OBESITY IN THE LONG ISLAND REGION

Third in a series of quarterly data reports examining trends and patterns of selected health topics
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Introduction

According to the CDC, the key to achieving a healthy weight, and continuing to maintain it, is an overall lifestyle change. This change includes regular physical activity as well as healthy eating.[1]

The Long Island Health Collaborative (LIHC) is a coalition of hospitals, county health departments, dozens of community-based health and social service organizations, health plans, colleges and schools, libraries, local municipalities, businesses, and others working voluntarily since 2013 to lessen the burden of chronic disease, including obesity, among Long Island residents of all ages. The LIHC and its partners have embraced nutrition and physical activity as their foundational pillars for interventions and strategies designed to motivate behavior change.

The LIHC is an initiative overseen by the Nassau-Suffolk Hospital Council, the association that advocates for fair and reasonable healthcare legislation and regulation that affects hospitals on Long Island. Funding for the Collaborative's activities comes from the Population Health Improvement Program (PHIP) grant, via the New York State Department of Health.

Data collection and analysis is one of the essential functions of the Collaborative. This report draws a picture of the obesity epidemic within the Long Island region and the trends that have emerged during the past few years, by pulling from national, regional, and state secondary data sets, as well as primary data collection.

Report Highlights

- The percentage of overweight individuals on Long Island steadily decreased from 2012 to 2015, though more research will be needed to see if this trend continues.
- Suffolk County has higher percentages of adults who are obese, adults who are overweight or obese, and adults who are obese and living with a disability when compared to Nassau County.
- Data collected throughout Long Island show select zip codes where residents desire weight loss programs to improve the health of their communities above all other programs.
- Analysis of two sample wellness programs showed improvement in various healthy weight and Body Mass Index (BMI) metrics when examined through a pre- and post-process.

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[1] https://www.cdc.gov/nutrition/data-statistics/2018-state-indicator-report-fruits-vegetables.htm

Obesity in the Long Island Region

In the United States it is estimated that 93.3 million (39.8%) adults and 13.7 million (18.5%) children were clinically obese in 2015-2016. The estimated healthcare cost of obesity-related conditions in the U.S. was 147 billion dollars in 2008, and medical costs for people with obesity were $1,429 higher than those of a normal weight. Conditions related to obesity are some of the leading causes of premature and preventable death. These include heart disease, stroke, type 2 diabetes, and certain cancer types.[1]

A person's BMI level defines a diagnosis of overweight or obesity. Overweight corresponds to a BMI of 25.0 to <30 and obesity corresponds to a BMI of 30 or greater for adults, according to the Center for Disease Control and Prevention.[2] The CDC offers an interactive tool to determine one's BMI: https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html

According to the CDC the key to achieving a healthy weight, and continuing to maintain it, is an overall lifestyle change.[1] This change includes regular physical activity as well as healthy eating.[1] It is recommend that adults aged 18-64 complete at least 150 minutes of moderate-intensity aerobic exercise a week[4] and a healthy adult diet based on 2,000 calories per day, with a balance of fruits, vegetables, grains, protein foods, dairy, and oils.[5] While the amount of each required for a healthy diet depends on a person's age, sex, and level of physical activity, there are nutrition recommendations for every lifestyle. Visit https://www.choosemyplate.gov/MyPlate to find your CDC daily recommendations.[5]
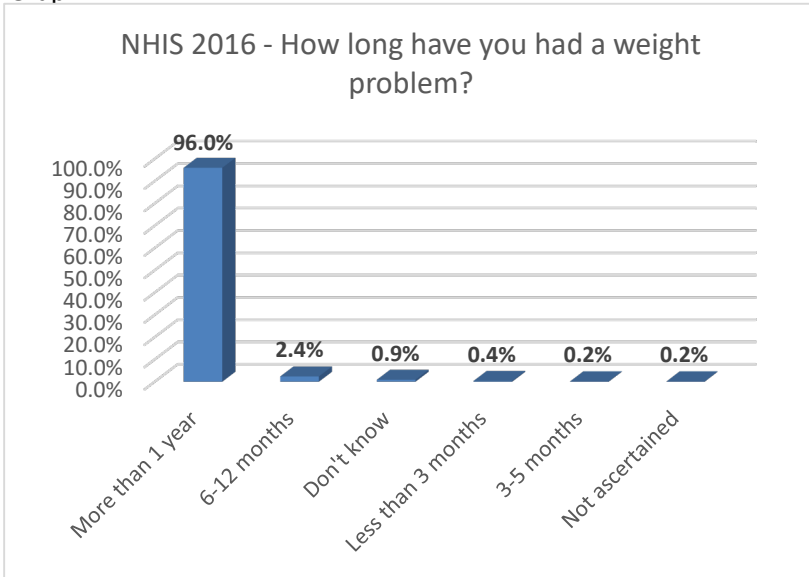
National Health Interview Survey (NHIS)

The National Health Interview Survey (NHIS) has been in use since 1957, and for over 50 years the U.S. Census Bureau has used it to monitor the health of Americans. It is a cross-sectional household interview survey that collects data on a broad range of health topics.
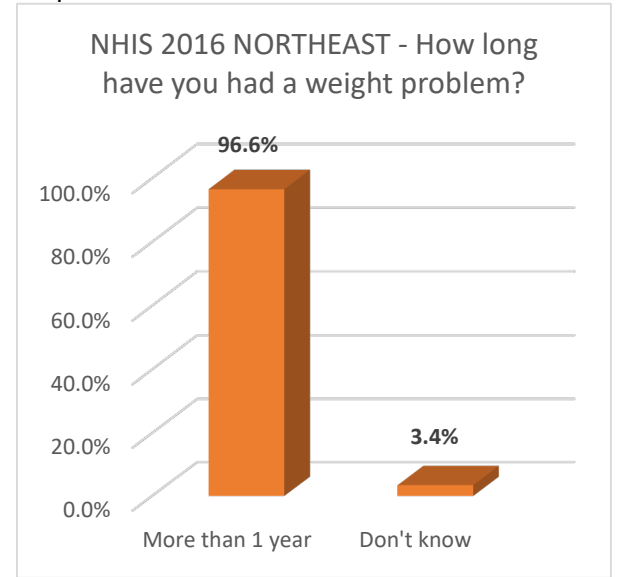
Graph 1 shows the 2016 percentages of how long Americans have had a weight problem, according to responses obtained by the NHIS. *Graph 2* shows similar 2016 percentages specifically for individuals living within the Northeast, which the NHIS defines as Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Vermont, New Hampshire, Massachusetts, and Maine. The Northeast had a higher percentage of individuals reporting a weight problem lasting more than one year than the U.S. as a whole during this time frame.

Graph 3 shows the 2016 percentages on whether American's weight problems were chronic, not chronic, or if they were unsure. *Graph 4* shows the 2016 percentages on whether those living within the Northeast had a chronic weight problem, or if they were unsure. Chronic conditions are conditions that last years or can be lifelong, so having a chronic weight condition means a person has had one for a long time. According to the NHIS, there was a higher percentage of individuals living with a chronic weight problem in the U.S. as a whole compared to the Northeast section of the U.S.
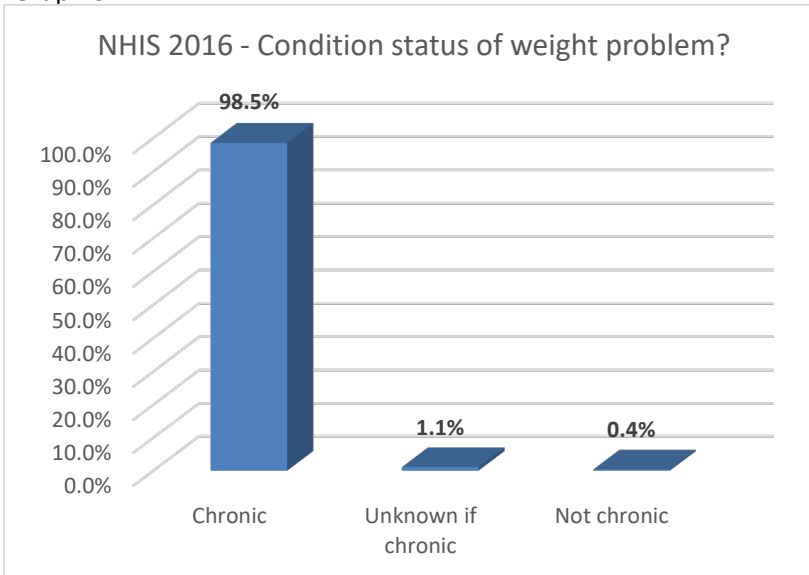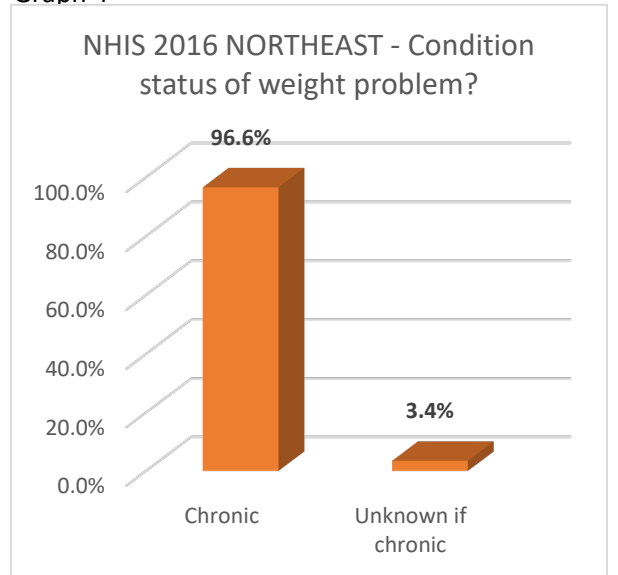
Graph 1

NHIS 2016 - How long have you had a weight problem?

96.0% — More than 1 year
2.4% — 6-12 months
0.9% — Don't know
0.4% — Less than 3 months
0.2% — 3-5 months
0.2% — Not ascertained

(Y-axis: 0.0% to 100.0%)

Graph 2

NHIS 2016 NORTHEAST - How long have you had a weight problem?

96.6% — More than 1 year
3.4% — Don't know

(Y-axis: 0.0% to 100.0%)

Graph 3

NHIS 2016 - Condition status of weight problem?

98.5% — Chronic
1.1% — Unknown if chronic
0.4% — Not chronic

(Y-axis: 0.0% to 100.0%)

Graph 4

NHIS 2016 NORTHEAST - Condition status of weight problem?

96.6% — Chronic
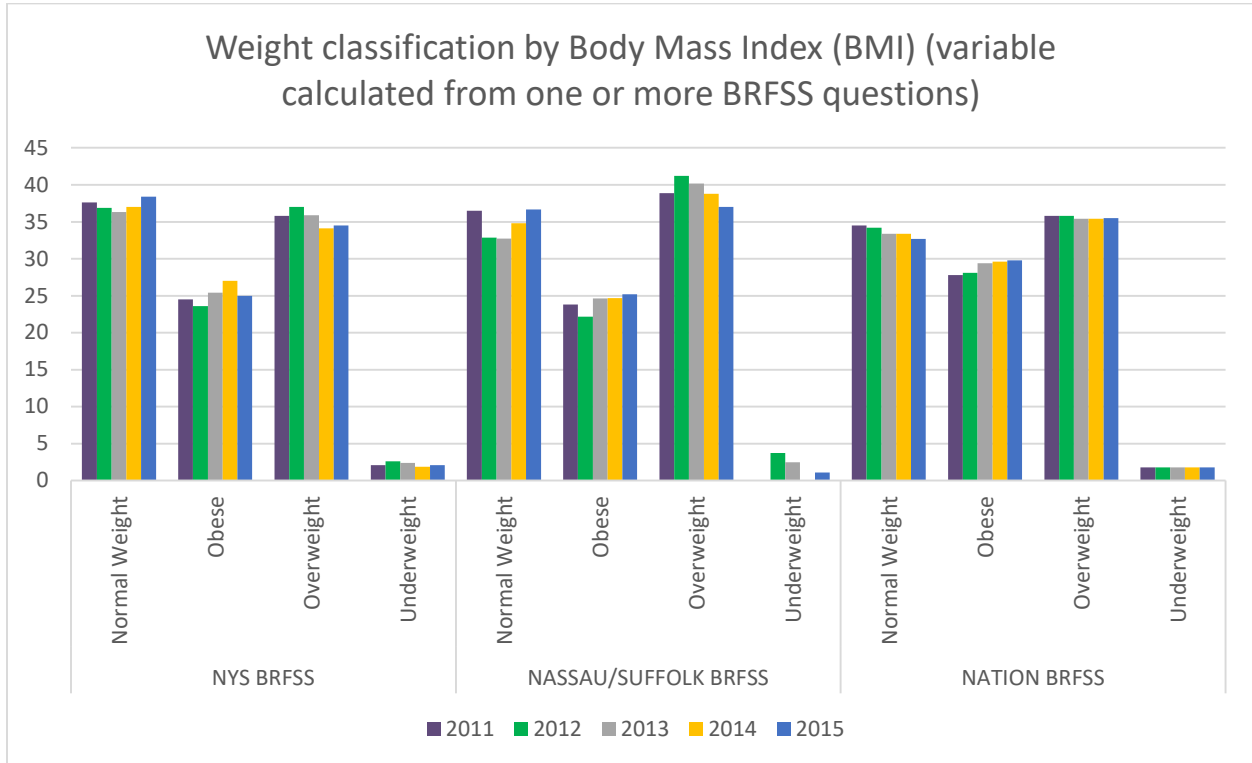3.4% — Unknown if chronic

(Y-axis: 0.0% to 100.0%)

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS), run by the CDC, is the largest continually conducted survey system in the world. It focuses on collecting behavioral health risk data through landline and cell phone calls. Each year the BRFSS asks survey respondents about their BMI. This survey can be used to compare New York State to Long Island (Nassau/Suffolk) and the nation as a whole over multiple years.

Year to year in America the percentage of individuals who are underweight, normal weight, overweight, and obese varies, *according to Graph 5*. The Long Island region had an overall lower average percentage

of those who are overweight, but had an overall higher average of those who are obese between 2011 and 2015 when compared to New York State or the nation. The percentage of overweight individuals on Long Island steadily decreased from 2012 to 2015. However, the percentage of individuals with obesity increased during the same time frame. Inspecting more recent BRFSS years once they become available will determine whether these trends have continued.
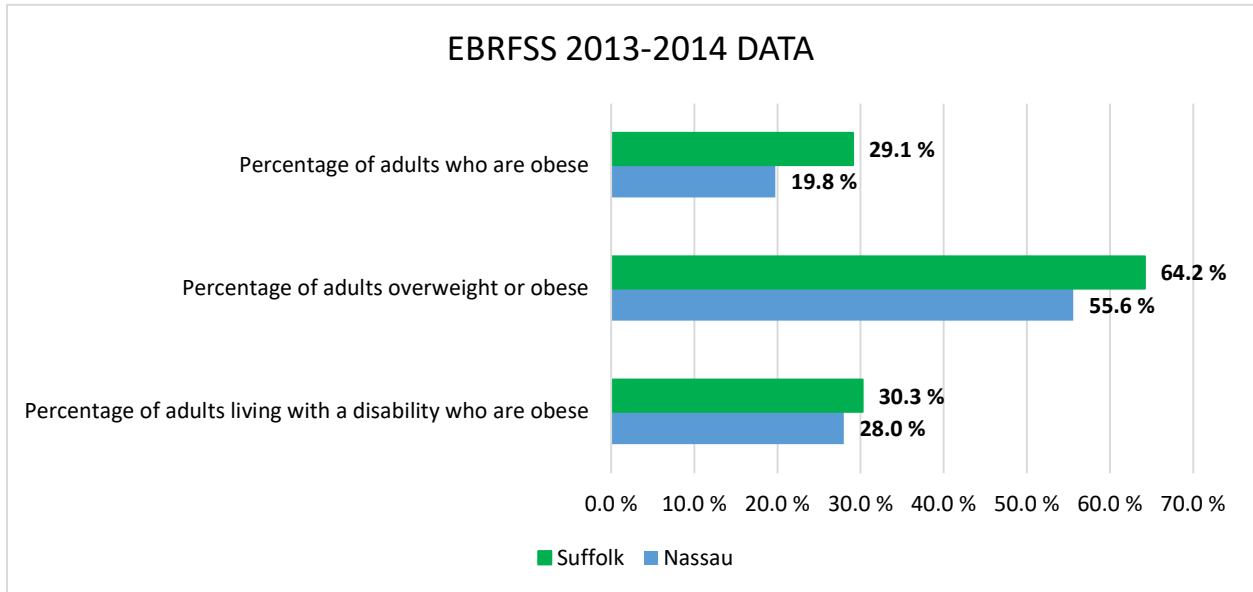
Graph 5

Weight classification by Body Mass Index (BMI) (variable calculated from one or more BRFSS questions)

	BMI Range
Underweight	12.0-18.4
Normal Weight	18.5-24.9
Overweight	25.0-29.9
Obese	30.0-99.8

Expanded Behavioral Risk Factor Surveillance System

The Expanded Behavioral Risk Factor Surveillance System (eBRFSS), an expansion of the national BRFSS survey, collects county-level information specific to New York. *Graph 6* uses 2013-2014 eBRFSS data to compare Nassau and Suffolk Counties on various overweight and obesity measures in order to paint a picture of how these issues are affecting Long Island specifically. Suffolk County has higher percentages of adults who are obese, adults who are overweight or obese, and adults who are obese and living with

a disability when compared to Nassau County. Adults with disabilities have 57% higher rates of obesity than adults without disabilities, according to the 2008 BRFSS.[6]

Graph 6

EBRFSS 2013-2014 DATA

Category	Suffolk	Nassau
Percentage of adults who are obese	29.1 %	19.8 %
Percentage of adults overweight or obese	64.2 %	55.6 %
Percentage of adults living with a disability who are obese	30.3 %	28.0 %

0.0 % 10.0 % 20.0 % 30.0 % 40.0 % 50.0 % 60.0 % 70.0 %

■ Suffolk ■ Nassau

Long Island and Eastern Queens Community Health Assessment Survey

To gain insight at the zip code level of Long Island, the Long Island Health Collaborative used their own Community Health Assessment Survey. In addition to collecting basic demographic data, the survey asks six main questions related to individual-perceived and community-perceived information regarding access and barriers to care, major health concerns, education and screenings, and programs/services needed. This survey is continually distributed and collected by Collaborative partners across the region with more than 12,000 surveys collected to date. Long Island community residents over the age of 18 are invited to complete the survey through this link https://www.surveymonkey.com/r/CMLICHAS.

Within the six questions, respondents have a variety of answer choices, including choices about what is most needed to improve the health of their communities. For this report, we analyzed data from 2017 and 2018. The analysis was conducted by DataGen, a division of the Healthcare Association of New York State, and mapped (*Map 1*). This map shows the percentage of respondents who believe weight loss programs are most needed in their community, above all other answer choices. Zip codes with less than five (5) responses were suppressed. The zip codes in yellow and orange are where weight loss programs are reportedly most needed, according to those who live in that community. The highest need zip codes have been labeled.

Map 1

Percent of Respondents that Weight Loss Programs are what is Most Needed to Improve the Health of Their Community
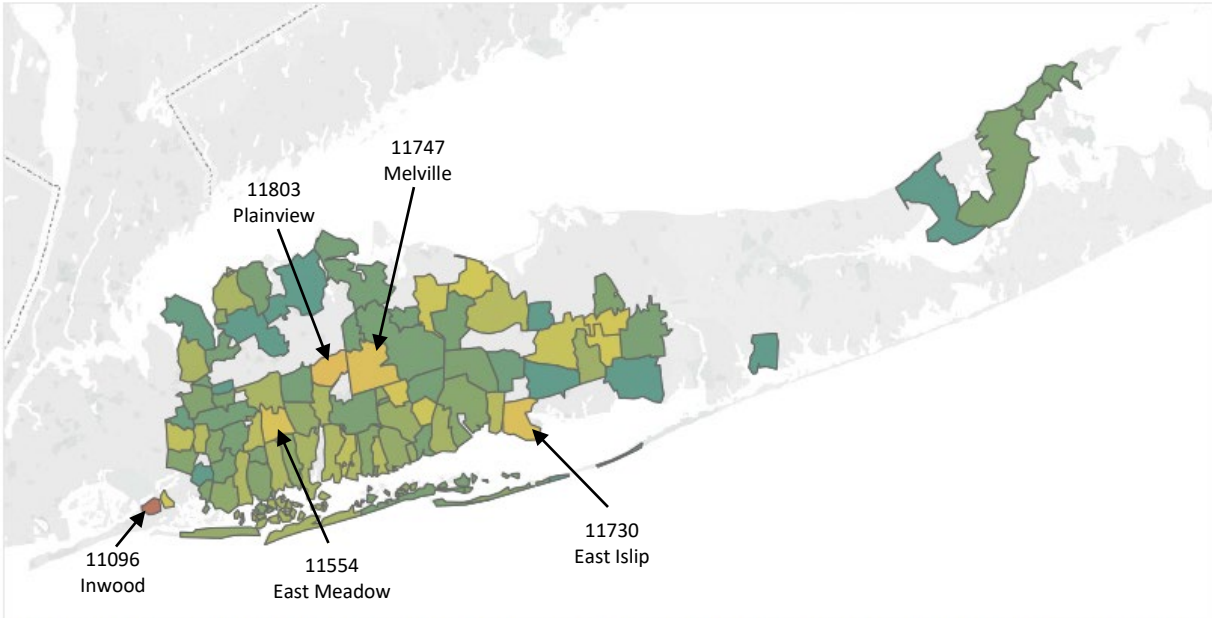
The map is based on longitude and latitude. The color shows the % of respondents that believe weight loss programs are what is most needed to improve the health of their community, for each Zip Code. Zip Codes with less than 5 total responses are not shown on the map.

Percent of Responses

0.00   80.00

Wellness Portal

Also analyzed were results from the Long Island Health Collaborative's Wellness Survey and Wellness Portal, which capture data about nutritional habits and exercise habits of Long Island adults. The Wellness Survey is administered via paper both pre and post-program to individual attendees, and the results are recorded in the LIHC's online Wellness Portal. The results are used to determine the effectiveness of chronic disease self-management and wellness programs offered by local hospitals, CBOs, and other organizations. The portal was built by Collaborative partner Stony Brook University and meets all HIPAA requirements including the de-identification of data and results. This analysis included portal data from January 2015-November 2017. During this time frame, two hospitals in the region participated consistently enough to provide valid data on their wellness programs. The survey asks participants various health-related questions.

The Wellness Survey and Wellness Portal are available at no cost to organizations that provide chronic disease self-management programs. It is a useful evaluative tool which helps inform future

programming, resource allocation, program effectiveness, and grant applications. Participating organizations also receive an analysis of program results. For questions regarding the Long Island Health Collaborative's Wellness Survey and Portal, contact the staff of the LIHC.

The percentages of pre- vs. post-survey responses of "Always" or "Often" to the question of how often, in a typical week, do you think about what is a healthy BMI or weight to be healthy" are shown in *Graph 7*. The Suffolk County percentage of responses went up after participation within a local chronic disease/wellness program, however the Nassau county percentages dropped slightly.

Graph 7
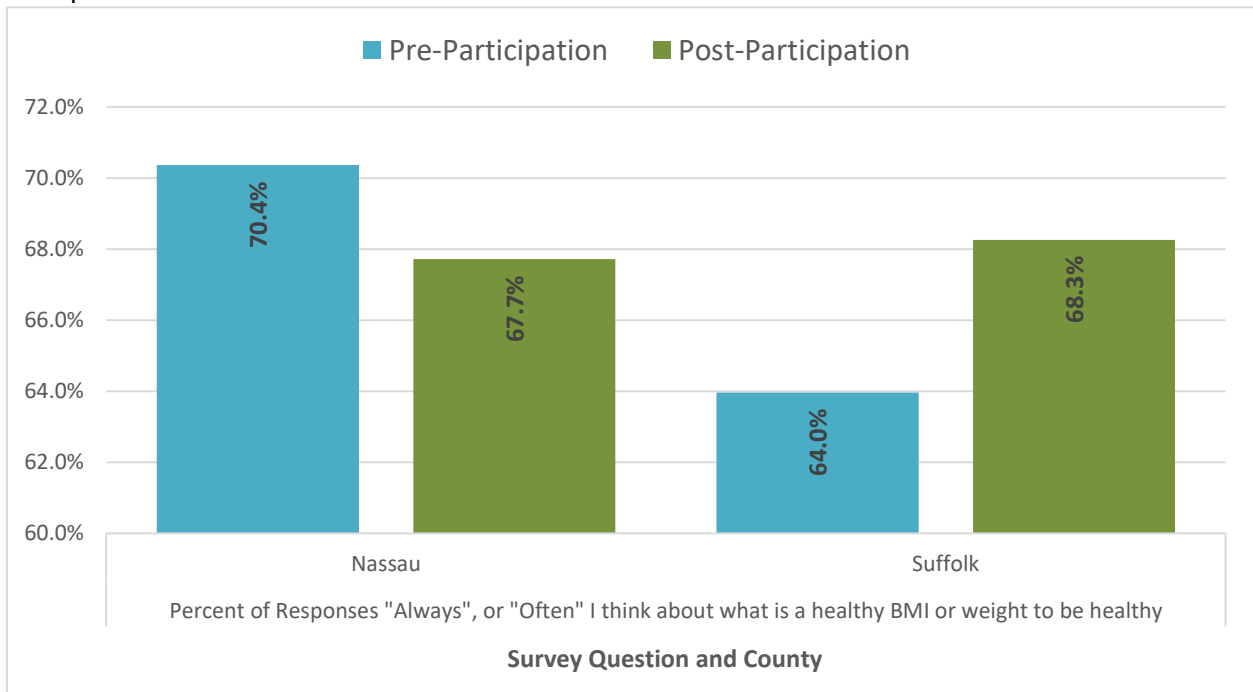
(Please Note: Graph 7 and Maps 2 and 3 present data for only two hospital-based chronic disease self-management programs. Therefore, this data is not representative of the Long Island population.)

Wellness Portal Zip Code Level Pre and Post Maps

The following pages include a breakdown of zip code-level responses to the question "I think about what is a healthy BMI or weight to be healthy," asked on the LIHC Wellness Survey. Each map shows the change from pre- to post-survey responses, with the darker blue representing a higher percentage of responses in that zip code answering "always" or "often." Zip codes with less than five responses have
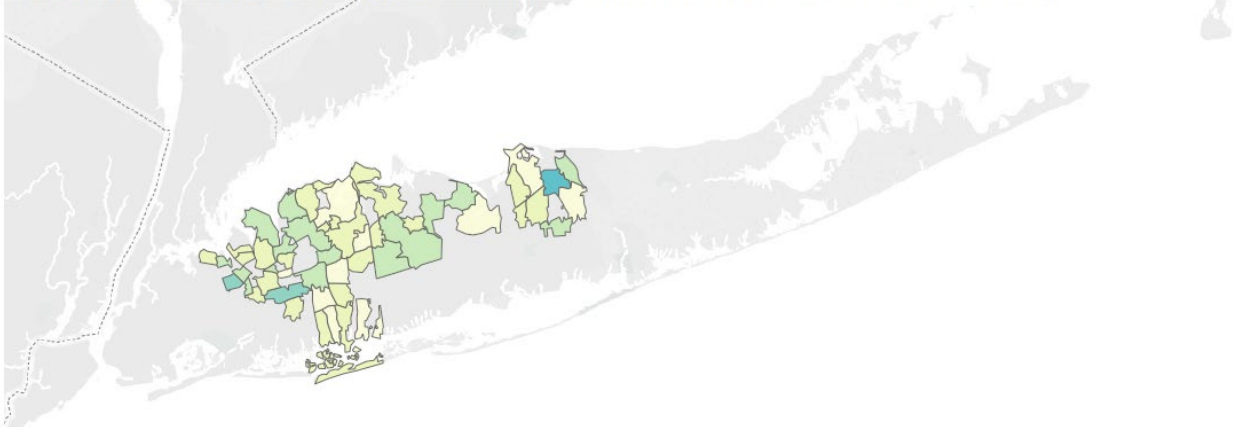
been suppressed. As the maps show, there is a change from pre to post at the zip code level, with more dark blue present across Long Island.
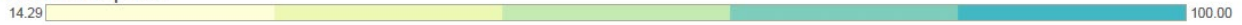
Pre-Participation "Always & Often" responses to: I think about what is a healthy BMI or weight to be healthy

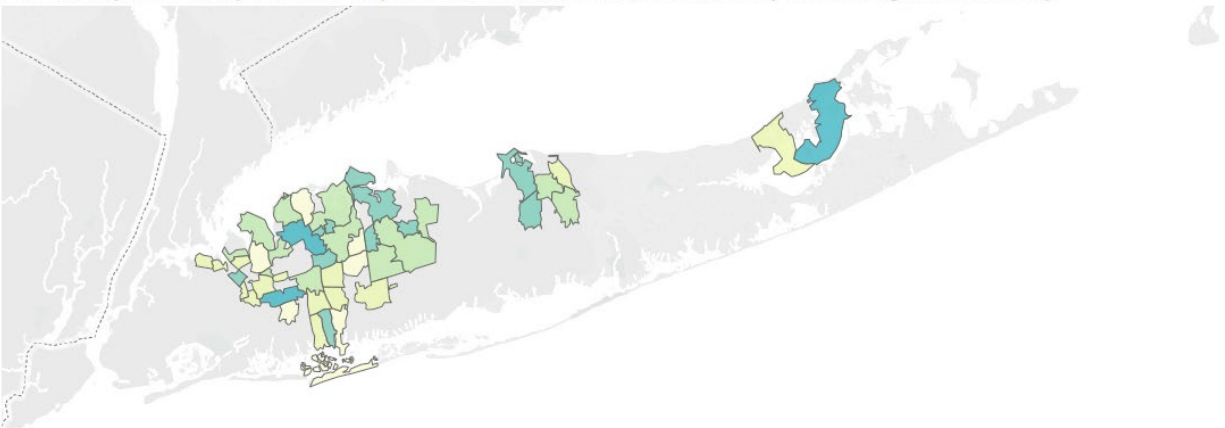Zip Codes with less than 5 respondents are not shown.

Percent of Responses
14.29 ——————————————————————————————— 100.00

Map 3

Post-Participation "Always & Often" responses to: I think about what is a healthy BMI or weight to be healthy

Zip Codes with less than 5 respondents are not shown.

Percent of Responses
14.29 ——————————————————————————————— 83.33

Conclusion

Because overweight and obesity have such a high prevalence among Long Islanders, data that delves locally into the trends of these diagnoses is important for healthcare providers. Targeted information allows providers to better design and locate programs and services that meet the health needs of the population they serve. Multiple intervention and prevention programs currently exist, but with zip code-based data, those current efforts can be improved and enhanced. Further, these localized data collection activities uncover pockets where health disparities exist, whether due to income, race, education or other factors. This collective approach is the first step toward improving the health of the entire Long Island population.

There is no single or simple solution to the obesity epidemic. It's a complex problem, and there must be a multifaceted approach. Policy makers, state and local organizations, business and community leaders, school, childcare and healthcare professionals, and individuals must work together to create an environment that supports a healthy lifestyle. There are several ways state and local organizations can create a supportive environment to promote healthy living behaviors that prevent overweight and obesity.

The New York State Prevention Agenda, which is the blueprint for state and local action to improve the health of New Yorkers, suggests several ways that state and local organizations can create a supportive environment to promote healthy living behaviors that prevent overweight and obesity. The Long Island Health Collaborative participates in several of these evidenced-based programs, polices, and practices, such as those listed below. To read about these and other suggested interventions, visit Prevention Agenda 2013-2018: New York State's Health Improvement Plan

- NYS Complete Streets Law
  Law presents an opportunity to expand programs and collaborate with bicyclists, pedestrians, people with disabilities and others to identify best practices and designs for transportation facilities. Website includes resources for planning, funding, and design.

- Promoting Nutrition Standards For Healthy Food and Beverage Procurement
  These fact sheets identify actions and resources to help worksites, municipal agencies, child care centers, groups homes, community-based organizations, and other institutions adopt improved nutrition standards through food procurement, advocacy, and other strategies.

- Sugar-Sweetened Beverages Playbook
  This is an interactive and engaging resource for advocates and policy makers who want to address the availability of sugary beverages to children in their communities.

Sources:

[1] https://www.cdc.gov/obesity/data/adult.html

[2] https://www.cdc.gov/obesity/adult/defining.html

[3] https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html

[4] http://www.who.int/dietphysicalactivity/factsheet_adults/en/

[5] https://www.choosemyplate.gov/MyPlate

[6] https://www.cdc.gov/ncbddd/disabilityandhealth/documents/obesityFactsheet2010.pd

About the Authors

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. Work of the LIHC is concentrated in the following areas:

- Convening diverse partners
- Engaging in primary and secondary data collection and analyses
- Conducting consumer and provider-facing public information/awareness campaigns
- Supporting adoption of policies related to healthier living
- Promoting chronic disease self-care
- Providing a free web-based walking initiative for use by the public and organizations seeking a platform in which to engage patients/clients/employees in a walking program

About [DataGen](#)

For more than a decade, DataGen has been an essential partner to healthcare organizations across the country, illustrating the financial implications of payment policy changes and promoting a pragmatic view of how changes will affect revenue and profitability. DataGen provides data analytic support to hospitals, health systems, state hospital associations, and other healthcare groups across the nation as they strive to improve quality, outcomes, and financial performance. Drawing on specialized health policy and payment expertise, as well as in-depth understanding of the power of analytics to drive change, DataGen simplifies the complexities of healthcare payment change.