means that we can access services that we don't provide through other nonprofits." CSN011119 also stressed the importance of tackling the issue around lack of affordable housing, noting that:

> *"People struggle to find apartment rentals that meet financial criteria. Need to increase requirements for affordable housing within communities (e.g. certain percentage of developments should be affordable)."*

Others talked about specific policies that would help, with New York City's Vision Zero plan for eliminating pedestrian/vehicle collisions coming up in multiple interviews as something to emulate. Still, others talked about the importance of outreach to help the general public understand what sort of services organizations offered for free or at a reduced cost. The theme of outreach to overcome a lack of awareness emerged in a few interviews across Social Determinants of Health, with CBO leader LBN010719 explaining that "service availability is there, but knowledge in the community about these services – we can do a better job at this, but the services are there."

Social, Family, and Community Context

Health Concerns

Health concerns noted often by Social, Family, and Community Context were access to primary and specialty care, elder care services, and mental health concerns. Mental illnesses and the difficulty of addressing them with a shortage of bilingual therapists (as currently exists according to one interviewee) was noted as an important health concern. Access to care, both primary and specialty, was another major concern. Some organizations also cited lack of access to health-related information, especially noting behavioral health as a major health concern. As MSS012619, a CEO of a health and healthcare organization explained:

> *"Access to quality behavioral health information and services, including treatment, self-help, family support, peer support, and care coordination. Some specific important issues that we address include psychiatric - depression, schizophrenia, different forms of bipolar, personality and disorders - as well as co-occurring substance disorders."*

Substance use was also believed to be a real risk in parts of Long Island. As one leader CCS011119 noted: “Opiate crisis: many of our clients could come from a reasonably well to do household status, the crisis is affecting both poor and rich.”

Populations of Interest

Immigrants were the most commonly discussed population of interest for Social, Family, and Community Context organization leaders. Organizational leaders frequently referenced the particular difficulties immigrants face in becoming healthy. Some CBOs noted that immigrants are not eligible for free health insurance services, such as Medicaid, which are a big boon to the health of low-income communities. However, the most commonly cited issue for immigrants was fear.

Barriers

A major Social, Family, and Community Context barrier to accessing healthcare discussed by the CBO leaders is immigration status. Interviews often noted that being undocumented complicates getting health insurance, in part by denying eligibility for Medicaid and Medicare, and discourages individuals from going to the doctor due to fear that any interaction with officials, including hospitals, could lead them to be deported. Fear was a common theme in interviews concerning immigrants. As the leader of a Health and Healthcare organization in Suffolk County noted, “Undocumented people are at elevated risk and have significant fear – they are not coming for help. They have seen a drop in family center usage in areas with Latino populations.” Several organization leaders noted that this fear is connected to current policies and rhetoric coming from the Federal government.

Organizations focusing on all Social Determinants of Health cited cultural issues as barriers in multiple ways. Many CBO leaders discussed the reticence of populations to utilize services. For Hispanic immigrants, cultural differences sometimes closely related to immigration status concerns, such as fear of being reported and deported. These fears were associated with lower utilization rates of services, which had implications for their health status.

Other cultural issues discussed by CBO leaders included cultural competency. As GSN011719, the leader of an education organization in Nassau County, noted: “There’s a cultural component. People resent someone coming in saying you can’t eat all the staples you eat. Instead, say ‘you eat this, how can you eat it healthier.’” For organizational cultural competency

issues, reference was made to the need to accommodate immigrant, ethnic and religious minority, and LGBTQ cultures.

Facilitators

Social, Family, and Community Context organizations again emphasized the importance of collaboration within the nonprofit sector and between nonprofit organizations and healthcare organizations. One leader in this topic area, JDS012619, summarized it succinctly:

> *"Collaboration is it. That's it! If we collaborate together, we can deal with a lot of these problems, we just need to come together as a community. With that we can deal with housing, transport, affordability, and bringing medical providers to the people; as long as we stay singular in the community, it's not going to work."*

Others stressed the importance of government intervention to help ease some of the burden currently borne by nonprofits and other community organizations. One leader, DNN012319, suggested providing the following:

> *"…grants to offset cost of care, including federal help. Medicare for All, that could help. Having more people insured, that could help. We have to address the immigration concern. Uninsured are primarily people who are undocumented, though we don't ask about citizenship."*

Prevention Agenda Priorities

Prevent Chronic Diseases

Many CBOs do work related to chronic diseases, as well as nutrition and exercise, such as conditions of overweight, obesity, and heart disease. Cancer emerged only twice in a total of two IDIs. Efforts included decreasing unnecessary hospitalizations and providing services to populations with chronic conditions. Most organizations focused on providing health education on nutrition, cancer and cancer screenings, physical activity, and other preventive health behaviors. Public libraries in Suffolk County represent a significant asset in health education on these subjects as education and resources are shared with staff at the system level, allowing them to share the information with their patrons. The focus of the library system is to facilitate a connection between their patrons and health resources around chronic diseases including obesity, diabetes, or heart disease. Some organizations work to provide health fairs or effect change at the community or structural level through policy or environmental changes, such as

promoting healthy food options at schools or building community gardens to offer access to healthy food and physical activity opportunities. CBO leaders observed that people who need access to health insurance typically have chronic diseases and that these populations are particularly vulnerable to economic challenges.

Prevent Communicable Diseases

Communicable diseases rarely emerged as a topic in the CBO interviews. One organization provides services to people who are HIV-positive, including access to housing, while another organization included providing flu vaccines as one of their services.

Promote a Healthy and Safe Environment

Quality Housing

Several CBO observed that access to quality housing is a significant challenge. There are problems with overcrowding and substandard housing with heating or plumbing issues, with these housing problems frequently occurring in low-income or rural areas. CBO leaders noted that having access to a stable environment is important for those with mental health or substance use disorders.

Access to Healthy Food

Access to healthy food was a major theme among CBOs. Interviewees noted that there are areas throughout Long Island that are considered food deserts, indicating few options for healthy and fresh food. Challenges are compounded by the lack of transportation, resulting in reliance on unhealthy food options from bodegas. An education organization leader in Suffolk County, ZBS012419, argued that lack of transportation shapes people's food choices in ways that discourage eating fruits and vegetables:

> *"Let's go back to transportation: if you are borrowing someone's car or in a taxi, you'll buy more non-perishable items like non-perishables so they'll last a couple weeks. You won't buy things like fresh fruits and veggies that are healthier but don't last."*

Healthier options were also reported to be less affordable. One CBO leader noted that some people on Long Island live in homes without kitchens, forcing them to rely on prepared foods

(typically fast food). The lack of healthy food affordability, convenient options, transportation, as well as time to prepare healthy food were significant challenges to healthy food access. Quite a few CBOs interviewed operated food pantries or soup kitchens for community members.

Violence

Several organizations discussed violence from different perspectives. Some organizations focused on the lasting mental health components and dynamics within abuse. Many public libraries provide resources around emergency preparedness, including active shooter trainings. One organization provides community education around sexual assault and human trafficking. However, there were no gang violence prevention programs discussed. Violence was discussed as a deterrent for children playing outdoors and healthy physical activity.

Other Topics

Some CBOs discussed issues related to traffic safety in terms of traffic calming procedures, adequate lighting, speed control, and facilitating other types of traffic over cars. The lack of sidewalks and general walkability was also noted by several CBOs.

Promote Healthy Women, Infants, and Children

Women's Health

Most CBOs who discussed women's health focused on breastfeeding support. Organizations working to support breastfeeding mothers noted that often, women do not have a location to breastfeed. One organization provides extensive resources around breast cancer, including education and empowerment to get screened and engage in health behaviors to reduce risk. This organization provides community education opportunities around breast cancer, what is involved in screenings, and prevention, working to address the common experience of fear of screenings. The organization also provides psychosocial support groups for women dealing with various stages of breast cancer.

Children's Health

Children's mental health received the majority of CBO focus in this prevention priority area. Several organizations discussed providing mental health services for populations including children. Factors that influence child mental health include housing insecurity and for some children, pressures to succeed academically and a lack of knowledge on healthy coping.

Promote Well-Being and Prevent Mental and Substance Use Disorders

Mental health was the biggest issue raised. Several organizations provide mental health services and noted the relationship between substance use and mental health conditions as symptoms of trauma. CBO leaders noted, however, the need for more bilingual mental health therapists. Interviewees indicated that mental health and substance use disorders can make it difficult for someone to successfully hold down a job, and there is an important relationship between stable housing and management of these issues. Mental health and substance use are related to homelessness. The lack of economic stability can also cause mental health problems from stress. Several organizations indicated a need for health education related to mental health.

4.3 Overview of Results for the Prevention Agenda Priorities

Across both populations of Long Island residents and CBO leaders, certain themes regarding the Prevention Agenda Priorities became apparent. It is clear that promotion of a healthy and safe environment, prevention of chronic diseases, and promotion of well-being and prevention of mental and substance use disorders were considered high priorities by both participant groups. Residents of Long Island stated that they were priority health concerns in their communities and CBO leaders indicated that these health concerns were important and receiving varying levels of support from their organizations. However, it was not clear how these priorities should be ranked. Long Island residents were asked which health topics were the highest priorities to address and CBO leaders were asked to prioritize the topics discussed. Based on the number of times a health concern was referenced during this portion of the discussion, a list of 20 specific health concerns was generated. The top five most commonly referenced specific health concerns are ranked as follows:

Ranking	Specific Health Concern	Number of References	Prevention Agenda Priority
1	Mental health	13	Promote Well-being and Prevent Mental and Substance Use Disorders
2	Violence	12	Promote a Healthy and Safe Environment
3	Substance use disorders	9	Promote Well-being and Prevent Mental and Substance Use Disorders
4	Diabetes	7	Prevent Chronic Diseases
5	Cancer	6	Prevent Chronic Diseases

Table 6: Ranking the top five specific health concerns within the Prevention Agenda Priorities by the number of times it was referenced when asked about the highest priorities to be addressed

The full list of 20 specific health concerns indicated as high priorities translated to a ranking of the Prevention Agenda Priorities according to the number of times any topic within the category was referenced. According to this ranking, promotion of well-being and prevention of mental and substance use disorders, promotion of a healthy and safe environment, and prevention of chronic diseases were the highest priorities, in that order.

Ranking	Prevention Agenda Priority	Number of References
1	Promote Well-being and Prevent Mental and Substance Use Disorders	23
2	Promote a Healthy and Safe Environment	20
3	Prevent Chronic Diseases	18
4	Prevent Communicable Diseases	7
5	Promote Healthy Women, Infants, and Children	2

Table 7: Ranking the Prevention Agenda Priorities by the number of times it was referenced when asked about the highest priorities to be addressed

The finding of the top three Prevention Agenda Priorities aligns with the discussions from the focus groups and in-depth interviews. It also closely parallels the ranking of the specific health concerns within the priority categories.

5. Discussion

5.1 Prevention Agenda Priorities

Prevent Chronic Diseases

Cancer

When discussing cancer, participants indicated that it was highly prevalent and there appeared to be an increase in diagnosis. They expressed concern about possible causes, including pollution and the lack of access to healthy foods. There was also concern about access to screening and healthcare, particularly for mammograms.

Few CBOs discussed their work with cancer. One organization interviewed provides breast cancer education and support individuals. The organization educates individuals about screening and health behaviors in efforts to lower their risk of breast cancer. Long Island residents and this organization agreed that access to screening and care represent significant challenges.

Diabetes and Obesity

Diabetes was also an important concern for participants because it was perceived as being very common and having severe consequences. Similar to participants' discussions on cancer, when discussing diabetes and obesity, participants expressed concern about access to treatment and care. Obesity was also perceived by participants as having a high prevalence rate. Participants diverged in their beliefs about obesity, some believing that it is caused by personal choices, and others believing that is influenced by the impact of their environment and lack of access to healthy foods.

Diabetes and obesity were the focus of several of the CBOs, though many of the organizations do some work related to chronic diseases. Many CBO leaders observed that underserved populations are dealing with these chronic conditions, and that individuals with chronic diseases are particularly vulnerable to economic challenges. Much of the work that the CBOs do related to chronic diseases involve community education, particularly around healthy food and nutrition. Several of the CBOs interviewed described efforts at multiple levels of the social-ecological model for public health, providing education and resources to individuals directly affected, but also at the organizational level. For example, a major public library system was described as sharing resources related to obesity and diabetes, among other topics, to the staff at their

various branches in order to reach a greater audience. Another organization worked to provide healthier options at schools for children and advocated for policy change.

Implications

These results suggest that many in the community are interested and eager to learn about cancer and how to protect themselves, potentially representing an opportunity for cancer health education to a receptive audience. As many forms of preventive health behaviors for cancer overlap with health behaviors to prevent diabetes and obesity, there may be opportunity for coordination in health education. Results suggest a structural barrier in the form of insufficient access to treatment and care, particularly for breast cancer screenings, due to affordability, insurance coverage, and access to transportation. There may be community-level challenges as well, in the form of fear of screenings. CBOs' efforts at addressing the structural factors for obesity and diabetes through change in environment and policy represent a strength in the public health approach.

Promote a Healthy and Safe Environment

Violence

Violence, primarily related to gangs and drug use, was a significant concern expressed by residents in both the in-depth interviews and the focus groups. Much of this concern was related to children who may mimic or get involved in gang violence or parents' concern for their children's lack of safety and inability to play outside. Residents expressed the need for afterschool programs to provide children with a safe place to go as a way to prevent involvement in gangs. There was also some concern about domestic violence.

The CBOs interviewed focused their attention on the resulting trauma from violence and exploration of mental health concerns and substance use disorders as potential symptoms. They also acknowledged the violence as a deterrent to outdoor activity for children, preventing them from having the opportunity for safe physical activity in their neighborhood. There is some community education occurring around violence, in the form of education on rape, sexual assault, and human trafficking.

Community members perceive gang and drug-related violence as an important health concern, but there appear to be few efforts at addressing or preventing violence. There was no mention of gang prevention, although some organizations are working to address the mental health

factors associated with violence. The lack of safe afterschool options for children represents a challenge, particularly as several residents discussed families with one or both parents unavailable to support their children due to substance use disorders or incarceration. While a few CBOs were doing work to increase parenting skills, there may be opportunity for greater education in this area.

Access to Healthy Food

The lack of access to affordable healthy food due to food deserts and insufficient transportation was a significant theme among residents and CBOs. Although there was a large effort described at healthy nutrition education, there appear to be fewer efforts at a structural level to make healthy food options more accessible. Due to healthy nutrition education performed by various CBOs, there may be a demand for healthier options, and many residents indicated interest in healthy, organic options. However, there is an insufficient supply of healthy food options. Some housing units may lack a kitchen, thus even if healthy foods were made available, some community members may be unable to take advantage of them.

Quality Housing

Multiple residents discussed concerns with housing quality in terms of pest control, litter, abandoned homes, and overcrowding. These concerns were echoed by the CBO leaders who observed that these substandard homes tend to be found in low-income and rural areas. Results suggest that a lack of quality housing represents an important structural challenge.

Promote Healthy Women, Infants, and Children

As previously discussed, residents indicated significant concern around the prevalence of breast cancer and access to screenings. For children's health, many residents expressed concern over mental health issues, gang violence, and the difficulty in accessing children's healthcare. Although residents indicated a need for afterschool programs, few organizations discussed providing these sorts of programs. Several organizations discussed providing mental health services to children, but there appears to be a greater need indicated by comments from Long Island residents. Domestic violence and child abuse also emerge in conversation with residents, but few organizations discussed programs aimed at parents to improve parenting skills. This may represent an opportunity to leverage health education efforts to support parents. CBOs also discussed breastfeeding support, although it did not arise as a concern for residents.

Promote Well-Being and Prevent Mental and Substance Use Disorders

Mental health was a major theme among discussion with residents. Many stated that it is significant because it underlies so many other problems, a position supported by CBO leaders. Residents and CBO leaders observed the connection between mental health and poverty, homelessness, incarceration, and violence. Many residents also discussed the difficulty in access to treatment as well as stigma presenting a significant barrier. Access to treatment while incarcerated was an important theme among residents but was not discussed by CBOs. Although several CBOs indicated providing mental health services, there appears to be an important need for both services as well as health education. However, it may be that greater awareness and outreach is needed to help connect residents to available services. Substance use disorder involving opiates, marijuana, and crack cocaine were frequently discussed by residents, and many noted that they may be a form of self-medication from mental health issues. Residents and CBO leaders agreed that implications from substance use disorders include difficulties in finding or holding down a job. Due to the significant interest in mental health concerns by residents, there may be an opportunity to provide health education to an invested audience and reduce some stigma.

Prevent Communicable Diseases

Long Island residents indicated that STIs, particularly hepatitis and HIV, were important health concerns in their communities due to their prevalence and severity. Many residents noted that unsafe sex practices were common and that there was a need for education. However, of the CBOs interviewed, few provided any services related to communicable diseases other than a reference to a housing program for people who are HIV positive and the provision of flu shots. There appears to be significant interest and concern about STIs with little indication from the CBOs interviewed of organizational effort applied to this area. However, it should be noted that there may be efforts in addressing STIs by CBOs who were not included in the interview sample.

5.2 Social Determinants of Health

Economic Stability

Challenges related to economic security were a major theme for residents and CBO leaders, primarily related to structural challenges of lack of transportation and financial insecurity.

Housing security

Many residents discussed homelessness as an important community health concern and identified the relationship between mental illness, inadequate housing, poverty, and crime. CBO leaders also noted the importance of housing security in the maintenance of mental health and substance use treatment. While several CBOs indicated providing services for homeless populations, it is unclear whether residents indicated a greater need for services than currently exist.

Transportation

Lack of access to reliable transportation was a major structural barrier described by both residents and CBOs. Both groups indicated that the public transit system is inadequate and provides insufficient service for local trips, such as going to the grocery store or attending health appointments. While some CBOs provide transportation services, there is a clear and significant need for greater support to transportation services throughout Long Island, including rural areas.

Financial security

Financial security is an issue discussed heavily by Long Island residents. Many participants strongly indicated feeling vulnerable and insecure in their financial standing. Residents and CBO leaders agreed that there is an important relationship between financial security and mental health. There was also agreement that although there are services available for people who are very low-income, there are important challenges facing families of moderate income. As the cost of living on Long Island is very high, expenses related to health insurance, food, housing, and childcare represent a significant portion of a family's budget. As a result, some families will choose to forgo health insurance, although residents indicated a strong desire to have health insurance when available. This income level may represent a need for greater support and services from community-based organizations.

Education

Residents and CBO leaders both commented on the challenges around school quality. Many people cannot read, and there is a need for afterschool programs for children. The impacts of illiteracy were discussed by both residents and CBO leaders as having important health implications, such as the ability to understand written health education. On a related note, this challenge extends to Spanish-speaking populations as well, since not all of them can read in

Spanish. However, few CBOs discussed early childhood, primary, or secondary education. Nearly all CBOs interviewed for education discussed health education, which is explored under "Health and Healthcare."

Health and Healthcare

Access to Healthcare

The challenges around healthcare access represented a major theme for residents and CBO leaders. While several CBO leaders discussed their primary care service provision, residents strongly indicated the need for more affordable and locally accessible services, particularly related to mental health, cancer screenings, and dental care. Access and affordability of health insurance that would provide sufficient coverage was another major theme for residents. While several CBOs indicated that Medicaid and Medicare were a boon to low-income residents, many residents indicated clear frustration with the lack of coverage for necessary services. Lack of access to healthcare was also related to transportation barriers.

As several residents indicated confusion in navigating the system to access resources, there appears to be an opportunity for CBOs, such as libraries, to assist those in need. Many residents noted that various services exist, but that they lacked awareness of them or did not know how to take advantage of them.

One important note is the unique challenge of Hispanic populations in accessing healthcare. Participants discussed significant fear in using healthcare systems and resources out of concern for drawing attention to oneself, risking deportation. These populations are less likely to seek needed healthcare and instead rely on emergency departments. Much of these concerns overlap with issues related to Social, Family, and Community context as current political rhetoric and emphasis on deportation appears to have the impact of making them fearful of using available resources. However, it is not known the extent to which these fears are shared by Hispanic populations residing the country who are not undocumented immigrants, nor is it known what other factors may be impacting access to healthcare for Hispanic citizens. Future research efforts are recommended to explore these questions.

Health Literacy

Most CBOs who provided health education focused on nutrition and eating habits. Some CBOs noted challenges involving providing this education in culturally appropriate ways. While

residents indicated interest in learning more about these topics, they also expressed interest in understanding disease prevention, safe sex, and other topics as ways to improve the health of families, not just individuals. Residents recommended that health education be presented in more concrete formats and preferably through face to face interactions. Residents indicated that Spanish speaking populations particularly need access to health education in their language. Several CBOs indicated that they provide health education in many languages, so there may be an opportunity for greater awareness and marketing of these resources.

Neighborhood and Built Environment

Residents spoke extensively about structural challenges related to violence, access to healthy food, and access to affordable housing, much of which was supported by comments from CBOs. Residents and CBOs agreed that there is a lack of healthy and affordable food access, driven by the combination of food deserts and lack of transportation infrastructure. CBOs indicated attempts to provide access to healthy foods through food pantries, soup kitchens, and community gardens, as well as other environmental and policy changes. Although there are many efforts at providing nutrition education, greater effort appears to be needed to provide access to healthy foods. Crime and violence were also important themes, as many residents stated that there was gang violence impacting their communities. However, few CBOs interviewed indicated efforts at gang violence prevention work or providing safe places for children to go after school. There may be opportunities for CBOs to provide activities and places for children to go as a method of preventing gang violence. Residents and CBO leaders emphasized the serious lack of affordable housing as an important structural barrier to community health, which may need to be addressed at a policy level to encourage more quality affordable housing development. The health impacts from air and water pollution was a concern indicated by several participants, although few CBOs indicated efforts in this area. While it is unclear whether there are health threats from air or water sources, the level of concern among residents suggests that some health education may be helpful.

Social, Family, and Community Context

The lasting impacts from incarceration were key themes among discussions with residents. Residents noted that incarceration is associated with lack of access to mental healthcare, as well as significant impacts on employment, family structure, and family finances. However, very few CBOs mentioned issues related to incarceration or institutionalization. This discrepancy

may represent a gap between the community's concerns and health priorities, and services offered by CBOs.

Social cohesion was addressed by residents and CBOs. Several residents discussed problems with discrimination. CBOs discussed the need to provide for special populations such as Spanish-speaking populations and seniors. Many CBOs discussed immigration status as a significant barrier to seeking healthcare out of fear of deportation. Health clinics in some Hispanic areas have seen a decrease in usage. Barriers facing undocumented immigrants include community-level challenges in the form of discrimination, institutional barriers with culturally competent services, and structural barriers in terms of the current emphasis on deportation.

6. Conclusions

The goal of this study was to inform the process used by the members of LIHC's CHNA Preparation Workgroup to select which of the five New York State Prevention Agenda Priorities to focus on for the 2019-2021 period, as well as to inform the Community Health Needs Assessment process and subsequent implementation plans for hospitals and local health departments through the lens of the Social Determinants of Health. Results from focus groups and in-depth interviews with underserved Long Island residents were compared to results from in-depth interviews with community-based organization leaders who provide services to these populations.

6.1 Prevention Agenda Priorities

Of the five Prevention Agenda Priorities, prevention of chronic diseases, promotion of a healthy and safe environment, and promotion of well-being and prevention of mental and substance use disorders received significant attention from residents on Long Island and from CBOs. These three priority areas were indicated as of significant concerns to residents while receiving varying levels of support and intervention from CBOs. Based on participant comments about the highest priorities, promotion of well-being and prevention of mental and substance use disorders appears to be the top priority, particularly related to mental health and substance use. Promotion of a healthy and safe environment was the second highest priority, mostly in terms of concerns related to violence. Prevention of chronic diseases was the third highest priority, and mostly related to concerns related to diabetes and cancer. It may be beneficial to explore

additional approaches and collaborative efforts to address these areas through health education, as well as environmental and structural changes.

6.2 Social Determinants of Health

Economic Stability is a significant influence upon the health of Long Island residents in their opinions as well as those of CBO leaders. The greatest impacts relate to accessible transportation and financial insecurity. Issues related to Health and Healthcare also dominated discussions with residents and CBO leaders, in terms of challenges to healthcare and insurance access, as well as health literacy and education. Residents recommended greater education to help them connect to available resources and address barriers such as fear or stigma. Many residents and CBO leaders also discussed the many structural challenges related to Neighborhood and Built Environment, such as lack of affordable housing or access to healthy food options.

6.3 Limitations

This research has some important limitations. As all three data collection methods involved qualitative research, it is important to note that while they provide a deep understanding as to experiences related to health and healthcare, they do not measure the prevalence of these experiences among the population of residents on Long Island or CBO leaders, as a survey with a representative sample would be needed for those conclusions. Furthermore, it is important to note that the focus groups in Suffolk County did not fill to capacity, although the resident in-depth interviews provided some additional insight into their perspectives on community health priorities.

7. Appendices

7.1 Focus Group Discussion Guide

Long Island Health Collaborative
Population Health Improvement Program

Focus Group Protocol

Focus Group Information:

Moderator	
Location	
Date	
Time	

Materials:

- *Pad of large sticky notes for each participant*
- *Thin black markers for each participant*
- *Easel with note sheets for the moderator*
- *Box or container for participants to place notes into*

Introduction and overview

(10 minutes total)

(3 minutes)

Hello and welcome to this group discussion. My name is _____, and I am tonight's facilitator. First, it is important to know that I work for EurekaFacts, a marketing research firm, and I do not work for any organization involved in health care in your community. EurekaFacts has been contracted by the Long Island Health Collaborative to conduct this focus group session. My role is to help get a conversation going and to make sure we cover a number of important topics that they would like your input on.

Let's go around the room now and introduce ourselves. *[Include quick ice breaker activity here]*

Rules for Focus Groups

(2 minutes)

I would like to thank you all for taking time out of your day to come here and discuss your ideas. The overall goal is to hear your thoughts about health**.** In particular, we are interested in your views about **things that impact the health of people in your community.**

- We value your experience and we are here to learn from you. Your thoughts are very important to all of us in the research team, and so we will be recording the audio from today's meeting so that we won't miss anything you say.
- Participating in today's meeting is completely voluntary. You have the right to withdraw from the group at any time without penalty.

The total length of time of the focus group meeting is expected to be about **two hours.** There will be a 10-minute break in the middle. There are a few "ground rules":

- I might move you along in conversation. Since we have limited time, I'll ask that off-topic questions or comments be answered after the focus group session.
- I'd like to hear everyone speak so I might ask people who have not spoken up to comment.
- Please respect each other's opinions. There's no right or wrong answer to the questions I will ask. We want to hear what each of you think and it's okay to have different opinions.

- We'd like to stress that we want to keep the sessions confidential so we ask that you not use names or anything directly identifying when you talk about your personal experiences. For example, if you talk about a friend, or specific places, don't use their full names or give the kind of information that could be used to fully identify someone. We want to keep their identities anonymous.

- We also ask that you not discuss other participants' responses outside of the discussion. However, because this is in a group setting, the other individuals participating will know your responses to the questions and we cannot guarantee that they will not discuss your responses outside of the focus group.

- Please do not film or record any part of this session. Please silence and put away your phones and other electronic devices.

Overview of "Delphi Method"

(5 minutes)

Let's talk about the sticky notes and markers in front of you. For some of the questions today, I will ask you the question, and then I want you to write your response down on those sticky notes, one idea per note. You will put the notes in that box and then pass the box to me. I will stick the notes onto this easel, and together we will see which notes similar and which ones are different, putting them into groups. We want the notes to be anonymous, so don't write your name on it, and you don't have to say which one you wrote. We will use these notes to start many of our conversations today.

- Let's practice doing this now. I'm going to ask you a question and I want you to write down your answers, one idea per note. Make sure you write legibly and in big letters. What is your favorite season? Write down your answer on the sticky note, put it in the box, and pass it to me.

  [Moderator takes the box full of notes, mixes them up, and places them on the easel, grouping the notes that say the same thing. Then, pointing to one of the seasons:]

- Let's talk about this group. Why do you think someone would say this is their favorite?

  [Discuss the pros/cons to that season, and then move on to the next season – until it seems like the group understands how it will work.]

- We will use this method for many of the discussion questions today. For other questions, we will just talk without writing anything. I will tell you when to write something down and when we will just talk about it. Ok?

DO YOU HAVE ANY QUESTIONS SO FAR?

Ok, let's get started.

Top health concerns in your community

(30 minutes)

Step 1: Group generation

To start our conversation today, let's talk about types of health concerns. We are going to brainstorm for a moment. You don't need to write anything down for this part because we are just going to talk about them.

- (2-3 minutes) Let's first talk about common *chronic diseases* in a general way. These are diseases which you can't catch from another person and that you have for a long time. For example, diabetes and asthma are both common chronic health diseases because you don't catch them from other people and you might have them for many years. What other common examples of chronic diseases or health conditions can you think of?

  [Moderator writes "Chronic Diseases" on easel pad and writes down the other examples from participants.]

  Suggest, if they do not come up: Diabetes, asthma or lung disease, cancer, heart disease or stroke, obesity or overweight

- (2-3 minutes) Let's move to the next topic: important *communicable diseases*. These are diseases which can be spread from one person to another in a variety of ways. For example, HIV and the flu are both important communicable diseases because they can be spread from other people. What other examples of infectious diseases can you think of?

  [Moderator writes "Communicable Diseases" on easel pad and writes down the other examples from participants.]

  Suggest, if they do not come up: HIV/AIDS, other sexually-transmitted infectious (e.g. herpes), and diseases that can be prevented with vaccines, like the flu or measles

- (2-3 minutes) Now let's talk about common health issues *for women, children, and infants* in particular. These are health concerns like reproductive health or childhood obesity. What other common examples of health conditions that impact women, children, and infants can you think of?

  [Moderator writes "Women, infants, and children" on easel pad and writes down the other examples from participants.]

Suggest, if they do not come up: cancer screenings (mammograms, pap smear), breastfeeding, dental health in kids, childhood vaccinations, obesity or overweight, bullying

- (2-3 minutes) Let's shift to focusing on common issues with *well-being, mental health, and substance use.* These are health issues that can include a person's resilience or overall ability to bounce back after a setback, or things like depression and anxiety disorders. What other common examples of well-being, mental health, and substance use issues can you think of?

  [Moderator writes "Well-being, mental health, and substance use" on easel pad and writes down the other examples from participants.]

  Suggest, if they do not come up: *positive relationships with others, depression, anxiety, suicide, alcohol abuse, and opioid abuse*

- (2-3 minutes) Finally, let's talk about common ways that your environment impacts your health. For example, neighborhood violence and having access to stores that carry healthy foods are aspects of your environment that affect your health. What other common examples of environmental conditions can you think of?

  [Moderator writes "Healthy and safe environment" on easel pad and writes down the other examples from participants.]

  Suggest, if they do not come up: environmental hazards (e.g. pollution), safety, and traffic accidents.]

Step 2: Individual generation I

- (*2-3* minutes) Now, with all of these different types of health concerns and issues in mind, what do you think are the **biggest health concerns** in your community? Write down one or more thoughts on the sticky notes provided, using one sticky note for each thought. Be sure to write in very big, legible letters.

  [*Moderator writes "Health concerns in <u>your</u> community" on easel pad. After 1-2 minutes of participants writing and putting their notes into the box, Moderator takes the box full of notes, mixes them up, and places them on the easel, grouping the notes that say similar things.*]

Step 3: Discussion of individual ideas I

- *(6-7* minutes) Let's talk about your responses for a few minutes and think through what the biggest concerns for your community might be. Remember, you don't need to say what your answer was, and you can change your mind about your answer. What do people think about (*one of the groups of responses*)? How big of a concern is this in your community? Why is this a concern for you, or do you not worry about it as much?

- [*Briefly discuss each grouping. Ensure discussion focuses on the specific community. While there may be many concerns, remember that we are interested in identifying the biggest concerns.*]

Step 4: Individual generation II

- (*6-7 minutes*) Now that we've had a chance to talk about these issues, I'd like to get your written responses again. So, just like before, please write down what <u>you</u> think the biggest priorities for health in your community are. You can write the same ideas you wrote last time, or you can write something different.

Step 5: Build consensus

- [*Allow 1-2 minutes then collect notes. Take 5 minutes to help the group identify the top 3-4 concerns*]

Barriers to getting treatment

(15 minutes)

Step 1. Individual generation

- (2-3 minutes) Sometimes people cannot or do not get care for their health problems. What do you think prevents people from getting treatment in your community? Some examples might be lack of insurance, transportation, embarrassment or stigma, and not knowing how to get treatment. Please write your response on a note.

  [*Moderator writes "Barriers to health care" on easel. After 1-2 minutes of participants writing and putting their notes into the box, Moderator takes the box full of notes, mixes them up, and places them on the easel, grouping the notes that say similar things.*]

Step 2. Discussion of individual ideas

- *(5 minutes)* Let's talk about these your responses and think through what the biggest barriers in your community might be.

  [Discuss groupings of notes. Ensure discussion focuses on the specific community. While there may be many concerns, remember that we are interested in identifying the biggest concerns.]

Step 3. Build consensus

- *(2-3 minutes)* What would you all say the biggest factors are for your community? Let's discuss them.

  [*Help group reach a consensus. Record top 3 barriers.*]

Step 4. Group generation of solutions

- *(5 minutes total for all questions about education and services)* What kind of education or services do you think would help with (*Barrier 1 from consensus list*)? Let's discuss them.

  [*Repeat previous question for each of the top barriers.*]

Break

(10 minutes)

- OK, let's take a 10-minute break. Let's be ready to go at (*time*).

Social determinants of health

(30 minutes, 7 min. per topic)

- Welcome back! I hope everyone got a chance to stretch their legs, use the restroom, and take care of personal needs. Please return to your seats. Now, we're going to talk in more detail about how your community and environment affect your health. Don't respond out loud yet, just write your response on a sticky note.

Step 1. Individual generation I (*economic stability*)

- *(1-2 minutes)* How does *economic stability* impact health of your community? In other words, how do *housing, employment, food, and transportation* impact health in your specific community? Write your answers down on the notes and place them in the box.

  [*Allow 1-2 minutes to write responses*]

  - OK, now everyone please pass your notes to me.

    [*Collect and shuffle notes, place them on easel grouped by housing, employment, food, transportation, and other categories.*]

Step 2. Discussion of individual generation I (*economic stability*)

  - *(5 minutes) Let's discuss your responses for a few minutes. Remember, you don't need to say what your answer was, and you can change your mind about your answer. What do people think about (one of the responses)?*

Step 3. Individual generation II (*education*)

- *(1-2 minutes)* How does *education* impact health of your community? In other words, how do issues like *literacy and early childhood education* impact health in your specific community? Write your answers down on the notes and place them in the box.

  [*Allow 1-2 minutes to write responses*]

  - OK, now everyone please pass your notes to me.

    [*Collect and shuffle notes, place them on easel grouped in categories. Discuss responses in each of the categories.*]

Step 4. Discussion of individual generation II (*education*)

- *(5 minutes)* Let's discuss your responses for a few minutes. Remember, you don't need to say what your answer was, and you can change your mind about your answer. What do people think about (*one of the responses*)?

Step 5. Individual generation III (*neighborhood and environment*)

- *(1-2 minutes)* How does *your neighborhood and environment* impact health of your community? In other words, how do issues like *having access to types of food stores, the level of safety, amount of pollution, and other similar issues* impact health in your specific community? Write your answers down on the notes and place them in the box.

  [*Allow 1-2 minutes to write responses*]

  - OK, now everyone please pass your notes to me.

    [*Collect and shuffle notes, place them on easel grouped in categories.*]

Step 6. Discussion of individual generation III (*neighborhood and environment*)

- *(5 minutes)* Let's discuss your responses for a few minutes. Remember, you don't need to say what your answer was, and you can change your mind about your answer. What do people think about (*one of the responses*)?

Step 7. Individual generation IV (*social factors*)

- *(1-2 minutes)* How do *social factors* impact health of your community? In other words, how do issues like *how tight knit a community is, the amount of discrimination a person faces, or incarceration* impact health in your specific community? Write your answers down on the notes and place them in the box.

[*Allow 1-2 minutes to write responses*]

- OK, now everyone please pass your notes to me.

  [*Collect and shuffle notes, place them on easel grouped in categories.*]

Step 8. Discussion of individual generation IV (*social factors*)

- *(5 minutes)* Let's discuss your responses for a few minutes. Remember, you don't need to say what your answer was, and you can change your mind about your answer. What do people think about (*one of the responses*)?

Sources for health information:

(5-7 minutes)

- We are done with the writing portion of this group and will just discuss questions now. Where do you get information about your health?
  - What information is easy to access? For example, are there certain *websites or people* who are easy to get health info from, or are there certain *health topics* that it's easy to get info on?

  Probe: Social media, health websites, news sources, peers, family, community. If they say "google", probe for more detail: what are their search terms, how do they know if they can trust the information from a site

Conclusions:

(5-10 minutes)

- *(2-3 minutes)* Is there anything else you want to talk about that we haven't addressed?
- *(2-3 minutes)* What was the most important thing that we discussed today?

Thank you all again for sharing your thoughts, feelings, and experiences with us today. We so appreciate it!

7.2 Long Island Resident In-Depth Interview Guide

Interviewer Questions

Complete these questions before the interview.

Ref #	Question/Prompt	Response
	Preliminary Information	
1	Name of interviewer	
2	Date, time	
3	Participant ID	
4	Participant City	

Road Map of Discussion

Issues / Information to be Discussed	Length Allotted to Discussion (minutes)
Overview, consent	*2, does not count toward interview length*
Top Health concerns	10-12
Barriers to getting treatment	3-5
Social Determinants of Health	6-8
Sources of Health Information	3
Conclusion	1-2
Total Time (minutes):	**30**

Overview and Consent

(5 minutes)

INTERVIEWER INSTRUCTIONS: *The interviewer should not read the script word for word, but should be familiar with its contents and conduct the interview in a natural and conversational manner, paraphrasing or giving further explanation as appropriate.*

Script:
Hello, my name is _____ and I am a researcher with a company called EurekaFacts conducting a project on behalf of the Long Island Health Collaborative. Thank you for agreeing to speak with me today and answer my questions.

I wanted to talk to you today because you live on Long Island and have had some trouble accessing healthcare recently. The overall goal is to hear your thoughts about health. In particular, I am interested in your views about ***things that impact the health of people in your community.***
Now, before we continue, it is important that you know that, as part of the research team, I am neutral on this topic. Please keep in mind that there are no 'right' or 'wrong' answers.

I value your experience and am here to learn from you. Your thoughts are very important to all of us in the research team, and so I will be recording the audio from today's meeting so that we won't miss anything you say. Participating in today's conversation is completely voluntary. You may choose to decline to answer any question and stop the interview at any time. You have the right to withdraw from the group at any time without penalty.

You may not directly benefit from this research; however, we hope that your participation in the study may help the Long Island Health Collaborative help more people on Long Island get the healthcare they need.

I anticipate that this interview should last around 30 minutes today. I will be taking notes and also recording our conversation with your permission, but everything that you tell me will be kept confidential and treated in a secure manner. Your answers in this study will remain private. Your name will not be shared with anyone outside of this study, except as otherwise required by law.

Do you agree that you are at least 18 years old, understand this consent language, and agree to participate in this research study?

☐ Yes → If Yes, continue
☐ No →If No, Terminate and use script at end of document

Do you consent to having this conversation recorded?

☐ Yes → If Yes, continue
☐ No → If No, Terminate and use script at end of document

Start recording

For the purposes of this recording, this is (interviewer) interviewing participant (-) on (date) for the Long Island Health Collaborative.

Top Health concerns (10-12 min total)

To start our conversation today, we're going to briefly talk about types of health concerns. We're going to be talking about health in pretty broad terms,

Chronic diseases (1-2 min)

Let's first talk about common *chronic diseases* in a general way. These are diseases which you can't catch from another person and that you have for a long time. For example, diabetes and asthma are both common chronic health diseases because you don't catch them from other people and you might have them for many years. Other examples might be lung disease, cancer, or obesity.

In your opinion, what are the important chronic diseases in your community, and why?

Communicable diseases (1-2 min)

Let's move to the next topic: important communicable diseases. These are diseases which can be spread from one person to another in a variety of ways. For example, HIV and the flu are both important communicable diseases because they can be spread from other people. Other examples might be HIV/AIDS, sexually-transmitted infections like herpes, and diseases that can be prevented with vaccines, like the flu or measles.

In your opinion, what are the important communicable diseases in your community, and why?

Women, infants, children (1-2 min)

Now let's talk about health issues for women, children, and infants in particular. These are health concerns like reproductive health or childhood obesity, cancer screenings like mammograms or pap smears, breastfeeding, kids' dental health, obesity in children, bullying.

In your opinion, what are the important health conditions that impact women, children, and infants in your community, and why?

Well-being, mental health, substance use (1-2 min)

Let's shift to focusing on common issues with well-being, mental health, and substance use. These are health issues that can include a person's resilience or overall ability to bounce back after a setback, or things like depression and anxiety disorders. This can also include positive relationships with others, or issues like suicide, alcohol or drug abuse.

In your opinion, what are the important health conditions involving well-being, mental health, and substance use issues in your community, and why?

Healthy and safe environment (1-2 min)

Finally, let's talk about common ways that your environment impacts your health. For example, neighborhood violence, having access to stores that carry healthy foods, traffic accidents, or having clean and safe places to live are aspects of your environment that affect your health.

In your opinion, what are the important environmental conditions that affect health in your community, and why?

Top health concerns in your community (1-2 min)

Now, we have just talked about a lot of different types of health concerns in your community: chronic diseases, communicable diseases, women / infants / children, well-being and mental health, and a healthy and safe environment.

With all of that in mind, what do you think are the biggest health concerns in your community and why?

Barriers to getting treatment (3-5 min total)

Sometimes people cannot or do not get care for their health problems. Some examples might be lack of insurance, transportation, embarrassment or stigma, and not knowing how to get treatment.

What do you think prevents people from getting treatment in your community?

Which are the biggest barriers?

Social Determinants of Health (6-8 min total)

Now, we're going to talk in more detail about how your community and environment affect your health.

Economic stability (1-2 min)

How does economic stability impact health of your community? What I mean by that is, how do housing, employment, food, and transportation impact health in your specific community?

Education (1-2 min)

How does education impact health of your community? In other words, how do issues like literacy and early childhood education impact health in your specific community?

Social factors (1-2 min)

How do social factors impact health of your community? In other words, how do issues like how tight knit a community is, the amount of discrimination a person faces, or incarceration impact health in your specific community?

Sources of health information (3 min)

- Where do you get information about your health?

  Probe: Social media, health websites, news sources, peers, family, community. If they say "google", probe for more detail: what are their search terms, how do they know if they can trust the information from a site

What information is easy to access? For example, are there certain *websites or people* who are easy to get health info from, or are there certain health topics that it's easy to get info on?

Conclusions (2 min)

Is there anything else you want to talk about that we haven't addressed?

What was the most important thing that we discussed today?

Thank you again for sharing your thoughts, feelings, and experiences with me today. I truly appreciate it!

Termination Script

Termination for lack of consent to participate or record

Thank you so much for agreeing to talk with me today. I need your consent to participate or record the interview, and so we will stop this interview, I appreciate your willingness to answer my questions, and those are all the questions I have at the moment. Have a great day.

7.3 Community-Based Organization In-Depth Interview Guide

Long Island Health Collaborative Community-Based Organization Leader

In-Depth Interview Guide

Interviewer Questions

Complete these questions before the interview. Confirm questions 4-6 with the participant during the Overview for quality assurance.

Ref #	Question/Prompt	Response
	Preliminary Information	
1	Name of interviewer	
2	Date	
3	Participant ID	
4	Participant's Role/Title	
5	Participant's Type of Organization	☐ Economic Stability ☐ Education ☐ Health and Healthcare ☐ Neighborhood and Built Environment ☐ Social, Family, and Community Context ☐ None of the above (Thank and terminate)
6	Participant's length of time at current job	☐ Less than one year (Thank and terminate) ☐ One year or longer (Please specify) _____

Road Map of Discussion

Issues / Information to be Discussed	Length Allotted to Discussion (minutes)
Overview, consent, eligibility confirmation	*5, does not count toward interview length*
Introduction and social determinants of health	2-3
The impact of the SDH on health	10
Conclusion	3
Total Time (minutes):	**15**

Overview and Consent

(5 minutes)

INTERVIEWER INSTRUCTIONS: *The interviewer should not read the script word for word, but should be familiar with its contents and conduct the interview in a natural and conversational manner, paraphrasing or giving further explanation as appropriate.*

Script:

Hello, my name is _____ and I am a researcher with a company called EurekaFacts conducting a project on behalf of the Long Island Health Collaborative. Thank you for agreeing to speak with me today and answer my questions.

I wanted to talk to you today because your organization has been identified as providing services that impact the health of people on Long Island. The purpose of this in-depth interview is to understand your perspectives regarding the intersection of [Social Determinant of Health] and health in the community. Your responses to this interview will help improve the understanding healthcare needs on Long Island.

Now, before we continue, it is important that you know that, as part of the research team, I am neutral on this topic. I am interested in getting your point of view to understand how you have observed [SDH] impact health in the communities you serve. Please keep in mind that there are no 'right' or 'wrong' answers. There are no known risks to participating in this study. You may choose to decline to answer any question and stop the interview at any time. There will not be any penalties if you choose not to participate in this study or decline to answer any questions.

You may not directly benefit from this research; however, we hope that your participation in the study may help the Long Island Health Collaborative improve access to healthcare for Long Island residents.

I anticipate that this interview should last around 15 minutes today. I will be taking notes and also recording our conversation with your permission, but everything that you tell me will be kept confidential and treated in a secure manner. Your answers in this study will remain private. Your name will not be shared with anyone outside of this study, except as otherwise required by law. Any results that come from this study will be presented as an aggregate and your name will not be linked to your answers. By agreeing to participate in this interview survey, you are allowing the Long Island Health Collaborative to use the information from this study.

Do you agree that you are at least 18 years old, have read and understood this consent language, and agree to participate in this research study?

☐ Yes → If Yes, continue

☐ No → If No, Terminate and use Script A (at end of document)

Do you consent to having this conversation recorded?

☐ Yes → If Yes, continue

☐ No → If No, Terminate and use Script A (at end of document)

Confirming eligibility

Social Determinants of Health: Types and Descriptions	
Economic Stability	E.g. housing security, employment food security, transportation
Education	E.g. language and literacy, early childhood education, high school education
Health and Healthcare	E.g. access to health care, health literacy access to trusted provider/primary care
Neighborhood and Built Environment	E.g. access to health foods, affordable/ quality housing, crime and violence
Social, Family, and Community Context	E.g. social cohesion, civic participation, incarceration / institutionalization

Is your organization involved in work related to [Social Determinant of Health]? For the purposes of this interview, [SDH] is defined as work addressing [give SDH example from chart above].

☐ Yes → If Yes, continue

☐ No → If No, Excuse and use Script B (at end of document)

Does your organization serve communities located in [County]?

☐ Yes → If Yes, continue

☐ No → If No, Excuse and use Script B (at end of document)

Ok, let's get started.

[Begin recording]

This is _____ [interviewer name] interviewing participant ID _____ on _____ [date] for the Long Island Health Collaborative.

Introduction (2 minutes)

1. To get started, could you very briefly describe your organization and your role in it?

2. We will be focusing on how your organization's work intersects with [SDH] and health in the community. Could you briefly describe for me how your organization addresses [SDH]?

Social Determinant of Health and the Community (10 minutes)

3. For the purposes of this interview, I'm using the term 'health' very broadly, it includes mental health, environmental health, substance use and any other aspect of health. What are the specific health concerns related to [SDH] that are important to the communities that your organization serves in [County]?

4. Are there any specific groups of people (such as women, Hispanics, or other types of groups) that are most impacted by [SDH], or have special challenges?

   If they need clarification on types of groups, they may be based on demographic variables or on other characteristics, e.g. chronic pain patients and employment, people without access to personal transportation and healthcare access, etc.

5. What are the factors related to [SDH] that make it **harder** for your communities become healthier?
   Examples, if needed: specific laws, cultural norms, factors in the environment, etc.

   a. What steps could be taken to address those factors and promote healthy communities?

6. What are the factors related to [SDH] that support your communities in becoming healthier?

   Examples, if needed: Policies related to this issue that positively impact health, or programs/resources that may be beneficial

a. What steps could be taken to build on the positive factors and promote healthy communities?

Conclusions (3 minutes)

7. Is there anything else you want to talk about that we haven't addressed?

8. What is the most important thing for me to take away from our conversation today regarding [SDH] and your communities?

Thank you so much for your time and insight, your input is very important and useful to us. Again, your responses will be kept confidential. You have been very helpful, and I appreciate it.

Have a great day.

Termination Scripts

Script A – *Termination for lack of consent to participate or record*

Thank you so much for agreeing to talk with me today. I need your consent to participate or record the interview, and so we will stop this interview, I appreciate your willingness to answer my questions, and those are all the questions I have at the moment. Have a great day.

Script B – *Termination for not meeting eligibility criteria*

Thank you so much for agreeing to talk with me today. Since all of my questions have to do with [SDH], health, and the communities in [County], I need to speak **with people at organizations which work in those areas.** I appreciate your willingness to answer my questions, and those are all the questions I have at the moment. Have a great day.

Nassau County Department of Health CHIP Workplan References and Supporting Evidence

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LIHC/PHIP Collaboration Membership Directory as of January 2019

Hospitals, Hospital Association and Hospital Systems *	Website
Catholic Health Services of Long Island	www.chsli.org
Eastern Long Island Hospital	www.elih.org
Glen Cove Hospital	www.northwell.edu
Good Samaritan Hospital Medical Center	www.goodsamaritan.chsli.org
Huntington Hospital	www.northwell.edu
Long Island Community Hospital	www.licommunityhospital.org
Long Island Jewish Valley Stream	www.northwell.edu
Mather Memorial Hospital	www.matherhospital.org
Mercy Medical Center	www.mercymedicalcenter.org
Nassau-Suffolk Hospital Council	www.nshc.org
Nassau University Medical Center	www.numc.edu
North Shore University Hospital	www.northwell.edu
Northwell Health System	www.northwell.edu
NYU Winthrop Hospital	www.winthrop.org
Peconic Bay Medical Center	www.pbmchealth.org
Plainview Hospital	www.northwell.edu
St. Catherine of Siena Medical Center	www.stcatherines.chsli.org
St. Charles Hospital	www.stcharles.chsli.org
St. Francis Hospital	www.stfrancis.chsli.org
St. Joseph Hospital	www.stjoseph.chsli.org
Southampton Hospital	www.southamptonhospital.org
South Nassau Communities Hospital	www.southnassau.org
South Oaks Hospital	www.south-oaks.org
Southside Hospital	www.northwell.edu
Stony Brook University Hospital	www.stonybrookmedicine.edu
Syosset Hospital	www.northwell.edu

Veterans Affairs Medical Center	www.northport.va.gov
Health Departments	**Website**
Nassau County Department of Health*	www.nassaucountyny.gov
Suffolk County Department of Health Services*	www.suffolkcountyny.gov
New York State Department of Health	www.health.ny.gov
Medical Societies and Associations	**Website**
Long Island Dietetic Association	www.eatrightli.org
Nassau County Medical Society	www.nassaucountymedicalsociety.org
New York State Nurses Association	www.nysna.org
New York State Podiatric Medical Association	www.nyspma.org
Suffolk County Medical Society *	www.scms-sam.org
Community-Based Organizations	**Website**
Adelphi New York Statewide Breast Cancer Hotline and Support Program	www.breast-cancer.adelphi.edu
All Ability Wellness	www.allabilitywellness.com
Alzheimer's Association, Long Island Chapter	www.alz.org
American Cancer Society	www.cancer.org
American Diabetes Association	www.diabetes.org
American Foundation for Suicide Prevention	www.afsp.org
American Heart Association *	www.heart.org
American Lung Association of the Northeast	www.lung.org
Arbors Assisted Living	www.thearborsassistedliving.com
Association for Mental Health and Wellness *	www.mentalhealthandwellness.org
Asthma Coalition of Long Island	www.asthmacommunitynetwork.org
Attentive Care Services	www.attentivecareservices.com

Caring People	www.caringpeopleinc.com
Catholic Charities, Diocese of Rockville Centre	www.catholiccharities.cc
Community Growth Center	www.communitygrowthcenter.org
Cornell Cooperative Extension - Suffolk County *	www.ccesuffolk.org
EPIC Long Island	www.epicli.org
Epilepsy Foundation of Long Island	www.efli.org
Evolve Wellness	www.evolvewellness.net
Family & Children's Association	www.familyandchildrens.org
Family First Home Companions	www.familyfirsthomecompanions.com
Federation of Organizations	www.fedoforg.org
Girls Inc, LI	www.girlsincli.org
Health and Welfare Council of Long Island	www.hwcli.com
Health Education Project / 1199 SEIU *	www.healthcareeducationproject.org
Hispanic Counseling Center	www.hispaniccounseling.org
Hudson River Healthcare *	www.hrhcare.org
Island Harvest	www.islandharvest.org
JDRF	www.jdrf.org
Life Trusts	www.lifetrusts.org
Long Island Association *	www.longislandassociation.org
Long Island Association of AIDS Care *	www.liaac.org
Long Island Council of Churches	www.liccny.org
Make the Road NY	www.maketheroad.org
Maria Regina Skilled Nursing Facility	www.mariareginaresidence.org
Maurer Foundation	www.maurerfoundation.org
Mental Health Association of Nassau County *	www.mhanc.org
Music and Memory	www.musicandmemory.org
NADAP	www.nadap.org

Nassau Region PTA	www.nassaupta.com
National Aging in Place Council	www.ageinplace.org
National Eating Disorder Association	www.nationaleatingdisorder.org
National Health Care Associates	www.nathealthcare.com
New Horizon Counseling Center	www.nhcc.us
New York City Poison Control	www.nyc.gov
NutriSense	www.nutri-sense.com
Options for Community Living	www.optionscl.org
People Care Inc	www.peoplecare.com
The Pulse Center for Patient Safety Education & Advocacy *	www.pulsecenterforpatientsafety.org
Retired Senior Volunteer Program *	www.rsvpsuffolk.org
RotaCare	www.rotacareny.org
SDC Nutrition PC	www.call4nutrition.com
Smithtown Youth Bureau	www.smithtownny.gov
Society of St. Vincent de Paul Long Island	www.svdpli.org
State Parks LI Regional Office	www.nysparks.com
Sustainable Long Island	www.sustainableli.org
The Crisis Center	www.thecrisisplanner.com
Thursday's Child	www.thursdayschildofli.org
Town of Smithtown Horizons Counseling and Education Center	www.smithtownny.gov
TriCare Systems	www.tricaresystems.org
United Way of Long Island *	www.unitedwayli.org
Utopia Home Care	www.utopiahomecare.com
Visiting Nurse Services & Hospice of Suffolk	www.visitingnurseservice.org
YMCA of LI *	www.ymcali.org
School and Colleges	**Website**
Adelphi University *	www.adelphi.edu

Farmingdale State College	www.farmingdale.edu
Hofstra University *	www.hofstra.edu
Molloy College	www.molloy.edu
St. Joseph's College	www.sjcny.edu/long-island
Stony Brook University *	www.stonybrook.edu
Western Suffolk BOCES Healthy Schools NY *	www.wsboces.org
Performing Provider Systems (DSRIP PPS)	**Website**
Nassau Queens PPS	www.nassauqueenspps.org
Suffolk Care Collaborative	www.suffolkcare.org
Insurers	**Website**
1199SEIU/Health Education Project	www.1199seiu.org
Emblem Health	www.emblemhealth.com
Fidelis Care	www.fideliscare.org
United Healthcare *	www.unitedhealthcare.com
Regional Health Information Organizations	**Website**
Healthix Inc.	www.healthix.org
New York Care Information Gateway	www.nycig.org
Businesses and Chambers	**Website**
Air Quality Solutions	www.iaqguy.com
Custom Computer Specialists	www.customtech.com
Feldman, Kramer & Monaco, P.C.	www.fkmlaw.com
Greater Westhampton Chamber of Commerce	www.westhamptonchamber.org
Honeywell Smart GRID Solutions	www.honeywellsmartgrid.com
LIFE, Inc. Pooled Trusts	www.lifetrusts.org
Marcum	www.marcumllp.com
PSEG of Long Island	www.psegliny.com

TeK Systems	www.teksystems.com
Temp Positions	www.tempositions.com
Time to Play Foundation	www.timetoplay.com
Wisselman & Associates	www.lawjaw.com
WSHU Public Radio (NPR News & Classical Radio)	www.wshu.org

Municipal Partners	Website
New York State Association of County Health Officials	www.nysacho.org
New York State Department of Parks and Recreation	www.nyparks.com
Nassau Library System	www.nassaulibrary.org
NYC Poison Control Center	www1.nyc.gov
Suffolk County Legislature	www.legis.suffolkcountyny.gov
Suffolk Cooperative Library System	https://portal.suffolklibrarysystem.org/

*** denotes a founding member of the Long Island Health Collaborative**