Community Needs Assessment

for New York State DSRIP Project Plan Application

Prepared for

Advocate Community Providers (ACP) / New York Community Preferred Providers

By

VERITÉ HEALTHCARE CONSULTING, LLC

December 15, 2014

Table of Contents[1]

[1] Parenthetical "Section" references in the table of contents and associated headings correspond to the "Components of a Community Needs Assessment" sections in "Guidance for Conducting Community Needs Assessment Required for DSRIP Planning Grants and Final Project Plan Applications" (the "Guidance document") June 6, 2014.

About Advocate Community Providers (ACP) / New York Community Preferred Providers

Advocate Community Providers (”ACP”) / New York Community Preferred Providers (“NYCPP”), is a physician-led emerging Performing Provider System (PPS) and a lead organization under the Delivery System Reform Incentive Payment (“DSRIP”) Program in New York State (“NYS”).

ACP brings a positive track record of leadership and accomplishments in similar endeavors with the goal of achieving the triple aim, and has been in the forefront of healthcare innovation and change in New York City (“NYC”) for over a decade.

The ACP target area includes New York, Kings, Queens, and Bronx counties.

ACP is strengthened by its partnership with other minority, community based medical practice groups that includes, among others:

- Balance IPA;
- Breukelen Community IPA;
- Chinese American IPA;
- Corinthian Medical IPA;
- Eastern Chinese American Physician IPA;
- Excelsior Medical IPA;
- Korean American Physician IPA; and
- Queens County IPA.

Collectively, these IPAs have amassed an impressive record of positive outcomes in the delivery of healthcare. They are experienced in the management of risk-based managed care programs, including programs for Medicaid members and Dual-eligible patients.

The membership of the IPAs includes physicians and specialists from diverse backgrounds including Asians, Hispanic/Latinos, and African-Americans, as well as other physicians throughout NYC and Long Island.

Each member brings on-the-ground knowledge of key communities and often performs the role of “cultural bridge” to the larger healthcare system.

A partial listing of accomplishments includes:

- the development of leading CMS-approved MSSP ACOs, such as the Asian American ACO, Balance ACO, and the Chinese Community ACO;
- partnerships with leading FQHCs; and
- the development of NYS-certified Medical Health Homes.

ACP has the proven ability to attract and organize providers and stakeholders throughout extensive portions of NYC. This is demonstrated by the broad range of effective and committed safety-net providers that have been assembled to serve the particular needs of Medicaid recipients.

ACP has representation from all of the provider segments that are critical to successful DSRIP implementation, including but not limited to: hospitals; OASAS, OMH and OPWDD affiliated organizations; certified patient centered health homes; urgent care centers; FQHCs; LTCs, nursing homes; home care agencies; diagnostic and treatment centers; pharmacies; laboratories; dialysis centers; managed care plans; housing organizations; and IPAs.

About Verité Healthcare Consulting

Verité Healthcare Consulting, LLC ("Verité") was founded in May 2006 and is located in Alexandria, Virginia. The firm serves as a national resource that helps health care providers conduct community health needs assessments and develop implementation strategies that address priority needs. Verité has conducted more than 40 needs assessments for hospitals, health systems, and provider and community partnerships in several states nationally since 2010.

The firm also helps hospitals, hospital associations, and policy makers with community benefit reporting, planning, program assessment, and policy and guidelines development. Verité is a recognized, national thought leader in community benefit and in the evolving expectations that tax-exempt healthcare organizations are required to meet.

The community needs assessment prepared for ACP was directed by the firm's President and managed by a Vice President, with an associate and research analyst supporting the work. The firm's senior staff holds graduate degrees in relevant fields.

More information on the firm and its qualifications can be found at www.veriteconsulting.com.

Verité Healthcare Consulting's work seeks to improve the health of communities and vulnerable people, and to strengthen the organizations that serve them.

Executive Summary

DSRIP Program and Needs Assessment Purpose

The Delivery System Reform Incentive Program is the primary means by which New York State is implementing its Medicaid Redesign Team Waiver Amendment. Its purpose is to restructure and transform the safety net care delivery system for Medicaid recipients, and to attain a 25 percent reduction in avoidable hospital use by the Medicaid population and uninsured individuals over a five year period. These delivery system changes -- and the health care savings, system performance, and health status improvements they aim to achieve – are intended to be lasting gains in quality, efficiency, and outcomes.

DSRIP is structured as an incentive payment program in which networks of providers, called Performing Provider Systems (PPS), work together in a coordinated fashion to implement projects that effect system transformation, achieve clinical improvements, and address population-level health goals in part through prevention activities. The state of New York has allocated $6.42 billion for DSRIP, including for incentive payments based on PPS performance.[2]

The purpose of the community needs assessment (CNA) is to analyze and document priority health and health service challenges for the Medicaid and uninsured population in the community, to inform DSRIP project selection and design. The Advocate Community Providers CNA documents the demographics and health needs of the population to be served, and the health care and community-based service resources currently available in the service area. It presents and analyzes a wide range of demographic, health and health care delivery system indicators, including but not limited to Domain metrics, as well as information from key informant interviews, Medicaid focus groups, and a survey of health care, behavioral health, and social services providers.

Community Served

This assessment covers the geographic areas and population served by the ACP emerging PPS. This community definition includes 164 zip codes in the four New York City counties (boroughs) of Bronx, Kings (Brooklyn), New York (Manhattan), and Queens. The total estimated population of these communities was 7,730,847, distributed among the boroughs as in **Exhibit 1** below. The boroughs are composed of 38 zip code-based neighborhoods that are useful units of sub-county data analysis.[3]

---

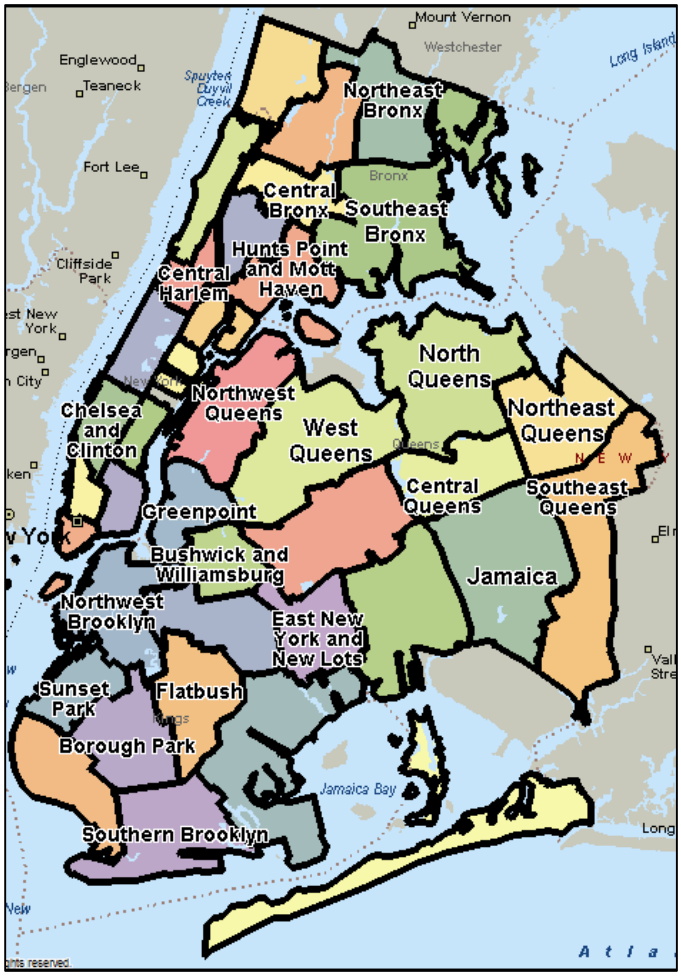
[2] New York State Department of Health, DSRIP program, accessed at www.health.ny.gov/health_care/medicaid/redesign/delivery_system_reform_incentive_payment_program.htm.
[3] New York State Department of Health, "ZIP Code Definitions of New York City Neighborhoods." See http://www.health.ny.gov/statistics/cancer/registry/appendix/neighborhoods.htm.

Exhibit 1: Population by Borough, 2008-2012

Borough	Population
Bronx	1,386,364
Brooklyn	2,512,740
Manhattan	1,596,735
Queens	2,235,008
Total	**7,730,847**

Note: This assessment uses the 2008-2012 estimates for population to be consistent with population estimates used for smaller areas and sub-populations, for which one-year estimates would be less reliable.
Source: U.S. Census Bureau, ACS 5 Year Estimates, 2008-2012

Exhibit 2: Community Map and Highlights



Community Highlights

- The population in the four boroughs was 7,730,847.
- Brooklyn was the most populous borough (2,512,740) and had the most growth since 2010, at 3.5 percent.
- The Bronx had highest percentage of youth aged 0-19 years (29.9%).
- Manhattan had the highest percentage of adults aged 65 and over (13.5%).
- Twenty-seven percent of community resident were Black. Twenty-nine percent were of Hispanic or Latino ethnicity.
- Forty percent of residents were foreign born, and 16 percent of households were limited English speaking.

Documentation of the Process and Methods Used (Section F)

Community health needs were identified by collecting and analyzing data and information from multiple quantitative and qualitative sources, including but not limited to those provided or recommended by the New York State DSRIP Guidance document and the DSRIP web pages.

Secondary and primary data of both a quantitative and qualitative nature were collected and analyzed. Incorporating multiple data sources, including stakeholder experiences and perspectives, is important both for assessing the level of agreement among different sources and to ensure a comprehensive representation of health and health services needs and issues. Confidence in conclusions about the most significant health needs in a community can be increased when multiple data sources convey similar points. It is also the case that issues not as well represented by statistical data (e.g., providers' and patients' experiences and opinions of the health care system) can be powerfully illustrated by qualitative information, and vice versa.

Statistical data for numerous indicators of health status, health behavior, health care utilization, population demographics were analyzed, including from local, state, and federal public agencies. The most recent data available were used whenever possible, and comparisons to benchmarks were made where available. Quantitative data, including demographics, were analyzed and are presented at the neighborhood level where possible, in addition to borough-level analyses. Data and descriptive summary information about health care and community resources also were collected for use in project planning.

Input from health care providers, community organization leaders, and Medicaid members was taken into account via key informant interviews, focus groups, and a survey. Details about these primary data collection activities and their analyses, are detailed in corresponding sections the body of the report. All data and information sources used are documented throughout the report and in the Sources section at the end.

Identification of the main health and health service challenges was achieved by reviewing data from all sources to identify issues that demonstrated the greatest (e.g. most deviation from a benchmark) and most widespread (e.g., affecting large populations and regions) need. Particular emphasis was placed on high-need geographic areas and populations as measured by socio-demographic indicators, and data specific to Medicaid members where available. The summary description of these challenges integrates key data points and finding from multiple sources.

Description of Stakeholder and Community Engagement Process

Stakeholder engagement is a critical part of the CNA process, as well as an ongoing activity for DSRIP project planning. Throughout the CNA process, stakeholders were engaged through focus groups, key informant interviews, and community/provider surveys.

Working in collaboration with its PPS partners, including its PAC and project care teams and input from the New York Academy of Medicine and Verité, ACP identified appropriate organizations (both healthcare providers and organizations providing wrap-around supports and resources) to provide insight on community health needs. Where appropriate, these organizations assisted with recruitment of survey, interview, and focus group respondents to ensure representation of diverse populations in terms of geography, age, gender, race/ethnicity, and community role.

Partner organizations and community leaders served as key informants, and identified others that should be approached. To ensure a diverse sample of key informants, ACP team members asked each person interviewed to suggest other people to interview, to get a full picture of community health needs and priorities.

In addition, ACP team members generated a list of community organizations based on its first-hand knowledge of the community and a review of publicly available sources (e.g., Community District Needs reports from local Community Boards), as well as from consultations with: service providers (including public health advocacy groups, community-based organizations (CBOs) and faith-based organizations (FBOs)); umbrella and membership organizations; and local community boards. The aim was achieving a broad cross-section of stakeholders, with a focus on those that had not previously worked with ACP.

Briefing elected officials constituted a critical step in the process of engaging stakeholders at the community level. Members of the ACP team and Steering Committee provided briefings to numerous elected officials on DSRIP implementation and the status of the ACP projects. These included: U.S. Senator Kirsten Gillibrand; U.S. Senator Robert Menendez; NYS Senators Jose Peralta, Adriano Espaillat, Ruth Hassell-Thompson, and Gustavo Rivera; NYS Assembly members Herman Farrell and Robert Rodriguez; and NYC Council members Ydanis Rodriguez and Peter Koo, among others.

ACP has been working with various federations of social service providers to access a wider range of stakeholders, as well as providers indigenous to the PPS service areas with strong interest in collaborating on DSRIP projects. The following organizations have played and will continue to play an important role in the engagement of stakeholders: Federation of Protestant and Welfare Agencies; Hispanic Federation; Asian American Federation; Black Agency Executives; New York Immigration Coalition; and Catholic Charities.

To ensure that data were captured from a diverse set of community members, community surveys were translated and small group discussions/focus groups were conducted and facilitated in the primary languages spoken in the respective communities. In total, ACP's CNA included 77 key informant interviews, 45 focus groups, five small group discussions with Medicaid recipients and community members, 1,281 community surveys and over 267 provider surveys.[4]

In addition, ACP has created a variety of other vehicles for ongoing community and stakeholder engagement for the life of the DSRIP project including a project website, targeted e-mails, community presentations, and discussions and collaborative events.

Once two sets of final drafts of the CNA are completed and made available for general consumption, ACP will initiate a broad dissemination strategy within each of the four counties (boroughs) that comprise the catchment area. Meetings will be held in local Community Boards, individual sites and umbrella groups, and federations of CBOs and FBOs, offices of elected officials, and hospitals, as well as in numerous other sites to reach the diversity of stakeholders in ACP's target communities.

Summary Description of Main Health and Health Service Challenges (Section C)

The CNA process identified eight priority health and health service challenges, or issues, across

[4] These figures include surveys and focus groups conducted by the New York Academy of Medicine for groups of emerging PPS networks in which ACP was a participant, separate from this CNA report.

the community. Some issues are fairly widespread, while others are of heightened concern mostly in particular boroughs or neighborhoods or among specific racial or ethnic groups.

The key informant interviews, Medicaid member focus groups, and provider survey generally identified similar issues across the community, while also revealing some geographic and population variations, mostly in care-seeking behavior and perceptions of the health care system. Quantitative secondary data depicted specific variations and disparities in disease incidence and mortality that are not reflected as specifically by the qualitative methods or the survey.

As described in the methodology section above and consistent with the Guidance document, the assessment of challenges took into account health status, health resources, and contributing causes of poor health, including but not limited to: behavioral, environmental, socioeconomic, access, coverage, and other human and community factors. These are discussed as appropriate in the needs summary and/or the body of the document.

The eight identified priority health and health service challenges are:

- Cardiovascular Diseases
- Diabetes
- Asthma
- Mental and Behavioral Health and Access to Care
- Sexually Transmitted Diseases including HIV/AIDS
- Insufficient Delivery System Coordination, Integration, and Navigation
- Health Literacy and Knowledge of the Health Care System
- Language and Cultural Barriers to Care

While there are both health conditions and health service delivery system issues on the list, at least one priority need has strong elements of both. Mental health was judged both to be a significant and highly prevalent health need, and to be an area for which prevention and treatment services were identified as being particularly under-resourced, low in supply, and generally not well-linked to the physical health care system.

The eight health and health service challenges identified are illustrated below with several supporting data points and findings for each, and references to data tables, charts, and narrative in the body of the report.

Cardiovascular Diseases

Cardiovascular diseases include coronary heart disease, myocardial infarction (heart attack), ischemic stroke, heart failure, and others.[5] Heart disease is the leading cause of death in the United States and many regions of the country, including for New York State and New York

[5] American Heart Association, What is Cardiovascular Disease? See http://www.heart.org/HEARTORG/Caregiver/Resources/WhatisCardiovascularDisease/What-is-Cardiovascular-Disease_UCM_301852_Article.jsp.

City.[6] Several forms of heart disease are preventable and have risk factors, such as high cholesterol and hypertension, which can be moderated by preventive health care and health behaviors such as diet, physical activity, and quitting smoking.

Key Findings

Evidence supporting cardiovascular diseases as a priority health need was present in multiple indicators from different sources, including:

- Heart disease was the number one leading cause of death for both males and females in all four boroughs and New York City as a whole. It was also the leading cause of premature death for males and the second leading cause for females in the Bronx. It was the second leading cause of premature death for both males and females in Brooklyn, Manhattan, and Queens. (**Exhibit 90** and **Exhibit 91**)

- Heart disease also was one of the top two leading causes of death for all racial ethnic groups: non-Hispanic Whites; non-Hispanic Blacks; Hispanics; Asians/Pacific Islanders; and American Indian/Alaska Natives. (**p. 99**)

- Overall mortality rates for diseases of the heart were higher than the New York State rate for the Bronx, Brooklyn, and Queens. Whites and Blacks had the highest mortality rates for heart diseases among all races in all four boroughs, with the rate for Blacks significantly higher than that for Whites in Manhattan. The heart disease mortality rate for Hispanics was higher than their state rate in the Bronx and Brooklyn, but lower in Manhattan and Queens. (**Appendix 5 - Exhibit 5D**)

- Risk-adjusted rates for hospital discharges for angina without procedure were higher in the Bronx, Brooklyn, and Queens than the New York State rate. Discharge rates for heart failure and the overall Prevention Quality Indicator (PQI) "All Circulatory Composite" were higher in the Bronx and Brooklyn than for the state. The discharge rate for hypertension was 50 percent higher in the Bronx than the state. (**Exhibit 49**)

- In Brooklyn and the Bronx, cardiovascular mortality and hospitalization rates are between 10 and 50 percent worse than for New York State for nearly all cardiovascular disease indicators. (**Exhibit 103**)

- The hospitalization rate for congestive heart failure in the Bronx is more than 50 percent higher than the New York State rate, and for adult hypertension is greater than 75 percent worse than the state. (**Exhibit 103**)

---

[6] Centers for Disease Control and Prevention. See http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm). New York State Department of Health. Leading Causes of Death. See https://www.health.ny.gov/statistics/leadingcauses_death/nys_by_year.htm).

- Hospitalization rates for heart disease were higher in the Bronx and Brooklyn than the state rate, about the same in Queens, and significantly lower in Manhattan. Blacks had the highest hospitalization rate of all races in each borough. (**Appendix 5 - Exhibit 5D**)

- The percentages of adults who are obese were higher in the Bronx and Brooklyn than in New York State, and compared to the New York State Prevention Agenda 2017 (NYS PA) target. The percentage of children and adolescents who are obese was higher in all four boroughs than both the New York State and the NYS PA 2017 target. The Bronx and Brooklyn also had the highest obesity rates according to self-reported height and weight. (**Appendix 5 - Exhibit 5C** and **Appendix 7 – Exhibit 7B**)

- According to the New York City Department of Health and Mental Hygiene's (NYC DOHMH) Community Health Survey, nearly 28 percent of New York City residents have ever been told they had high blood pressure, a figure that was nearly 33 percent in the Bronx and above 35 percent in seven neighborhoods across the four boroughs. (**Appendix 5 - Exhibit 5C**)

- The percentage of adults who smoke cigarettes was higher in the Bronx and Brooklyn than the state rate and the NYS PA 2017 target. There were significant variations in smoking prevalence by gender (men smoke at nearly twice the rate as women), race/ethnicity (Whites more than others), and neighborhood (with one neighborhood in each borough over 20 percent). (**Exhibit 114** and **p.124**)

- According to the County Health Rankings, the Bronx ranked 60th out of 62 counties in New York State for diet and exercise. (**Exhibit 115**)

- In key informant interviews, hypertension, cardiovascular disease, and obesity all were among the most frequently mentioned issues. Cardiovascular conditions and obesity among youth and adults were among the top health issues raised in the majority of the Medicaid focus groups, including with individuals representing the Bronx, Washington Heights/Inwood, and Brooklyn. (**p. 133**)

- Survey respondents ranked cardiovascular diseases and obesity and overweight the second and third highest-priority health issues. (**p. 142**)

Diabetes

Diabetes is the seventh leading cause of death and a highly prevalent disease nationally afflicting nearly 26 million people.[7] The predominant form of the disease, Type 2 diabetes, is largely

[7] Centers for Disease Control and Prevention. See http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm and http://www.cdc.gov/chronicdisease/resources/publications/aag/ddt.htm.

preventable and manageable through health behaviors including physical activity, diet and nutrition, and weight loss for obese individuals. Diabetes is a significant cause of hospitalization, and untreated or uncontrolled diabetes can result in disability-causing conditions such as blindness and leg and feet amputations, and kidney failure.

Key Findings

Evidence supporting diabetes as a priority health issue was found in secondary quantitative data on disease prevalence, hospitalization, and mortality, and was strongly present in all primary data collection. Specific data points include:

- Diabetes was among the top five leading causes of death in the Bronx, Brooklyn, and New York City overall. It was among the top three to five leading causes of premature death in all four boroughs (**Exhibit 91**). It also was among the top three leading causes of death for non-Hispanic Blacks since 2005. (**p. 99**)

- The Bronx had a significantly higher hospital discharge rate than the state for the "All Diabetes Composite" PQI, and for several specific diabetes PQIs, including short-term diabetes complications, lower-extremity amputation among patients with diabetes, and uncontrolled diabetes. The Bronx had diabetes hospitalization and short term complication rates greater than 75 percent worse than the New York State average. Brooklyn's rate was higher than the state for diabetes long term complications and for uncontrolled diabetes. (**Exhibit 49**)

- The Bronx and Brooklyn had sharply elevated rates of diabetes hospitalization (and mortality), with figures between 38 and 123 percent higher than the state average. The Bronx, Brooklyn, and Queens had somewhat higher percentages than the state of adults with physician-diagnosed diabetes. (**Exhibit 105** and **Appendix 5 - Exhibit 5D**)

- Blacks and Hispanics were disproportionately burdened with diabetes mortality and hospitalization (primary diagnosis) rates. Both groups had the highest rates among racial/ethnic groups in every borough, except that Hispanics in Queens had the lowest rate among racial/ethnic groups. Blacks had the highest diabetes mortality and hospitalization rates in all four boroughs. (**Exhibit 105**)

- According to the NYC DOHMH, there were wide disparities by borough in the percentage of residents who have ever been told they have diabetes. The percentage was in the Bronx was 15.2 percent and 11.8 percent in Brooklyn, compared to the city-wide average of 10.7 percent. There also were significant neighborhood-by-neighborhood variations within each borough, although the Bronx most uniformly reported higher percentages. (**Appendix 7 -Exhibit 7B**)

- Diabetes was the single most frequently mentioned health issue in key informant interviews, and was among the most prominent issues raised by the majority of Medicaid

member focus groups. Diabetes was seen as a critical health issue in all four boroughs of the community. (**p. 133**)

- Both physician and non-physician respondents to the provider survey ranked diabetes the highest–priority health issue, with obesity and overweight ranked third overall and second among physicians. (**p. 142**)

Asthma

Asthma is a chronic respiratory disease that frequently starts in children, but affects all ages. It causes shortness of breath and other symptoms due to inflammation and constriction of air passages in the lungs. Asthma is sensitive to air quality, including dust, pollen, mold, and outdoor air pollution. Knowledge about and management and abatement of asthma "triggers" both indoors and outdoors, preventive care, and timely treatment can minimize the impacts and risks of the condition.

Key Findings

Evidence supporting asthma as a priority health issue was found in multiple quantitative and qualitative data sources. Specific data points include:

- According to New York State Department of Health (NYSDOH), the Bronx, Brooklyn, and Manhattan all had rates of hospitalization for asthma overall and for youth up to age 17 worse than the state. Rates in the Bronx were approximately three times the state averages. Asthma hospitalization rates among youth were highest in every borough for Blacks and Hispanics. (**Exhibit 101**)

- The PQI discharge rate for asthma in younger adults was above the state average in the Bronx and Manhattan. The "All Respiratory Composite" discharge rate was 42 percent higher in the Bronx than for the state. The rate for chronic obstructive pulmonary disease or asthma in older adults was 38 percent higher in the Bronx than for the state. (**Appendix 4 - Exhibit 4A**)

- Hospital emergency department visit rates for asthma were higher in all hour boroughs than the NYS PA 2017 target, and higher in the Bronx, Brooklyn, and Manhattan than for New York State. The Bronx exhibited rates more than three times the state averages, for all ages and for those aged 0-4 years. (**Appendix 7 - Exhibit 7B**)

- CLRD was in the top five leading causes of death in both Manhattan and Queens, and among the top five leading causes of premature death in the Bronx and in Manhattan. (**Exhibit 90** and **Exhibit 91**)

- The Bronx and Brooklyn had worse chronic lower respiratory disease (CLRD) hospitalization rates than the state, although CLRD mortality rates in all four boroughs were lower than the state. The hospitalization rate in the Bronx was more than twice the state rate. CLRD includes asthma. (**Exhibit 100**)

- In the NYC DOHMH Community Health Survey, greater than 18 percent of Bronx respondents reported ever having been told they had asthma, compared to 12.5 percent for New York City. A total of 11 neighborhoods across the four boroughs reported levels of between 15 to almost 21 percent. (**Appendix 5 - Exhibit 5C**)

- Asthma was raised as a high priority issue as frequently as diabetes and cardiovascular diseases in key informant interviews. Half of interview participants who mentioned asthma made a point of focusing on childhood asthma. Asthma also was mentioned as a top issue in the majority of the Medicaid member focus groups, including those covering Washington Heights/Inwood, Bronx, and East and Central Harlem. (**p. 133**)

- In the provider survey, pulmonary and respiratory diseases were the fourth-ranked health issue by both physician and non-physician respondents. Physician respondents ranked environmental quality as the sixth most important contributing factor to health. (**p. 142**)

Mental and Behavioral Health and Access to Care

Poor mental health, including depression, anxiety, schizophrenia, and other conditions, causes suffering for both those afflicted and their families, co-workers, and others around them. It poses challenges to the ability to manage one's life, and frequently contributes to, exacerbates, or postpones treatment for physical health problems. Mental health needs often co-occur with substance abuse and addiction. Access to mental health services is a vital part of the health service system.

Key Findings

Evidence supporting mental and behavioral health and access to care as a priority health issue was found in multiple quantitative and qualitative data sources. Specific data points include:

- According to the NYC DOHMH Community Health Survey, residents of the Bronx (7.1%) and Brooklyn (6.1%) reported having "serious psychological distress" (a composite measure addressing symptoms of anxiety, depression, and other emotional issues) at the highest levels of the four boroughs. The citywide average was 5.5 percent. (**Exhibit 108**)

- According to the Community Health Survey, Hispanics reported serious psychological distress at approximately twice the rate (8.4%) as other racial and ethnic groups. But, according to the New York State Office of Mental Health, Hispanics received mental health services at lower rates than non-Hispanics. (**p. 118** and **Exhibit 109**)

- According to the Medicaid managed care program Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey, nearly 19 percent of New York City respondents reported being depressed, and 11.6 percent reported having "emotional problems or mental illness." (**p. 118**)

- The inpatient psychiatric average daily census per 100,000 population for adults was higher than the New York State average in all four boroughs, with the Bronx and Manhattan approximately 40 percent higher than the state. (**Exhibit 20**)

- Approximately 20 percent of adults and 13 percent of children in a general hospital for a psychiatric diagnosis were readmitted within 30 days of discharge in the Bronx and Manhattan. Queens had a somewhat higher percentage readmitted for both adults (24.5%) and children (13.9%), while Brooklyn had a slightly lower readmission percentage for children (9.6%). (**Exhibit 93**)

- Nearly 22 percent of state mental health clients across all program categories in the Bronx and Manhattan had both a mental illness and chemical abuse (MICA) problems in 2013. The percentages are somewhat lower in Brooklyn (17.1%) and significantly lower in Queens (12.9%). (**Exhibit 24**)

- Between 43 and 75 percent New York State Office of Mental Health (NYS OHM) program clients also have a chronic medical condition, with those in Manhattan (74.5 percent) much higher than the state average of just over 50 percent. (**Exhibit 110**)

- In the NYC DOHMH Community Health Survey, self-reported binge drinking was between 10 and 75 percent worse than the New York City average in all neighborhoods of Manhattan except for the Upper West Side and Washington Heights/Inwood. (**Appendix 5 – Exhibit 5B**)

- In key informant interviews, mental health issues ranked equally with cardiovascular diseases and asthma. Mental health was discussed in several forms, including depression and anxiety, domestic violence, schizophrenia, and other conditions and behaviors. The issue was frequently linked with substance abuse, which on its own ranked fairly high among all issues. (**p. 133**)

- Concerns about the availability, accessibility, and level of funding for mental health services were in the top one-third of health service challenges raised by interview participants. Key informants shared limitations in provider supply, reimbursement, available medications, and limits on the number of managed care visits for mental and behavioral health services. (**p. 137**)

- Mental health services also were believed by many interview participants to be poorly connected to physical health care providers and provider institutions, making continuity of care and maintenance of outcomes difficult. It also was observed that uncontrolled

mental health needs decrease the ability of an individual to take care of their physical health and to engage in care-seeking. (**p. 134, 137**)

- Stigma associated with mental health, including among many recent immigrants who may not have a culture of thinking or talking about their own mental health and wellness, was seen as a continuing barrier in interviews and Medicaid member focus groups. (**p. 134**)

- In the survey, behavioral and mental health was the fifth-ranked health issue overall, and third among non-physician respondents. The supply of behavioral health services was perceived as the biggest gap in available health care, behavioral health, and social services. (**pp. 142, 145, 146**)

- Mental health advocacy and education was ranked by survey respondents as the top community-based "resource" that can assist in addressing identified health priorities. And, when asked to rank a number of proposed initiatives and actions that would have the greatest impact on improving care and reducing avoidable hospital admissions, respondents placed "expansion of mental and behavioral health services" fourth, behind "integration of primary care and behavioral health services." (**p. 148**)

- The focus groups raised mental health in much the same way as interview participants. Depression and mood disorders were discussed, including a perception that they are afflicting younger people more than in the past. Isolation among elderly individuals was seen as contributing to mental health problems by one group, and another, of senior day care participants, repeatedly stressed the importance of organized social supports and interaction to their overall health. The same group also said the mental health is not openly discussed. Two groups specifically mentioned a need for more mental health services. (**pp. 133-34, 137, 139**)

Sexually Transmitted Diseases including HIV/AIDS

Sexually transmitted diseases can be a significant community and public health issue due to low rates of diagnosis, significant health consequences, potentially high care costs, and their communicable nature. Reducing the incidence of sexually transmitted diseases requires attention to a number of factors, including health education, preventive health behaviors, social supports, and accessible health care and public health services.

Key Findings

Evidence supporting sexually transmitted diseases including HIV/AIDS as a significant health need was found in public health data regarding prevalence and mortality rates. HIV/AIDS also exhibited large disparities by race/ethnicity, sex and borough. Supporting data include:

- In 2012, the Bronx, Brooklyn, and Manhattan reported AIDS mortality rates from twice to more than four times as high as the state average. AIDS was the fourth leading cause

of premature death among males and females in the Bronx, and among males in Manhattan. (**Exhibit 107** and **Exhibit 91**)

- HIV and AIDS case rates were extremely high in the Bronx, Brooklyn, and Manhattan in 2012. The prevalence rates of those living with HIV or AIDS in the Bronx, Brooklyn, and Manhattan were nearly twice to more than four times greater than the state average. (**Exhibit 106**)
- Blacks and Hispanics had much higher HIV and AIDS prevalence rates than Whites, but nearly all racial and ethnic groups in the Bronx, Brooklyn, and Manhattan had significantly higher rates than their respective groups at the state level. The rates of men living with HIV and AIDS are two to three times the rates for women. The rate for women in the Bronx is nearly three and one-half times that at the state level. (**Exhibit 106** and **Exhibit 107**)
- The chlamydia incidence rate in all four boroughs compared unfavorably to New York State, except among females in Queens. Rates in the Bronx were more than 75 percent worse than the state average, while rates for different age groups among males and females in Brooklyn and Manhattan were typically between 10 and 75 percent worse than the state rates. (**Exhibit 107**)
- The Bronx, Brooklyn, and Manhattan compared unfavorably to New York State for case rates of gonorrhea and syphilis, with rates in some cases two to three times the state average. (**Exhibit 107**)

Insufficient Delivery System Coordination, Integration, and Navigation

Individuals, including Medicaid members, frequently have multiple health needs requiring services from a number of different providers. These include primary care and specialist physicians, clinics and community health centers, hospitals for diagnostic, emergency or inpatient care, pharmacists, mental health providers, social services, and more. The ability of and degree to which different service providers share information about patients' health conditions and treatments, coordinate care, and even integrate services has significant implications for health care costs, quality, and outcomes. It also affects patients' ability to navigate the health care system and their experience of the system.

Key Findings

Evidence supporting insufficient delivery system coordination and integration was prevalent across the community, and was found in multiple indicators from different sources, including:

- Problems with care coordination, management, and navigation were among the top three system-related issues cited in key informant interviews with providers of physical health, mental health, and social services. The issue was discussed in many ways, including:
    - incomplete referrals, inconsistent inter-provider communication, and failure to receive reports from other providers;
    - a lack of time, staff, and reimbursement in some care delivery settings for clinicians or other professionals to engage in regular care management activities;

- issues related to managed care plans, such as: variations among plans in the composition of provider networks and member assignment to providers, differences in reporting systems for quality metrics, Medicaid drug formulary limitations, and patients' understanding of plan options and open enrollment periods;
- health information technology (electronic medical record) incompatibilities across provider types and institutions; and
- incomplete knowledge on the part of providers about available services outside of their specialty (e.g. between mental health and primary care). (**p. 135**)

- Interview participants most frequently called for improvements to care coordination, management, and transitions as the highest-priority delivery system change. Some specifically called for expanded use of Health Homes, patient-centered medical homes, and Federally Qualified Health Centers as "integrated primary care hubs" to improve care coordination. (**p. 138**)

- Provider survey respondents ranked delivery system integration and care coordination among health care providers – and between health care and other services (e.g. mental health, social services) – as the second highest priority delivery system issue overall. Among non-physician survey respondents, it was the top issue. (**p. 144**)

- Similarly, survey respondents ranked "system integration and care coordination" as the second "biggest gap" in available services for Medicaid recipients. (**p. 145**)

- The rates of Potentially Preventable Emergency Room Visits (PPVs) when Medicaid was the payer were substantially (26% to 74%) greater in each borough compared to the average for all payers, including private insurance, Medicare, and self-pay. At the state level, the PPV rate for Medicaid was 54 percent higher (**Exhibit 44**). In addition, Medicaid members in New York City reported "getting care quickly" and "getting needed care" at somewhat lower rates than for the state as a whole (**Exhibit 55**). While a number of factors including access to primary care can influence these rates, improved care coordination could help reduce unnecessary emergency room use and ensure needed care can be obtained on a timely basis.

- A lack of care coordination and management was seen by interview participants as a contributing factor to higher rates of emergency room visits, admissions for Ambulatory Care Sensitive Conditions, and potentially avoidable hospital readmissions. (**p. 135**)

- Participants in Medicaid member focus groups discussed a number of issues related to care coordination. Some reported difficulties navigating among hospitals, clinics, primary care doctors, and specialists. Others said that reminders to keep appointments or to take medications were helpful, but rarely done. There was a belief expressed that Medicaid should pay enough so that care navigation and related services outside of medical encounters can be offered to more people and more regularly. (**p. 135**)

Health Literacy and Knowledge of the Health Care System

Health literacy refers to one's knowledge of and ability to understand health information and issues, and to make informed decisions to improve one's own health.[8] Knowledge and understanding of the components of the health care system of doctors, clinics, hospitals, mental and social services providers, Medicaid managed care plans, and others - and how they work together - is essential for an individual to obtain the services they need. Health literacy and knowledge of the health care system are influenced to a degree by demographic factors, including educational attainment, and exacerbated by the complexity and fragmentation of the system.

Key Findings

Evidence for health literacy and knowledge of the health care system as priority need was present in the survey and interviews, and is supported by demographic characteristics of the populations in the high-need communities to be served.

- When asked to rate the relative priority of "contributing factors to health," survey respondents chose "awareness/knowledge about available health services" and "health literacy" as their top two choices. Both physician and non-physician respondents rated both among their top selections. (**p. 143**)

- In interviews, health literacy, health education, and general educational levels among Medicaid and uninsured individuals was in the top cluster of frequently-cited health system issues. This was discussed both in terms of knowledge about health and healthy behaviors, and with respect to understanding how to effectively navigate and use the system to obtain needed care. (**pp. 134, 138**)

- Considering educational attainment as one proxy for health literacy and knowledge of the health system, the percentage of residents without a high school degree or equivalent is highest in the Bronx (30.6%) and lowest in Manhattan (15.1%). As with other social and demographic indicators, there is significant neighborhood-level variation. Neighborhoods with the highest percentages of residents with no high school degree are:
    - Bronx: Hunts Point and Motts Haven (44.4%), High Bridge and Morrisania (39.1%), and Central Bronx (38.7%);
    - Brooklyn: Sunset Park (45.7%) followed by Bushwick and Williamsburg (37.2%);
    - Manhattan: East Harlem (32.2%) and Washington Heights/Inwood (30.9%); and
    - Queens: West Queens (29.5%). (**Exhibit 74**)

- Residents of Hispanic ethnicity had the lowest educational attainment, ranging from 31 to 41 percent without a high school degree. Whites had the highest educational attainment

[8] Centers for Disease Control and Prevention, Learn about Health Literacy, accessed 2014 from http://www.cdc.gov/healthliteracy/learn/index.html.

overall, but in the Bronx the percentage of Whites without a high school diploma (28%) was higher than for Blacks and Asians. (**p. 87**)

- The community is composed of a high percentage of people who were born in countries other than the United States. Particularly for more recent immigrants, unfamiliarity with the organization of health care and related services has the potential to create barriers to care. Fifty percent of Queens residents were foreign born, according to the U.S. Census Bureau. That figure ranges from 30 to 40 percent for the other boroughs, with significant differences among neighborhoods. Flatbush in Brooklyn was 50 percent foreign born, for instance, while the Greenpoint community was only 26 percent foreign born. (**Exhibit 64**)

- Across the four boroughs, 16 percent of households are "limited English speaking," meaning that no one age 14 or over speaks only English or speaks English "very well." The figure is lowest for Manhattan (10.4%) and highest in Queens (19.1%), but there is significant neighborhood-level variation: (**Exhibit 66**)
    - Bronx, the highest proportions of limited English speaking households are in Hunts Point and Motts Haven (31.7%), High Bridge and Morrisania (24.4%), and Central Bronx (24%).
    - Brooklyn, Sunset Park (36.8%) and Southern Brooklyn (34.6%) are the highest.
    - Manhattan, the Washington Heights/Inwood neighborhood (23.8%) is the only one with a percentage of limited English speaking households higher than the citywide average.
    - Queens, West Queens (31.5%) and North Queens (27.6%) have the highest percentages of such households.

Language and Cultural Barriers to Care

Language and cultural barriers to care are important health issues when working to improve access to care. A person's or a community's beliefs and attitudes towards health and health care, including preventive medical care, mental health care, and large institutions such as hospitals, can shape how they interact with and understand the care delivery system. It can even affect whether they decide to seek care.

Key Findings:

Evidence supporting language and culture as potential barriers to care was present significantly in the survey and interviews, and is supported by demographic characteristics of the populations in the high-need communities to be served. Supporting evidence includes:

- Provider survey respondents ranked language and cultural barriers as one of the most important contributing factors to health. Physicians ranked it as the second highest priority contributing factor, while non-physicians ranked it fourth. (**Exhibit 120**)

- The provider survey also revealed that language and cultural issues were considered to be in the top six "biggest gaps" in health care behavioral and social services. (**Exhibit 122**)

- In Medicaid member focus groups, the language ability and cultural competency of health care providers was important, but it was not always perceived as a problem when visiting primary care providers. In communities with high percentages of people with similar backgrounds who speak the same (non-English) language, there was frequently a base of providers and support staff who have the appropriate skills. This was true in the Sunset Park area of Brooklyn, and in the Chinatown and Washington Heights/Inwood areas of Manhattan, for example. (**p. 135**)

- Medicaid members reported greater difficulty with language, cultural competency, and health system navigation when seeking hospital emergency department, diagnostic or inpatient care. This was reported to be the case particularly for Spanish speaking patients going to hospitals in Upper Manhattan. (**p. 135**)

- Culture came up as a significant barrier to care for some Asian American immigrants. Key stakeholders revealed that, especially for new immigrants, seeking care is not a top priority unless one is severely ill. There also were reports that Chinese doctors often keep their practices open longer hours and on weekends, and see patients on a walk-in basis, to accommodate the life demands and expectations of their patients. (**p. 135**)

- Across the four boroughs, 16 percent of households were "limited English speaking," meaning that no one age 14 or over speaks only English or speaks English "very well." The figure was lowest for Manhattan (10.4%) and highest in Queens (19.1%), but there was significant neighborhood-level variation, as detailed in the Health Literacy section above. (**Exhibit 66**)

- Brooklyn and Queens had higher percentages of foreign born residents than the other two boroughs, at 40 percent and 50 percent respectively. The boroughs with the highest percent of foreign born that are not U.S. Citizens are the Bronx (55%) and Manhattan (54%). As with the limited English speaking indicator, there was significant variation at the neighborhood level. (**Exhibit 64**)

- The diversity of the community and its cultures and sub-cultures is evident in the distribution of people from different racial and ethnic backgrounds, and nationalities within ethnicities. Latinos make up between 5.5 percent and 66.7 percent of the populations of individual neighborhoods in Manhattan, for example. Further, the U.S. Census estimates that 32 percent of Latino residents in the community are Puerto Rican, 13 percent are Mexican, and fully 53 percent are other Hispanic or Latino. The picture is similar for Asians, with 50 percent in the overall community being Chinese, 16 percent Asian Indian, and nearly 10 percent Korean, in addition to other nationalities. For both Latinos and Asians, there is wide variation in nationalities among boroughs. (**Exhibit 58**, **Exhibit 59**, and **Exhibit 60**)

Description of Health Care and Community Resources (Section A)

Health Care Resources (Section A.i.)

The community overall has a wide range of health care resources available to help meet the needs of the Medicaid and uninsured population living in the four boroughs. Many of those resources are identified and enumerated in this section, using comparative measures where possible to assess the relative supply and availability of specific services in different parts of the community.

A summary of these resources and notable or potential gaps in resources, as pertains to the health and health service priorities and proposed DSRIP projects, is in the "Summary of Assets and Resources to Help Address DSRIP Strategies and Projects" section that begins on page 148.

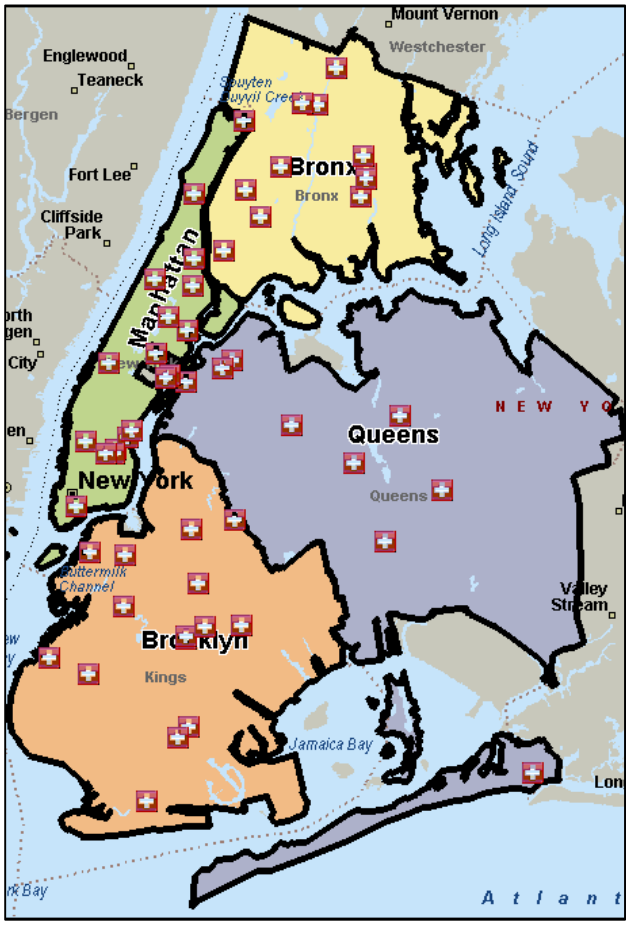
Hospitals

There are 45 acute care general hospitals in the four boroughs, including eight in the Bronx, 14 in Brooklyn, 14 in Manhattan, and nine in Queens. Additionally, there are 21 specialty hospitals in the four boroughs: five in the Bronx, two in Brooklyn, 12 in Manhattan, and two in Queens.[9] The geographic distribution of hospital facilities is depicted in **Exhibit 3**. The hospitals are individually listed by borough in **Appendix 1, Exhibit 1A**, mapped by acute care general hospitals and specialty hospitals in **Appendix 1, Exhibit 1C and Exhibit 1D**.

A table depicting the five acute care general hospitals in each borough providing emergency department (ED), inpatient, and primary care services to the greatest numbers of Medicaid members in 2013 is in **Appendix 1, Exhibit 1B**. Overall, the hospitals serving the greatest numbers of Medicaid members in each borough were: Montefiore Medical Center (Bronx), Maimonides Medical Center (Brooklyn), NewYork-Presbyterian Hospital (Manhattan), and Elmhurst Hospital Center (Queens).

[9] Sources: New York State Department of Health, NYS Health Profiles (http://profiles.health.ny.gov/hospital/county_or_region), CMS Official Hospital Compare Data (https://data.medicare.gov/Hospital-Compare/Hospital-General-Information/xubh-q36u), and primary research by Verité.

Exhibit 3: Locations of Hospitals in the Four Boroughs, 2014



Source: New York State Department of Health, Health Data NY accessed 2014, and Microsoft MapPoint 2010

Forty-six hospitals have emergency departments. There are 10 located in the Bronx, 15 in Brooklyn, 13 in Manhattan, and eight in Queens.[10] Queens appears to be lacking in the number of hospitals with emergency departments, and the eight seem to be clustered around central Queens. There are no emergency departments in Central, Northeast or Southeast Queens.

Eleven of the hospitals are run by the New York City Health and Hospital's Corporation (HHC).[11] The HHC also operates other types of health care facilities (**Exhibit 4**).

[10] New York State Department of Health, NYS Health Profiles. See http://profiles.health.ny.gov/hospital/county_or_region/

[11] New York City Health and Hospitals Corporation. See http://www.nyc.gov/html/hhc/html/patients/ForPatients-FindHealthcare.shtml.

Exhibit 4: Health and Hospitals Corporation Health Care Facilities, by Borough, 2014

Borough	Hospital	Community Health Center	Child Health Center	Nursing Home /Assisted Living Center
Bronx	3	4	3	0
Brooklyn	3	6	12	1
Manhattan	2	5	3	0
Queens	3	10	2	3
Total	**11**	**25**	**20**	**4**

Source: New York City Health and Hospitals Corporation, 2014

Assessment of Hospital Bed Capacity

To help assess the current supply of inpatient hospital beds in the community, Verité compared the current bed-to-population ratios in each borough and New York State to the current bed-to-population ratios of the U.S. The bed-to-population ratios for the boroughs were compared to the ratio for the U.S. urban population. The bed-to-population ratio for New York State was compared to the ratio of the U.S. as a whole, including total beds in both urban and rural areas.

The source of data used for hospital beds was Medicare's FY 2014 Impact File (final rule) for the Acute Inpatient Prospective Payment System. The source of population data for the boroughs was U.S. Census Bureau, ACS 5 Year Estimates, 2008-2012. The source of population data for New York State and the U.S. was 2010 Census from the U.S. Census Bureau.

The analysis suggests that, relative to the urban U.S. bed-to-population ratio, there is a modest undersupply of more than 600 beds (3.5 percent) across the four boroughs (**Exhibit 5**). The largest undersupply, of 2,250 beds, was in Queens, followed by Brooklyn with approximately 1,500. Manhattan had an oversupply of nearly 3,300 beds relative to the U.S. urban benchmark.

Exhibit 5: Hospital Beds per 1,000 Population, by Borough, Compared to U.S Benchmark

Borough / Region	Total Beds	Beds per 1,000 Population	"Target" Beds Based on U.S. Benchmark	Excess/(Deficit) Beds
Bronx	3,043	2.19	3,168	(125)
Brooklyn	4,230	1.68	5,742	(1,512)
Manhattan	6,916	4.33	3,649	3,267
Queens	2,857	1.28	5,107	(2,250)
Four Borough Total	17,046	2.20	17,666	(620)
New York State*	42,266	2.12	41,682	584
U.S. (urban only)	**569,590**	**2.29**	-	-

* New York State bed target is based on total (urban and rural) U.S. hospital beds of 654,886.
Source: Medicare FY 2014 Impact File, Acute Inpatient Prospective Payment System, and U.S. Census Bureau

Consideration of hospital bed oversupply or undersupply should take into account analyses and factors in addition to those above. These include:

- this analysis assumes that the bed-to-population ratio for all U.S. urban areas is a suitable benchmark or target;
- this analysis assesses bed capacity by borough, as well as community-wide. However, referral patterns of physicians and the hospital preferences of community residents may consider the community or New York City region as a whole – and Manhattan as a center for tertiary and quaternary care – with lesser importance placed on borough boundaries;
- population projections and trends in both sites of care (e.g., inpatient and outpatient) and length of stay;
- benefits from economies of scale and scope that may result from a concentration of beds in Manhattan; and
- building costs and other constraints that may exceed the benefit of relocating beds or facilities among boroughs.

Additionally, the Impact File used for this analysis identifies beds by Medicare Provider, rather than facility; accordingly, actual bed ratios for specific boroughs may vary slightly from this analysis.

Ambulatory Surgical Centers

According to the NYSDOH, there are approximately 38 ambulatory surgical center sites in the four boroughs. Five are located in the Bronx, 11 in Brooklyn, 15 in Manhattan, and seven in Queens.[12]

Urgent Care Centers

According to key informant interview accounts, there is a growing number of urgent care centers located throughout the four boroughs that offer weekend hours and walk-in availability for both primary care and specialty services. Interview participants who discussed urgent care centers stated that, despite drawbacks in terms of continuity of care, they may be valuable additions to the provider supply by filling "after hours" and weekend gaps between appointment-based primary care providers open during typical business hours and hospital emergency rooms (ERs). Some interview participants also noted that urgent care centers tend not to be located in neighborhoods with high concentrations of Medicaid members.

There is not a comprehensive, searchable database for urgent care centers in New York City, but the following describes two major urgent care providers serving the four boroughs.

CityMD currently operates 15 locations in Brooklyn, Manhattan, and Queens, and plans to open ten more, including one in the Bronx. Four locations are in Brooklyn, seven in Manhattan, and four in Queens. CityMD provides services that include: general injury/illness, women's health, pediatrics, vaccines, X-rays, laboratory, aftercare, and occupational medicine. CityMD accepts

[12] New York State Department of Health, Provider List. See http://www.health.ny.gov/regulations/hcra/provider.htm.

both Emblem HIP and DHI Medicaid managed care plans at all locations, and accepts all Medicaid plans at their Jackson Heights (Queens) location.[13]

Mount Sinai Hospital currently operates two urgent care centers, on the Upper West Side of Manhattan and the Brooklyn Heights section of Brooklyn, that provide a variety of services including: primary care, specialty care (from cardiology to urology), and lab and radiology. Like other urgent care centers, these are open evenings and weekends.[14]

Health Homes

A Medicaid Health Home is a comprehensive and integrated care management model for Medicaid enrollees with medical, behavioral, and long term care needs that are complex and that may require a higher volume of costly services.[15] NYSDOH has designated Health Homes in each of the four New York City boroughs that comprise the community.[16]

Exhibit 6 presents a summary of the numbers of Medicaid members enrolled in Health Homes in each borough as of August 2014. The largest number was in the Bronx, followed closely by Brooklyn. Manhattan and Queens had approximately one-half and one-fifth as many Medicaid members enrolled in Health Homes, respectively.

Exhibit 6: Health Homes Serving Medicaid Members, 2014

Member Borough	Number of Members Enrolled	Number of Health Homes with Enrolled Members
Bronx	13,597	10
Brooklyn	11,546	11
Manhattan	6,710	11
Queens	2,760	10

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Exhibit 7 below displays the names of the Health Homes in each borough that had any enrolled Medicaid members, in order from the largest to smaller number of enrollees. In the Bronx the top three Health Homes by numbers of enrollees had nearly 86 percent of all enrollees in the borough, and in Brooklyn the top three had nearly 83 percent. In Manhattan, the top two had 58 percent of enrollees, and in Queens one Health Home had 35 percent of the enrollees.

[13] CityMD. See http://www.citymd.com/urgent-care-locations.
[14] Mount Sinai Hospital. See http://www.mountsinai.org/patient-care/service-areas/urgent-care.
[15] New York State Department of Health, Medicaid Health Homes. See https://www.health.ny.gov/health_care/medicaid/program/medicaid_health_homes/.
[16] Salient NYS Medicaid DSRIP Dashboard System Version 1.0 – accessed October 2014

Exhibit 7: Health Homes and Numbers of Enrollees, by Borough

Borough and Health Home	Unique Members Enrolled
Bronx	**13,597**
Community Care Management Partners	4,702
Bronx Accountable Healthcare Network Health Home (BAHN)	4,361
Bronx Lebanon Hospital Center	2,583
Coordinated Behavioral Care, Inc. dba Pathways to Wellness	581
Community Health Care Network	501
New York City Health and Hospitals Corporation	302
Southwest Brooklyn Health Home dba Brooklyn Health Home	266
St. Luke's-Roosevelt Hospital Center - Mount Sinai Health Home	155
The New York and Presbyterian Hospital	79
Heritage Health Home Network	48
Brooklyn	**11,546**
Southwest Brooklyn Health Home dba Brooklyn Health Home	4,491
Coordinated Behavioral Care, Inc. dba Pathways to Wellness	2,899
Community Health Care Network	2,139
New York City Health and Hospitals Corporation	763
Community Care Management Partners	754
Bronx Lebanon Hospital Center	206
St. Luke's-Roosevelt Hospital Center - Mount Sinai Health Home	133
Bronx Accountable Healthcare Network Health Home (BAHN)	94
The New York and Presbyterian Hospital	20
Heritage Health Home Network	19
North Shore Long Island Jewish Health Home	16
Manhattan	**6,710**
Community Care Management Partners	2,809
Coordinated Behavioral Care, Inc. dba Pathways to Wellness	1,072
St. Luke's-Roosevelt Hospital Center - Mount Sinai Health Home	685
Community Health Care Network	487
New York City Health and Hospitals Corporation	371
Bronx Lebanon Hospital Center	325
Southwest Brooklyn Health Home dba Brooklyn Health Home	315
Bronx Accountable Healthcare Network Health Home (BAHN)	258
Heritage Health Home Network	221
The New York and Presbyterian Hospital	138
North Shore Long Island Jewish Health Home	23
Queens	**2,760**
North Shore Long Island Jewish Health Home	972
Community Care Management Partners	381
New York City Health and Hospitals Corporation	353
Coordinated Behavioral Care, Inc. dba Pathways to Wellness	346
Community Health Care Network	233
Southwest Brooklyn Health Home dba Brooklyn Health Home	233
Bronx Lebanon Hospital Center	77
Bronx Accountable Healthcare Network Health Home (BAHN)	66
St. Luke's-Roosevelt Hospital Center - Mount Sinai Health Home	54
The New York and Presbyterian Hospital	29

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0 – accessed October 2014

Federally Qualified Health Centers

There are currently 373 Federally Qualified Health Center (FQHC) sites in the four boroughs. There are 107 service delivery sites in the Bronx, 105 in Brooklyn, 87 in Manhattan, and 27 in Queens.

There are 367 Health Resources and Services Administration (HRSA) health center grant sites, of which 21 are designated "look-a-likes." These health centers are affiliated with an organization receiving at least one HRSA grants, including: community health, public housing, health care for the homeless and migrant health center.[17]

Exhibits 8 display the number of HRSA health center grants. This figure is greater than the number of site, because some sites have more than one grant.

Exhibit 8: HRSA Health Center Grants, by Grant Type and Borough

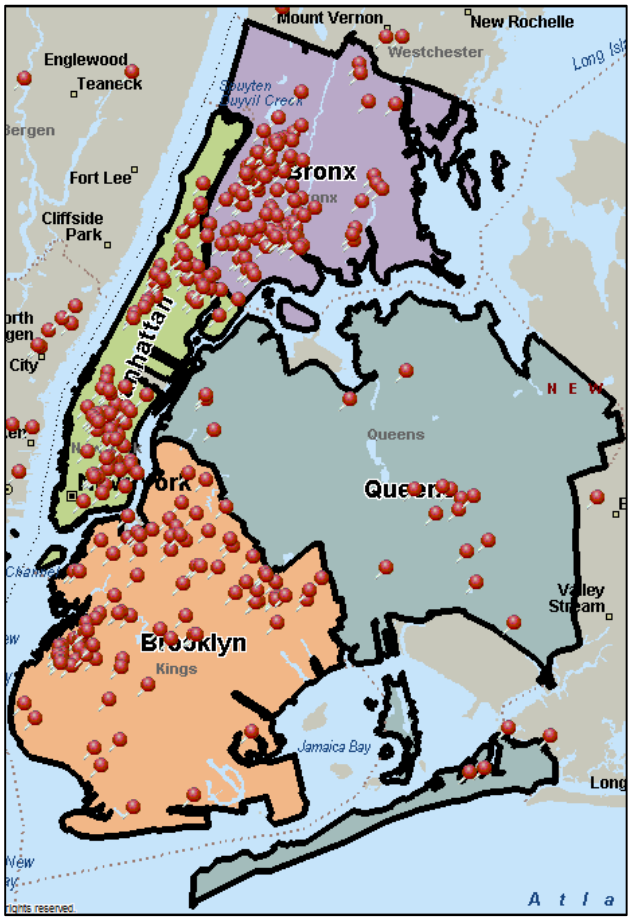
Borough	Community Health	Public Housing	Health Care for the Homeless	Migrant Health Centers
Bronx	101	11	29	0
Brooklyn	112	7	19	6
Manhattan	107	0	40	0
Queens	26	3	13	0
Total	**346**	**21**	**101**	**6**

Source: HRSA Data Warehouse Health Care Service Delivery and Look-Alike Sites Data, accessed 2014

[17] Health Resources and Services Administration, "Health Care Service Delivery and Look-Alike Sites"

The locations of FQHC care sites in the four boroughs are depicted below in **Exhibit 9**. There are heavy concentrations of HRSA-granted health center sites in high-need areas in the Bronx, Manhattan, and Brooklyn. Queens has relatively few sites.

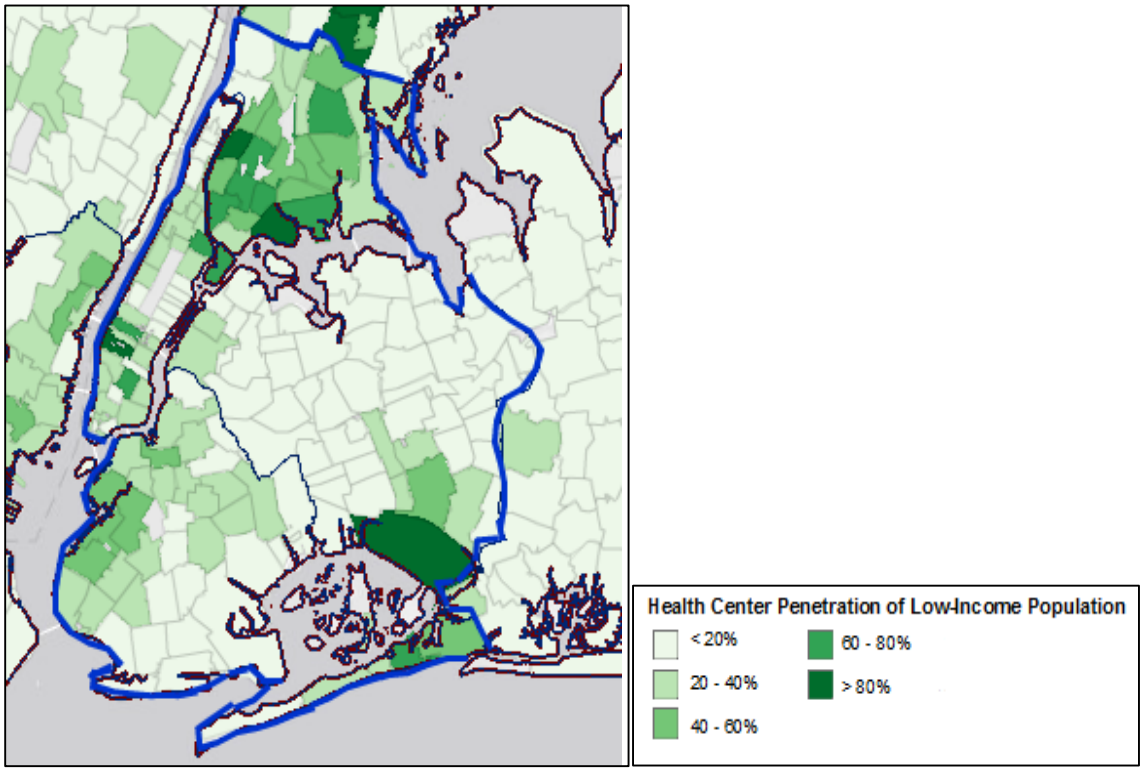
Exhibit 9: Locations of FQHCs and Look-A-Like Health Center Sites



Source: HRSA Data Warehouse Health Care Delivery Sites, accessed 2014, and Microsoft MapPoint 2010

Exhibit 10 displays health center "penetration" of the low-income population, expressed as a percentage of residents below 200 percent of the Federal Poverty Level living in zip code tabulation areas (ZCTA[18]) served by a health center.[19]

Exhibit 10: Health Center Penetration of Low-Income Population, 2014



Source: UDS Mapper, 2014

Primary Care Providers

Physicians

There are several measures of physician numbers in the four boroughs, including total physicians overall, physicians contracted with Medicaid managed care, and physicians by specialty. The total numbers of physicians of any type in the community, by borough, are in **Exhibit 11**.

Of greater relevance for Medicaid members, **Exhibit 12** below reflects the numbers of primary care providers and specialist physicians contracted with at least one Medicaid managed care plan. Manhattan had by far the greatest number of these primary care physicians and specialists, and the highest rates per 100,000 population. The Bronx had the least number of primary care physicians and second lowest number of specialists, but the second-highest concentration of these physicians relative to the size of the Bronx population.

[18] U.S. Census Bureau. See https://www.census.gov/geo/reference/zctas.html
[19] UDS Mapper. See http://udsmapper.org/data-sources-and-definitions.cfm

Exhibit 11: Number of Physicians by Borough, 2013

Borough	Number of Physicians	Rate per 100,000 Population
Bronx	16,528	1,165.0
Brooklyn	25,383	979.2
Manhattan	34,765	2,137.9
Queens	17,903	779.7
New York City	**99,277**	**1,181.0**

Note: Ninety-seven percent of physicians are M.D.s, and three percent are Doctors of Osteopathy.
Source: New York State Department of Health, 2013

Exhibit 12: Managed Care Primary Care Physicians and Specialists, Number and Rate per 100,000 Population, by Borough, 2012

Borough	Primary Care Providers	Rate per 100,000 Population	Specialists	Rate per 100,000 Population
Bronx	1,293	93.3	3,413	246.2
Brooklyn	2,088	83.1	4,275	170.1
Manhattan	2,372	148.6	10,311	645.8
Queens	1,589	71.1	3,124	139.8

Source: New York State Department of Health, Managed Care Provider Network Data System, accessed 2014. See https://www.health.ny.gov/health_care/medicaid/redesign/providernetwork/.

Among actively practicing health care professionals in New York State in 2013, less than one-third were primary care providers. This included 26 percent of physicians, 33 percent of nurse practitioners (NPs), and 24 percent of physician assistants (PAs).[20]

The Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services collects and publishes data on a wide variety of primary care physicians and other primary care providers. Data on primary care physicians by specialty per 100,000 population is in **Exhibit 13**. The Bronx had the lowest concentrations among the four boroughs of all primary care specialties, with a particular lack of primary care physicians overall, internists, obstetricians/gynecologists, and pediatricians.

Brooklyn and Queens had roughly equivalent concentrations of most primary care providers, while Manhattan had the highest concentrations of all the provider types.

[20] University at Albany, School of Public Health, Center for Health Workforce Studies. "New York's Primary Care Workforce," May 2014. http://chws.albany.edu/archive/uploads/2014/08/nypricare2014.pdf

Exhibit 13: Primary Care Physicians per 100,000 Population, by Borough, 2012

Borough	Total Physicians	Primary Care Physicians	General and Family Practitioners	Internists	Obstetricians/ Gynecologists*	Pediatricians*
Bronx	118.7	47.9	8.6	24.8	9.5	50.1
Brooklyn	162.3	60.3	9.8	34.3	19.0	65.5
Manhattan	683.4	136.7	16.0	86.8	64.0	200.7
Queens	163.5	66.1	10.9	36.8	14.9	81.6
New York State	**267.6**	**82.6**	**18.6**	**42.2**	**26.2**	**88.7**

Source: HRSA Health Workforce Mapping Tool, accessed 2014

Discussions of the supply and capacity of primary care providers needs to take in account future departures from the workforce. The physician population in New York State overall is aging, having increased from an average of 50 to 52 years since 2002. In New York City in 2010, 1.5 percent of physicians indicated having plans to retire in the next 12 months, and 8.9 percent had plans to reduce hours worked. Statewide for primary care physicians specifically, these figures were somewhat higher at 1.8 percent and 9.7 percent, respectively.[21]

Graduate Medical Education in Primary Care Specialties, and Nursing Education

According to the Accreditation Council for Graduate Medical Education (ACGME) there are approximately 35 internal medicine physician training programs in the four boroughs, with seven located in the Bronx, 12 in Brooklyn, nine in Manhattan, and seven in Queens. There are approximately nine family medicine education programs, with two in the Bronx, three in Brooklyn, three in Manhattan, and one in Queens. And, there are five preventive medicine programs: one in the Bronx, three in Manhattan, and one in Queens.[22]

The American Osteopathic Association lists approximately six family medicine and internal medicine residency programs in the four boroughs, with two each in the Bronx, Brooklyn, and Queens.[23]

According to the Commission on Collegiate Nursing Education (CCNE), there are approximately ten nursing degree programs in the four boroughs and one accredited nursing residency program located in Manhattan.[24]

Physician Assistants, Nurse Practitioners, and other Advanced Practice Nurses

[21] University at Albany, School of Public Health, Center for Health Workforce Studies. "New York Physicians' Plans to Retire or Reduce Patient Care Hours, 2010." June 2013. http://chws.albany.edu/archive/uploads/2013/09/nyphysretire2013.pdf

[22] Accreditation Council for Graduate Medical Education. See http://www.acgme.org/ads/Public.
[23] American Osteopathic Association. See http://opportunities.osteopathic.org/search/search.cfm.
[24] Commission on Collegiate Nursing Education. See http://directory.ccnecommunity.org/reports/accprog.asp.

Manhattan had the highest rates per 100,000 of PAs and NPs, 86.1 and 140.1, respectively. The three other boroughs had approximately equivalent rates of PAs, of less than half the Manhattan rate. NP rates varied widely, with Manhattan (140.1) at nearly four times the second highest borough rate in the Bronx (36), and seven and one-half times the rate as in Queens.

Exhibit 14: Physician Assistant and Advanced Practice Nurse Rates per 100,000 by Borough, 2013

Borough	Physician Assistants	Nurse Practitioners	Certified Nurse Midwives	Certified RN Anesthetists
Bronx	37.9	36.0	2.0	3.4
Brooklyn	34.5	25.8	7.6	2.3
Manhattan	86.1	140.1	7.1	18.1
Queens	38.8	18.5	2.3	2.4
New York State	**50.7**	**58.8**	**5.1**	**7.2**

Source: HRSA Health Workforce Mapping Tool, accessed 2014

Nutritionists and Dieticians

There are 754 nutritionists and dieticians serving the four boroughs. Manhattan has the single largest number of these providers with 284. The Bronx and Brooklyn have 170 and 166 respectively, while Queens has 134. Overall, there are 9.5 nutritionists and dieticians per 100,000 population in the four boroughs.[25]

Specialty Medical Providers

As show in **Exhibit 12** above, there were 21,123 specialists located in the four boroughs. Manhattan had by far the highest concentration of specialists, at 645.8 per 100,000 population. The Bronx (246.2) followed, with Brooklyn (170.1) and Queens (139.8) having approximately equivalent rates of specialist physicians per 100,000 people.

Dentists

According to NYSDOH, Queens had the lowest number of dentists per 100,000 population among the four boroughs, while the Bronx had the highest rate. The Bronx and Manhattan had higher concentrations of dentists than New York City overall, while Brooklyn's rate was approximately equal to that of the city.

According to older, 2010 data from HRSA, Manhattan had an even higher concentration of dentists (152.3 per 100,000) than reflected in the NYSDOH data, while the Bronx (48.0), Brooklyn (58.5), and Queens (68.1) all had fewer dentists.[26]

[25] New York State Department of Health. Managed Care Reports, accessed 2014
[26] HRSA Health Workforce Mapping Tool, accessed 2014. See http://ahrf.hrsa.gov/arfdashboard/ArfGeo.aspx.

Exhibit 15: Dentist Numbers and Rates per 100,000, by Borough, 2013

Borough	Dentists*	Rate per 100,000 Population
Bronx	1,673	117.9
Brooklyn	2,555	98.6
Manhattan	1,751	107.7
Queens	1,831	79.7
New York City	**8,246**	**98.1**
New York State	**15,131****	**78.0**

*Includes DDS, DMS, and DMD professionals. **2009 data.
Source: New York State Department of Health, Managed Care Reports, accessed 2014

Exhibit 16: Dental Clinics with Largest Numbers of Medicaid Claims, and Total Claims per Borough, 2013

Borough and Dental Clinic	Total Claims	Unique Members with Services
Bronx Total	**90,558**	**43,326**
Montefiore Medical Center	30,608	14,097
Union Community Health Center, Inc	14,636	6,245
Morris Heights Health Center	12,249	7,167
Dr. Martin Luther King Health Center	9,747	5,455
Help/Project Samaritan SVCS Corp	4,368	1,763
Brooklyn Total	**113,360**	**44,243**
Lutheran Medical Center	59,077	21,946
L'Refauh Medical & Rehab Center, Inc	26,121	10,546
Brownsville Multi-Service Family Health Center	7,713	3,809
Phoenix House Foundation Inc	5,400	611
Bed Stuy Family Health Center	3,514	1,784
Manhattan Total	**76,834**	**34,096**
Charles B Wang Community Health Center	13,935	4,587
Columbia University Health Care	11,757	4,884
Institute for Family Health	10,046	4,951
New York University Dental Center	6,683	3,003
William F Ryan Community Health Center	5,107	3,445
Queens Total	**32,281**	**13,290**
Joseph P Addabbo Family Health	13,720	7,408
Phoenix House Foundation, Inc	8,447	899
Premier Healthcare D & T Center	2,972	1,190
New York Hospital Medical Center, Queens	1,685	511
Long Island Jewish Medical Center	1,411	806

Note: The sums of the provider claims and Medicaid members served in each borough do not equal the borough totals, because only the top five providers by claim volume are included in the table.
Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

There were a total of 33 dental clinics in Manhattan, 15 in Queens, 24 in the Bronx, and 26 in Brooklyn in 2013. Dental clinics in Brooklyn had the greatest number of Medicaid claims7, with more than 113,000 for more than 44,000 unique Medicaid members. The dental clinics in Queens submitted only 32,000 Medicaid claims for somewhat over 13,000 7patients. The top three dental clinics by claim volume in Manhattan submitted 47 percent of all dental clinic claims in the borough. In Brooklyn, the figure was 82 percent. The top five dental clinics in each borough, by volume of Medicaid claims, are in **Exhibit 16**.

Rehabilitative Services

According to the Greater New York Hospital Association's Health Information Tool for Empowerment (GNYHA-HITE), there are a number of rehabilitative therapy providers in all boroughs, with the Bronx having the greatest number. In the table below, borough totals indicate the approximate numbers of unique provider organizations offering any one or all of the service categories of physical, occupational, and speech therapy. Sub-totals within each borough are greater than the borough totals because many agencies offer two or three of the service types.

Exhibit 17: Physical, Occupational and Speech Therapy Services, by Borough

Borough	Service Type	Number of Providers
Bronx		**76**
	Physical	47
	Occupational	67
	Speech	60
Brooklyn		**63**
	Physical	31
	Occupational	33
	Speech	28
Manhattan		**61**
	Physical	16
	Occupational	46
	Speech	37
Queens		**45**
	Physical	33
	Occupational	13
	Speech	19

Source: GNYHA-HITE, accessed October 2014

Behavioral Health Resources

The NYS OMH licenses and/or funds mental health programs that provide direct services to people residing in the community. There are 285 NYS OMH mental health programs located in

the Bronx, 376 in Brooklyn, 458 in Manhattan, and in 266 in Queens.[27] **Exhibit 18a** depicts in detail the numbers and types of providers and services in each borough. **Exhibit 18b** illustrates the locations of mental health facilities in the total service area. Maps by borough are in **Appendix 9, Exhibits 9A-D**.

The majority of service organizations in the four boroughs are clustered in Manhattan. Overall, there appears to be a relative scarcity of mental health services in Queens, with only a few facilities located in southwestern, southeastern, and central Queens. In Brooklyn, mental health service locations are mainly in central and northern Brooklyn, with very few in eastern and southeastern Brooklyn. However, compared to the Bronx and Queens, Brooklyn seems to have a more even distribution of services across the borough. The exception is inpatient services, which are clustered in north central Brooklyn. In the Bronx, service locations tend to be in central and western areas.

Exhibit 18a: Number of Behavioral Health Providers by Service Type and Borough, 2014

Service Type	Bronx	Brooklyn	Manhattan	Queens
Emergency	**9**	**14**	**21**	**7**
Comprehensive Psychiatric Emergency Program	2	2	6	3
Crisis	7	12	15	4
Inpatient	**10**	**12**	**17**	**9**
General Hospital Psychiatric IP Unit	7	10	12	6
Private Psychiatric Hospital	0	0	1	0
Residential Treatment Facility	1	1	1	1
State Psychiatric Hospital	2	1	3	2
Outpatient	**63**	**93**	**110**	**81**
Assertive Community Treatment	9	13	12	8
Clinic Treatment	41	66	72	52
Continuing Day Treatment	2	1	9	5
Day Treatment	6	3	7	4
Intensive Psychiatric Rehabilitation	0	1	0	2
Partial Hospitalization	1	2	3	4
Personalized Recovery-Oriented Services	4	7	7	6
Residential	**153**	**186**	**155**	**92**
Support Program	0	1	0	0
Treatment Program	44	49	55	34
Unlicensed Housing	109	136	100	58
Support	**51**	**71**	**155**	**77**
Care Coordination	25	25	56	32
Education	3	5	5	3

--Exhibit 18a is continued on the next page--

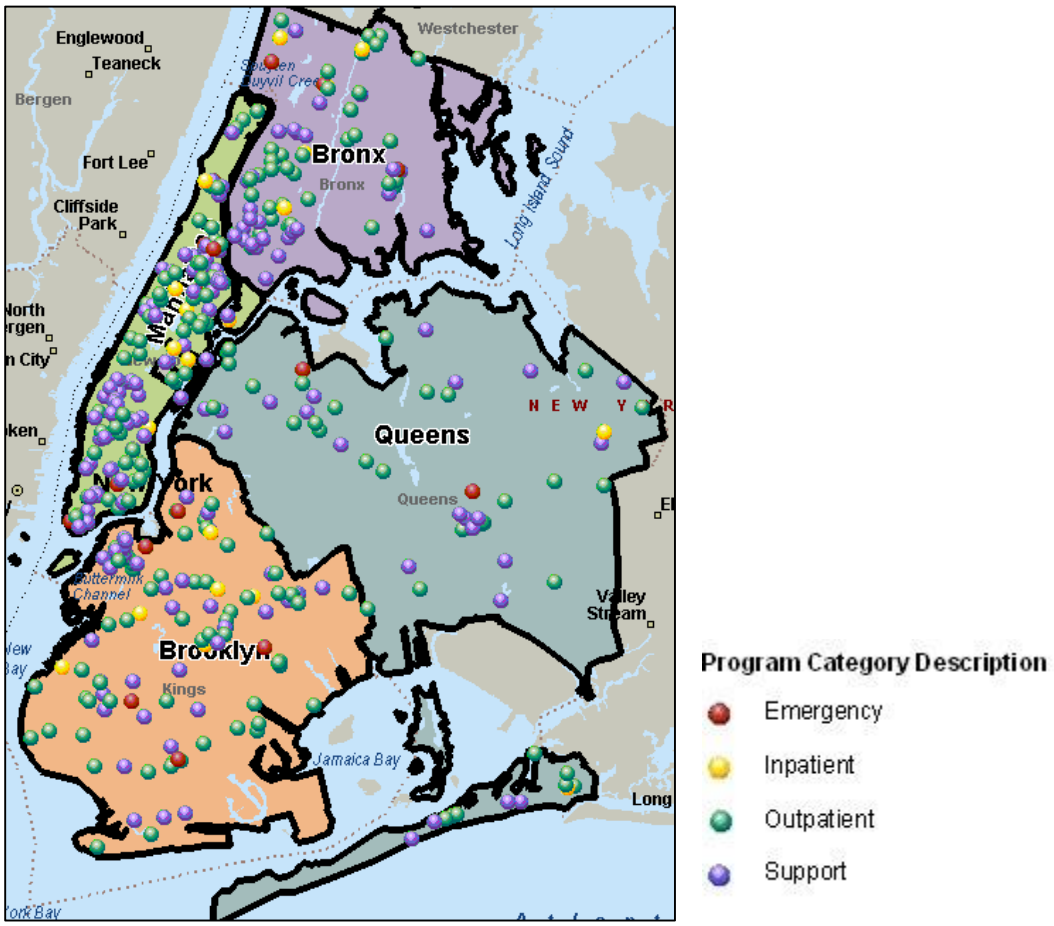
[27] New York State Office of Mental Health, Mental Health Program Directory. See http://bi.omh.ny.gov/bridges.

--Exhibit 18a is continued from the previous next page--

Service Type	Bronx	Brooklyn	Manhattan	Queens
Forensics	0	0	2	1
General Support	9	12	31	12
Self-Help	10	21	39	17
Vocational	4	8	22	12
Total	**286**	**376**	**458**	**266**

Source: New York State Office of Mental Health, Find a Mental Health Program.
See http://bi.omh.ny.gov/bridges/index.

Exhibit 18b: Location of Behavioral Health Facilities, 2014



Source: New York State Office of Mental Health, Mental Health Program Directory and Microsoft MapPoint 2010

Inpatient Psychiatric Facilities

According to NYS OMH, total New York City inpatient psychiatric facility capacity for adults and children was 4,584 beds.[28]

[28] New York State Office of Mental Health. See https://www.omh.ny.gov/omhweb/special-projects/dsrip/ccudb.html

The number of beds per 100,000 population varied widely by borough, both above and below the city and state figures. Manhattan had the highest number and rate of adult inpatient beds, but Queens had the highest number and rate of beds for children and youth. For adult beds, Brooklyn and Queens had rates below the city and state averages, and a little more than half the rate in Manhattan. For children and youth beds, the Bronx and Brooklyn both had rates of approximately one-half the New York City rate (**Exhibit 19**).

Exhibit 19: Inpatient Psychiatric Bed Capacity, Adults and Youth, by Borough, 2013

Borough	Total Adult Inpatient Capacity	Rate per 100,000 Population	Total Children/Youth Inpatient Capacity	Rate per 100,000 Population
Bronx	574	55.3	59	15.9
Brooklyn	930	47.3	78	13.0
Manhattan	1,260	91.9	95	38.2
Queens	877	48.5	275	59.2
New York City	**4,060**	**62.0**	**524**	**29.3**
New York State	**8,163**	**53.4**	**1,786**	**41.6**

Note: Children and youth capacity includes residential treatment facilities and psychiatric centers.
Source: New York State Office of Mental Health, Office of Performance Measurement and Evaluation, 2014

Data from NYS OMH on the average daily census for inpatient psychiatric facilities (**Exhibit 20**) suggests that facilities were over capacity for adults in the Bronx, Brooklyn, and Queens, although it is unclear exactly how this could be the case. For children and youth, facilities were extremely over capacity in the Bronx and Brooklyn (from two to more than four times), slightly over capacity in Manhattan, and well below capacity in Queens.

Exhibit 20: Inpatient Psychiatric Average Daily Census by Borough of Residence, 2012

Borough	Total Adult Inpatient ADC	Rate per 100,000 Population	Total Youth Inpatient ADC	Rate per 100,000 Population
Bronx	726.2	69.9	258.2	69.8
Brooklyn	1,200.5	61.1	150.1	25.0
Manhattan	969.5	70.7	107.6	43.3
Queens	954.8	52.8	144.2	31.0
New York City	**4,114.6**	**62.8**	**681.8**	**38.1**
New York State	**7,718.5**	**50.5**	**1,587.7**	**37.0**

Source: New York State Office of Mental Health, Office of Performance Measurement and Evaluation, 2014

Social Workers and Clinical Psychologists

The community had more than 17,000 certified social workers in 2012, ranging from a high of nearly 300 per 100,000 people in Manhattan to a low of 123 per 100,000 in Queens. The relatively high-need borough of the Bronx had the second highest rate, 258 per 100,000 (**Exhibit 21**).

There were 4,401 psychologists and clinical psychologists in the community. The rates per 100,000 people in Manhattan were more than more than double those in Brooklyn, and three to five times the rates in the Bronx and Queens. In addition, there were relatively small numbers of

non-licensed social workers (169) and counselors (425) in the four boroughs.[29]

Exhibit 21: Certified Social Workers and Clinical Psychologists, by Borough, 2012

Borough	Certified Social Workers		Clinical Psychologists	
	Number	Rate per 100,000 population	Number	Rate per 100,000 population
Bronx	3,668	258.5	472	33.3
Brooklyn	5,842	225.4	1,168	45.1
Manhattan	4,855	298.6	1,640	100.9
Queens	2,834	123.4	425	18.5
New York	**18,026**	**214.4**	**3,856**	**45.9**

Source: New York State Department of Health, DSRIP Managed Care Provider Network Data, 2012

Outpatient Service Utilization

Exhibit 22 presents the numbers Medicaid members, by borough, who received non-inpatient behavioral health services in 2012.

Exhibit 22: Adult and Youth Medicaid Non-Inpatient Service Use, by Provider Borough, 2012

Borough	Number of Adult Medicaid Recipients in Non-State Programs	Children and Youth Medicaid Clients in Non-State Programs
Bronx	26,643	358
Brooklyn	38,304	928
Manhattan	37,285	731
Queens	20,669	770
New York City	**126,520**	**2,913**
New York State	**240,529**	**7,285**

Source: New York State Office of Mental Health, Office of Performance Measurement and Evaluation, 2014

Brooklyn and Manhattan had the greatest number of NYS OMH clients with severe mental illness or a serious emotional disturbance in 2013 (**Exhibit 23**). The Bronx had the smallest number. In all four boroughs, outpatient programs had by far the greatest number of clients. Brooklyn had the largest number of clients in outpatient programs, while the Bronx had the smallest number of clients. Manhattan had almost double the number of clients in emergency and inpatient programs, compared to the other boroughs. Queens had the least number of clients in emergency programs. The Bronx had less than half the number of clients in support programs as did the other boroughs.

Exhibit 23: Number of NYS OMH Clients with Severe Mental Illness/Serious Emotional Disturbance, by Borough and Program Category, 2013

[29] New York State Department of Health, DSRIP Managed Care Provider Network Data, 2012

Borough	Program Category					Total
	Emergency	Inpatient	Outpatient	Residential	Support	
Bronx	486	719	10,989	4,949	1,259	**16,942**
Brooklyn	418	955	18,717	4,685	2,300	**24,992**
Manhattan	830	1,640	17,133	4,492	5,355	**26,850**
Queens	332	1,152	14,623	2,500	2,404	**18,800**

Source: New York State Office of Mental Health, Patient Characteristics Survey, 2013.
See https://www.omh.ny.gov/omhweb/statistics/pcs-message.htm.

In New York State overall, 20.4 percent of total mental health clients had both a mental illness and chemical abuse (MICA) problems in 2013. Percentages in the Bronx and Manhattan (21.6% for each) were only slightly higher than the state average, while Brooklyn (17.1%) and Queens (12.9%) both had lower proportions of mental health clients with chemical abuse problems.[30] The numbers of MICA clients served in 2013, by program category and borough, are below in **Exhibit 24**.

Exhibit 24: Number of OMH Mental Illness and Chemical Abuse (MICA) Clients, by Program Category, 2013

Borough	Program Category					Total
	Emergency	Inpatient	Outpatient	Residential	Support	
Bronx	154	262	1,503	1,998	302	**3,652**
Brooklyn	170	379	2,178	1,882	480	**4,268**
Manhattan	348	669	2,294	1,951	1,640	**5,791**
Queens	110	377	1,322	752	519	**2,427**

Source: New York State Office of Mental Health, Patient Characteristics Survey, 2013
See https://www.omh.ny.gov/omhweb/statistics/pcs-message.htm.

Alcoholism and Substance Abuse Prevention and Treatment Providers and Programs

There are 167 Office of Alcoholism and Substance Abuse Services (OASAS) prevention (47) and treatment (120) providers located in the four boroughs. There were five OASAS prevention providers with 11 different programs serving the Bronx, 14 providers with 26 programs serving Brooklyn, 21 providers with 27 programs serving Manhattan, and seven providers with 14 programs serving Queens.
There were 31 treatment providers serving the Bronx, 55 serving Manhattan, and 33 for Queens. Each of those boroughs had over 40 different programs serving their communities. Brooklyn only had one OASAS provider delivering services at two locations.[31]

Health and Recovery Plans (HARPs)

[30] New York State Office of Mental Health, Patient Characteristics Survey, Mental Illness and Chemical Abuse (MICA) by Program Category, 2013. See https://www.omh.ny.gov/omhweb/statistics/pcs-message.htm.
[31] New York State Office of Alcoholism and Substance Abuse Services. See http://www.oasas.ny.gov/providerdirectory.

New York State has proposed a new type of managed care plan that strives to integrate primary care and behavioral health called Health and Recovery Plans (HARPs) are estimated to go into effect for adults aged 21 and older in New York City in April 2015, the rest of the state in October 2015 and for children in January 2016. This type of plan aims to fill the gap of integration between primary care and behavioral health, especially in managed care.[32]

Specialty Medical Programs

Autism Spectrum Early Intervention

The NYSDOH operates the Early Intervention Program (EIP) in New York City, for children under the age of three years with a disability or developmental delay. EIP serves all four boroughs and delivers a wide range of services through approved providers, including, but not limited to: family education, home visits, speech pathology and audiology services, physical therapy, nursing services, social work services, and assistive technology devices and services.[33] There are local contacts in each borough through the NYC DOHMH.[34]

According to GNYHA-HITE, there are a total of 48 general autism spectrum service providers in the four boroughs. There are 14 located in Queens, 13 in the Bronx, 11 in Manhattan, and 10 in Brooklyn.[35]

Eating Disorders

Three data sources indicate varying numbers of eating disorder service providers in the community, and one demonstrates a significant lack of such providers for Medicaid members.

According to the Academy of Eating Disorders (AED), there are 82 practitioners in the four boroughs who specialize in treating eating disorders. The vast majority of these practitioners, who are listed on AED's online search tool, are located in Manhattan (78), with three in Brooklyn, one in Queens, and none in the Bronx.[36]

Another resource for locating eating disorder services, the National Eating Disorder Association (NEDA), identifies 106 practitioners in the four boroughs. The majority of those on this list also are located in Manhattan (101). Four are in Brooklyn, one in Queens, and none in the Bronx, and they are generally not located in high-need areas as identified by socio-demographic and health status indicators. The NEDA tool also provides the number of eating disorder providers who accept Medicaid and/or Medicare. This number is much lower than the total number of NEDA provider members. There are only six Medicaid/Medicare providers in Manhattan, one in

---

[32] New York State Department of Health. https://www.health.ny.gov/health_care/medicaid/redesign/behavioral_health_transition.htm
[33] New York State Department of Health. See https://www.health.ny.gov/community/infants_children/early_intervention/index.htm
[34] See https://www.health.ny.gov/community/infants_children/early_intervention/county_eip.htm.
[35] Greater New York Hospital Association, Health Information Empowerment Tool. See http://www.hitesite.org/Members/SearchChoices.aspx
[36] Academy of Eating Disorders. See http://aedweb.org/web/index.php/education/eating-disorder-information-2

Brooklyn, one in Queens, and none in the Bronx. This clearly illustrates a lack of eating disorder services for Medicaid members throughout the community.[37] **Exhibit 25** shows the locations and number of the NEDA practitioners.

GNYHA-HITE lists a total of 130 eating disorder providers in the four boroughs. Forty-nine are located in Manhattan, 33 in Brooklyn, and 24 each in the Bronx and Queens.[38]

Exhibit 25: Number of National Eating Disorder Association Member Practitioners, by Neighborhood, 2014

Borough and Neighborhood	Number of Practitioners
Brooklyn	**4**
Bushwick and Williamsburg	1
Northwest Brooklyn	3
Manhattan	**101**
Central Harlem	1
Chelsea and Clinton	27
East Harlem	1
Gramercy Park and Murray Hill	24
Greenwich Village and Soho	2
Inwood and Washington Heights	5
Lower East Side	11
Upper East Side	11
Upper West Side	19
Queens	**1**
Northwest Queens	1
Total	**106**

Source: National Eating Disorder Association, "Find Treatment" Tool – accessed 2014

Skilled Nursing Homes and Assisted Living Facilities

According to the New York State Nursing Home Profile, there are 59 skilled nursing homes and assisted living facilities in Queens, 46 in the Bronx, 42 in Brooklyn, and 19 in Manhattan.[39]

According to the Salient NYS Medicaid DSRIP Dashboard, there are 95 nursing homes with any Medicaid claims in Queens, 77 in the Bronx, 82 in Manhattan, and 96 in Brooklyn.[40]

There are currently 26 "adult care facilities" with approximately 4,200 beds in Queens, 22 with 2,996 beds in Brooklyn, 13 with 1,027 beds in Manhattan, and 10 with 1,346 beds in the Bronx.

[37] National Eating Disorder Association. See http://www.nationaleatingdisorders.org/find-treatment
[38] GNYHA-HITE. See http://www.hitesite.org/Members/SearchChoices.aspx
[39] New York State Department of Health, "New York State Nursing Home Profile." See http://nursinghomes.nyhealth.gov/searches/region.
[40] Salient NYS Medicaid DSRIP Dashboard System Version 1.0., Dashboard B1

These facilities are licensed through New York State and provide "temporary or long-term, non-medical residential care services to adults who are substantially unable to live independently."[41]

According to the NYSDOH, based on data self-reported by nursing home facilities, available capacity in nursing home beds across the four boroughs ranged between approximately six and eight percent of total beds at the time of last submission with minimal differences in additional capacity among the boroughs. The weekly bed census is show below in **Exhibit 26.**

Exhibit 26: Nursing Home Weekly Bed Census – Latest Submission

Borough	Total Beds	Available Beds	Available Capacity
Bronx	13,110	764	5.8%
Kings	12,653	966	7.6%
New York	6,490	434	6.7%
Queens	14,066	1,081	7.7%
Total	**46,319**	**3,245**	**7.0%**

Source: New York State Department of Health, Open Data NY (accessed Nov. 11, 2014)

Assessment of Nursing Home Bed Capacity

To help assess the supply of federally certified nursing home beds in the community, Verité compared the current bed-to-population ratios in each borough and New York State to the current ratio of the U.S. population as a whole.

The source of data for beds is the Official Nursing Home Compare Data from the Centers for Medicare & Medicaid Services.[42] The source of population data for the boroughs and New York State is the U.S. Census Bureau, ACS 5 Year Estimates 2008-2012. The source of population data for the U.S. is the 2010 U.S. Census.

The analysis suggests that the 42,491 beds in Medicaid-certified facilities in the four boroughs constitute an oversupply, and that New York State also has an oversupply. The extent of the oversupply varies depending on the population age cohort used as the benchmark for comparative analysis (all ages, 65 and over, and 85 and over).[43] Looking at the range across all three age cohorts, total oversupply was between approximately 1,500 and nearly 6,200 beds, or between 3.8 percent and 17 percent (**Exhibit 28**).

Exhibit 27 below portrays the beds per 1,000 population ratios for the U.S., New York State, and each borough. Values higher than the U.S. ratios represent higher densities of beds (oversupply), while values lower than the U.S. ratios indicate undersupply.

The Bronx had the greatest oversupply. It had 12,003 beds, but would have had between approximately 5,600 and 7,300 if its bed-to-population ratios were consistent with the U.S.

[41] New York State Department of Health. Adult Care Facilities. See https://www.health.ny.gov/facilities/adult_care/.
[42] See https://data.medicare.gov/data/nursing-home-compare, downloaded October 29, 2014.
[43] The analysis was conducted using three complementary national benchmarks: beds per 1,000 population (of all ages), per 1,000 population age 65 and over, and per 1,000 population age 85 and over. The three benchmarks are different measures beds per population, and taken together provide a range of "target" beds for a local area.

Queens appeared to have a slight oversupply, while the analysis suggests there was an undersupply of certified nursing home beds in Brooklyn and Manhattan.

Exhibit 27: Nursing Home Beds per 1,000 Population, by Borough, Compared to U.S Benchmark

Borough	Total Beds	Beds per 1,000 Population		
		All Ages	65 Years and Over	85 Years and Over
Bronx	12,003	8.7	81.8	603.0
Brooklyn	10,744	4.3	37.0	265.5
Manhattan	7,393	4.6	34.2	238.3
Queens	12,321	5.5	42.6	291.0
Four Borough Total	42,491	5.5	45.1	317.6
New York State	116,369	6.0	44.1	297.4
U.S.	**1,662,116**	**5.3**	**38.5**	**282.3**

Source: Centers for Medicare & Medicaid Services, Official Nursing Home Compare Data and U.S. Census Bureau

Exhibit 28: Actual Nursing Home Beds and "Target" Beds, by Borough, Compared to U.S Benchmark

Borough	Total Beds	"Target" Beds Using U.S. Benchmark		
		All Ages	65 Years and Over	85 Years and Over
Bronx	12,003	7,341	5,664	5,634
Brooklyn	10,744	13,305	11,199	11,426
Manhattan	7,393	8,454	8,361	8,759
Queens	12,321	11,834	11,133	11,954
Four Borough Total	42,491	40,933	36,312	37,772
New York State	116,369	102,709	101,727	110,452
U.S.	**1,662,116**	**-**	**-**	**-**

Source: Centers for Medicare & Medicaid Services, Official Nursing Home Compare Data and U.S. Census Bureau

Consideration of federally certified nursing home bed oversupply or undersupply should take into account analyses and factors in addition to those above. These include:

- the analysis assumes that the bed-to-population ratio for the U.S. is a suitable benchmark or target;
- the analysis assesses bed capacity by borough, but providers and residents may consider the community or New York City region as a whole, with lesser importance placed on borough boundaries;
- population projections and trends in preferences for supported living arrangements among elderly residents; and
- variations in building and operating costs by borough, or other factors, that may limit or preclude location of federal certified nursing home beds in some areas.

Home Care Services

There were a large number of home care providers throughout the community, but the largest number (licensed home health agencies) may not accept Medicaid.

Certified home health agencies provide nursing, home health aide, and support services to clients with Medicaid, Medicare, and some private insurance, in addition to private pay clients. They provide short-term services to clients who require specialized or intermittent care, as well as longer-term care if required. There are between 30 and 40 agencies in each borough.

Licensed home health agencies primarily offer home care services to patients who have private insurance or who pay privately. However, some licensed home health agencies also may contract with other agencies (such certified home health agencies) to serve Medicaid clients.[44]

The figures in the table below (**Exhibit 29**) represent the numbers of agencies serving each borough. Because individual agencies may serve more than one borough, the data do not represent counts of unduplicated agencies.

Exhibit 29: Home Health and Hospice Agencies/Programs Serving each Borough

Borough	Licensed Home Care Agencies	Certified Home Health Agencies	Long-term Home Health Programs	Hospices	Total
Bronx	563	33	15	6	**617**
Brooklyn	504	31	10	7	**552**
Manhattan	492	32	11	4	**539**
Queens	589	36	12	8	**645**
Total	**2,148**	**132**	**48**	**25**	**2,353**

Source: New York State Department of Health, Home Health and Hospice Profile, accessed at http://homecare.nyhealth.gov/, October 2014.

According to the Salient NYS Medicaid DSRIP Dashboard System, in 2013 there were 175 home health providers in the Bronx, 339 in Brooklyn, 403 in Manhattan, and 298 in Queens. Of these home health providers, 133 in the Bronx reported claims, 249 in Brooklyn, 313 in Manhattan, and 226 in Queens.

Providers based in Manhattan provided a significantly higher volume of service as measured by Medicaid claims, with more than 16,800,000 as compared to between approximately 1,300,000 and 3,800,000 in the other boroughs. **Exhibit 30** depicts the top five home health providers in each borough. Together they comprised considerable portions of total Medicaid home health claims in the Bronx (65.9%), Brooklyn (32.2%), Manhattan (56.0%), and Queens (24.4%).

Exhibit 30: Top Five Home Health Providers, by Medicaid Claims, by Borough, 2013

[44] New York State Department of Health. See http://homecare.nyhealth.gov/about.php.

Providers	Total Claims	Unique Members with Services
Bronx	**3,209,160**	**65,211**
CenterLight Healthcare Select Medicaid Managed Long Term Care	1,210,405	6,553
CenterLight Healthcare PACE	412,429	2,385
Montefiore Medical Center LTHHCP	260,718	1,468
HHH Choices Health Plan, LLC	115,461	2,615
Jewish HM/HSP LCS-Bronx LTHHCP	114,360	408
Brooklyn	**3,898,271**	**65,035**
Metropolitan Jewish LTHHCP	326,047	1,799
Center for Nursing & Rehab IN	284,004	1,329
PTS of Brooklyn LTHHCP	249,908	891
Americare Certified SS INC	200,050	2,809
Concepts of Independence, INC	193,412	1,088
Manhattan	**16,835,330**	**195,751**
VNS Choice	3,821,661	23,333
Visiting Nurse Service/NY HM Care	1,917,854	32,186
Independence Care System, INC	1,564,452	5,422
WellCare of NY Medicaid Managed Long Term Care	1,135,172	6,155
Guildnet INC	996,751	13,832
Queens	**1,382,114**	**56,406**
Hillside Manor Nursing Center	87,299	299
UCP of Queens	85,035	439
Medical Health Research Association of NYC	59,178	3,406
The Shield Institute Day	57,568	356
NYC Department of Mental Health Early Intervention	47,878	6,071

Note: The sums of the provider claims and Medicaid members served in each borough do not equal the borough totals, because only the top five providers by claim volume are included in the table.
Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Laboratory and Radiology Services

According to the NYSDOH's Health Care Reform Act provider list there are 115 clinical laboratory sites located in the four boroughs. 14 are located in the Bronx, 20 in Brooklyn, 47 in Manhattan, and 34 in Queens.[45]

According to GNYHA-HITE, there are at least 57 radiology service providers in the four boroughs. Eighteen are located in the Bronx, 16 in Brooklyn, 17 in Manhattan, and six in Queens.[46]

Specialty Development Disability Services

According to the NYC Department of City Planning, there are approximately 868 developmental

[45] New York State Department of Health. See http://www.health.ny.gov/regulations/hcra/provider.htm .
[46] GNYHA-HITE. See http://www.hitesite.org/Members/SearchChoices.aspx

disability services in the four boroughs.[47] **Exhibit 31** depicts the number and type of services in each borough, by residential or non-residential status.

Exhibit 31: Number and Type of Developmental Disability Services, by Borough

Borough	Residential	Non-Residential	Total
Bronx	161	36	**197**
Brooklyn	243	82	**325**
Manhattan	76	55	**131**
Queens	172	43	**215**
Total	**652**	**216**	**868**

Source: New York City Department of City Planning, accessed October 2014

Pharmacies

According to the NYSDOH, there are approximately 414 safety net pharmacies in the four boroughs. There are 101 serving the Bronx, 140 in Brooklyn, 79 in Manhattan, and 94 in Queens.[48]

Local Health Department

The NYC DOHMH is the local public health agency with jurisdiction in the community assessed by this report. The Department operates three District Public Health Offices (DPHOs) that work to address disparities in high-need areas within the community, specifically the South Bronx, East and Central Harlem (Manhattan), and North and Central Brooklyn.

The DPHOs focus on obesity, asthma, and teen pregnancy with programs and research initiatives that include promoting healthier eating choices, increased physical activity, developing school wellness policies, childhood asthma education and management, teen pregnancy prevention, and maternal and child health programs. In Harlem, the East Harlem Asthma Center of Excellence provides focused services to address the high rate of asthma in that community.

NYC DOHMH also provides mental and behavioral health information services, including Lifenet, a telephone help line to help link residents with appropriate services.

Key informant interviews with senior staff at the Brooklyn and Harlem DPHOs indicated that the NYC DOHMH is working to adopt a "Collective Impact" approach to community and partner engagement for addressing health needs, and is implementing a strengthened focus on disparities through a new Center for Health Equity.[49]

---

[47] New York City Department of City Planning, "Selected Facilities and Program Sites"
[48] New York State Department of Health, "Designated Safety Net Pharmacies"
[49] Collective Impact is an approach to addressing social problems or needs in which collaborating organizations from multiple sectors work in alignment in a way that meets five specific conditions that facilitate achieving meaningful results. See http://www.fsg.org/OurApproach/CollectiveImpact.aspx.

Managed Care Organizations

Ten Medicaid managed care health plans serve the general Medicaid population in the community. There also are three HIV Special Needs Plans (HIV SNPs) for people living with HIV/AIDS and their eligible children. Enrollees in HIV SNPs have primary care providers who are specialists in HIV/AIDS, and receive coordinated services important for their care.[50] The same plans are available in all four boroughs.[51]

Medicaid Managed Care Plans

- Affinity Health Plan, Inc.
- AMERIGROUP New York, LLC
- Health Insurance Plan of Greater New York
- HealthFirst PHSP, Inc.
- MetroPlus Health Plan, Inc.
- Neighborhood Health Providers, Inc.
- New York State Catholic Health Plan, Inc.
- The New York-Presbyterian Community Health Plan, Inc.
- UnitedHealthcare of New York, Inc.
- WellCare of New York, Inc.

HIV Special Needs Plans

- Amida Care, Inc.
- MetroPlus Health Plan, Inc. Special Needs Plan
- VNS Choice SNP

Area Health Education Centers

Area Health Education Centers (AHECs) are health care workforce development initiatives with the goal of increasing access to primary and preventive care through educational partnerships between community and academic organizations. The national AHEC program was created by Congress to recruit, train, and retain health professionals who are committed to meeting the health needs of underserved communities. One important component of AHEC work is promoting health workforce diversity.

The community is served by three AHECs: Bronx Westchester AHEC, Brooklyn-Queens-Long Island AHEC, and Manhattan-Staten Island AHEC. There is also a New York Metropolitan Regional AHEC office housed at the Institute for Family Health.

The AHECs deliver a number of education and training programs, including:

---

[50] New York State Department of Health, HIV Special Needs Plans. Accessed at: https://www.health.ny.gov/diseases/aids/general/resources/snps/.

[51] New York State Department of Health, Division of Managed Care and Program Evaluation. County Directory of Managed Care Plans. Accessed at: https://www.health.ny.gov/health_care/managed_care/pdf/cnty_dir.pdf.

- residency training rotations in hospitals, community health centers, and other care delivery settings in underserved communities;
- community health internships, mentorships, and training programs for college and high school students in health care and health-related organizations; and
- health careers educational curricula in conjunction with middle and high schools.

Medically Underserved Areas and Populations

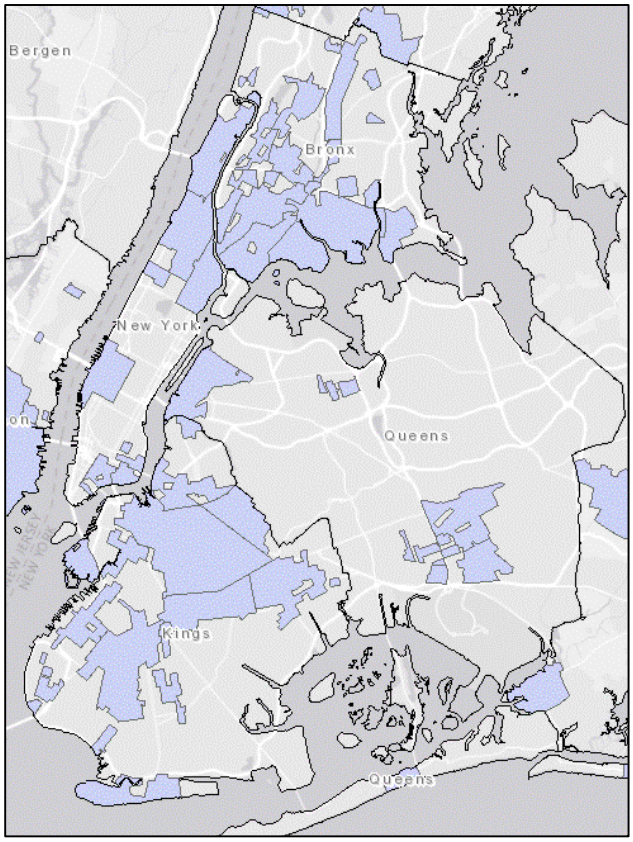
Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) on the basis of a score of less than 62 on the an Index of Medical Service, which takes into consideration: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.[52]

The MUA/Ps overlap with the majority of the Health Professional Shortage Area (HPSA) locations for all types of HPSAs. The two exceptions are that there are no MUA/Ps in Rockaways in Queens and Kingsbride/Riverdale in the Bronx, where there are HPSAs for primary care in Rockaways and for mental health in Kingsbridge/Riverdale.

The majority of the MUA/Ps in the community are located in the Bronx and Brooklyn. However, there is also a high concentration in Upper Manhattan, the Lower East Side, Midtown East, and South Central Queens (**Exhibit 32**).

[52] Heath Resources and Services Administration. See http://www.hrsa.gov/shortage/mua/index.html

Exhibit 32: Medically Underserved Areas and Populations



Source: HRSA Data Warehouse Map Tool, 2014

Health Professional Shortage Areas

HPSAs are designated by HRSA as lacking in primary, dental, and/or mental health care services. This designation can be geographic, demographic (e.g. low income), or institutional (e.g. community health centers).[53]

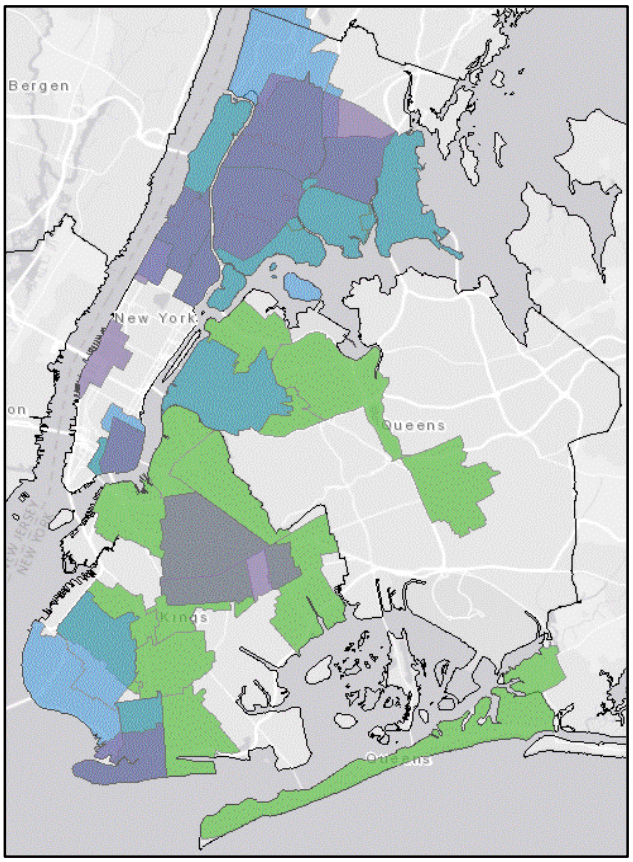
The majority of the HPSAs in the community are consistent with MUA/P areas, in that almost all of the Bronx, Brooklyn, and Upper Manhattan are shortage areas. However, HPSAs are also located in Northwest Queens and Greenpoint. The Bronx and Brooklyn both have shortages of all three types: primary care, dental, and mental health. Queens and Manhattan have both mental health and primary care shortages. Queens has a majority of Primary Care shortages located in Northwest and North Queens, with some in Southeast Queens.

The map below depicts the location of the HPSAs (**Exhibit 33**). The Mental Health shortage areas are located in Northwest Queens. In Manhattan, the Dental shortage areas are primarily in

[53] Health Resources and Services Administration, Find Shortage Areas. See http://hpsafind.hrsa.gov/

Upper Manhattan, Midtown West, and the Lower East Side. The Mental Health shortage area is located in the Lower East Side.

Exhibit 33: Health Professional Shortages Areas, by Type



Key – HPSA Type
Primary Care
Mental Health
Dental

Source: HRSA Data Warehouse Map Tool, 2014

The table below shows that Manhattan had significantly more HPSAs of all categories (primary care, dental, and mental health) than the other three boroughs, with a total of 68. However, the Bronx had a much higher proportion of the borough population living within HPSAs, especially for mental health (35.3%) and dental care (27.2%) (**Exhibit 34**).

Exhibit 34: Number of HPSAs, by Type and Borough, 2014

Borough	Primary Care	% Borough Population within HPSA PC	Dental Care	% Borough Population within HPSA DC	Mental Health	% Borough Population within HPSA MH	Total Number of HPSAs
Bronx	15	35.7%	10	27.2%	13	35.3%	**38**
Brooklyn	17	32.4%	11	8.2%	14	17.2%	**42**
Manhattan	23	15.4%	23	14.8%	22	21.4%	**68**
Queens	7	15.4%	2	0.0%	4	2.8%	**13**
New York City	**66**	**24.1%**	**49**	**10.2%**	**54**	**15.2%**	**169**

Source: HRSA Data Warehouse, accessed 2014 http://hpsafind.hrsa.gov/

The table in **Exhibit 35** is a list of the HPSA-designated facilities by borough and facility type.

Exhibit 35: HPSA Facility List, by Borough and Type

Borough	Type of HPSA	HPSA Name	Facility Type[54]
Bronx	Primary Medical Care	Jacobi Women's Health Center	Other Facility
	Primary Medical Care, Mental Health, Dental	Bronx Community Health Network	Comprehensive Health Center
		Bronx Lebanon Integrated Services System	Comprehensive Health Center
		Help/PSI Services Corporation	Comprehensive Health Center
		Morris Heights Health Center, Inc.	Comprehensive Health Center
		Union Community Health Center	FQHC Look-Alike
		Urban Health Plan, Inc.	Comprehensive Health Center
		Hunts Point Multi-Service Center, Inc.	FQHC Look-Alike
Brooklyn	Mental Health	Woodhull Mental Health Center	State Mental Hospital
	Primary Medical Care, Mental Health, Dental	Bedford Stuyvesant	Comprehensive Health Center
		Brooklyn Plaza Medical Center	Comprehensive Health Center
		Brownsville Community	Comprehensive Health Center
		Ezra Medical Center	Comprehensive Health Center
		Housing Works, Inc.	Comprehensive Health Center
		ICL Healthcare Choices, Inc.	Comprehensive Health Center
		Metropolitan Detention Center	Correctional Facility
		ODA Primary Care Health	Comprehensive Health Center
		Sunset Park Family Health	Comprehensive Health Center
Manhattan	Mental Health	Bellevue Hospital	State Mental Hospital
	Primary Medical Care	Morningside Clinic	Other Facility
		Mount Sinai Adolescent Health Center	Other Facility
	Primary Medical Care, Mental Health, Dental	AHRC Health Care, Inc.	Comprehensive Health Center
		Asian and Pacific Islander Coalition	FQHC Look-Alike
		Betances Health Center	Comprehensive Health Center
		Boriken Neighborhood Health Center	Comprehensive Health Center
		Charles B. Wang Community Health Center, Inc.	Comprehensive Health Center
		Community Healthcare Network	Comprehensive Health Center
		Covenant House	Comprehensive Health Center
		Health Care for the Homeless	Comprehensive Health Center
		Heritage Health and Housing	Comprehensive Health Center
		Institute for Family Health	Comprehensive Health Center
		Metropolitan Correctional Center	Correctional Facility
		New York Children's Health Project*	Comprehensive Health Center
		Project Renewal	Comprehensive Health Center
		Settlement Health	Comprehensive Health Center
		Upper Room AIDS Ministry, Inc.	Comprehensive Health Center
		William F. Ryan CHC	Comprehensive Health Center
Queens	Primary Medical Care, Mental Health, Dental	The Floating Hospital**	Comprehensive Health Center
		J. P. Addabbo Family	Comprehensive Health Center
		Project Samaritan Health Services	Comprehensive Health Center

Source: Health Resources and Services Administration, 2013.
*The New York Children's Health Project is housed in the Bronx but serves children across New York City.
**The Floating Hospital's administrative offices are located in Queens, but it is designated as a Dental HPSA in Manhattan.

[54] Comprehensive health centers that have been identified by HRSA and certified by CMS as meeting the definition of "health center" under Section 330 of the PHS Act, but do not receive grant funding under Section 330, are referred to as FQHC "look-alikes."

Advocate Community Providers (ACP) / NYCPP Emerging PPS

The ACP / NYCPP emerging PPS is an extensive network of physicians, dentists, nurse practitioners, and a wide range of health care service providers across the four boroughs.

Exhibits 36 and **37** illustrate in detail the numbers and types of PPS partners.

Exhibit 36: ACP Provider Types, by Borough, December 2014

Provider Type	Bronx	Brooklyn	Manhattan	Queens	Total
Non-PCP	207	297	644	870	2,018
PCP	114	185	217	400	916
CBO	0	8	2	3	13
Nursing Home	15	10	4	16	45
Other	95	143	236	204	678
Behavioral Health	7	16	16	38	77
Health Home/Care	3	2	4	2	11
Clinic	0	0	0	5	5
Hospital	3	2	6	5	16
Substance Abuse	16	14	15	6	51
Hospice	1	0	2	1	4
Pharmacy	1	3	14	11	29
Total	**462**	**680**	**1,160**	**1,561**	**3,863**

Source: ACP, December 2014

Exhibit 37: ACP Providers, by Specialty, by Borough, December 2014

Provider Specialty	Bronx	Brooklyn	Manhattan	Queens	Total
Allergy & Immunology	0	1	6	3	**10**
Anesthesiology	1	13	4	8	**26**
Behavioral Health	1	0	2	10	**13**
Cardiovascular Disease	8	8	27	31	**74**
Certified Nurse Midwife	5	2	2	14	**23**
Dermatology	0	3	7	8	**18**
Emergency Medicine	2	3	2	30	**37**
Endocrinology	1	1	3	4	**9**
Family Practice	14	46	20	70	**150**
Gastroenterology	4	14	29	17	**64**
General Medicine	3	0	9	2	**14**
General Surgery	0	1	2	8	**11**
Gynecology	6	26	29	54	**115**
Health Plan	1	1	2	0	**4**
Hematology & Medical Oncology	0	0	2	7	**9**
Internal Medicine	39	89	110	176	**414**
Internal Medicine/Cardiovascular Disease	0	1	5	5	**11**
Nephrology	0	4	6	3	**13**
Neurology	2	6	2	14	**24**
Non-PCP Provider	26	34	65	129	**254**

--Exhibit 37 is continued on the next page--

Provider Specialty	Bronx	Brooklyn	Manhattan	Queens	Total
Nurse Practitioner	25	4	5	16	**50**
Nursing Home	8	2	2	12	**24**
Ophthalmology	1	7	30	22	**60**
Orthopedic Surgery	0	3	4	11	**18**
Otolaryngology	0	4	10	3	**17**
Pediatrics	60	50	81	141	**332**
Physical Medicine & Rehabilitation	1	12	9	17	**39**
Physician-Other Specialty	89	110	318	324	**841**
Podiatry	6	12	18	20	**56**
Psychiatry	8	2	13	45	**68**
Pulmonary Disease	2	4	4	5	**15**
Radiology	1	4	10	8	**23**
Surgery	1	4	5	5	**15**
Urology	4	6	12	10	**32**
No Classification	137	202	305	285	**929**
Total	**462**	**680**	**1,160**	**1,561**	**3,863**

Note: Only specialties with greater than 10 providers total were included in this table.
Source: ACP, December 2014

Community-Based Resources (Section A.ii.)

The four boroughs have a large number of community resources and services of many types. Resources enumerated and summarized by type and location here can be identified by name and location and researched in greater detail by using the source references provided. Of particular value for many resource categories was the Greater New York Hospital Association's Health Information Tool for Empowerment.

A summary of these resources and notable or potential gaps in resources, as pertains to the health and health service priorities and proposed DSRIP projects, is in the "Summary of Assets and Resources to Help Address DSRIP Strategies and Projects" section that begins on page 148.

Community Health Coalitions

Community health coalitions are partnerships between health organizations and non-health community organizations. There are at least 12 community coalitions, with a total of 56 sites serving the four borough area. The majority of the coalitions have sites in Manhattan and Brooklyn, while Queens has the fewest. There are five coalitions serving Brooklyn, four serving Manhattan and three serving both the Bronx and Queens (**Exhibit 38**).

Exhibit 38: Coalitions with Non-traditional and Non-health Partners, 2012

Partnership/Coalition	Location and Number			
	Bronx	Brooklyn	Manhattan	Queens
Asthma Coalition of Queens				1
Bronx RESPIRAR Asthma Coalition	1			
Bronx Smoke-Free Partnership	1			
Brooklyn Active Transportation Community Planning Initiative		1		

Brooklyn Smoke-Free Partnership		1		
Brownsville Partnership		1		
Comprehensive Adolescent Pregnancy Prevention Projects	9	13	14	6
Healthy Eating Active Living by Design			4	
Manhattan Smoke-Free Partnership			1	
North Brooklyn Asthma Action Alliance		1		
Queens Smoke-Free Partnership				1
Washington Heights Inwood Network, Best Asthma Care for Kids (WIN-BACK)			1	
Total Number of Sites	**11**	**17**	**20**	**8**

Source: New York State Department of Health, Health Data, accessed 2014[55]

Housing Services

According to GNYHA-HITE, there are approximately 91 housing/housing services/shelters serving the Bronx, 82 serving Brooklyn, 40 serving Manhattan and 23 serving Queens.[56]

New York City Housing Authority (NYCHA)

The Housing Authority provides low and moderate cost housing to more than 400,000 New York City residents. NYCHA operates approximately 104 developments in the Bronx, 103 in Brooklyn, 108 in Manhattan, and 23 in Queens. NYCHA also provides Section 8 rental subsidies to 235,000 people city-wide.[57]

NYCHA also operates community facilities, including community centers and senior centers, the deliver a wide range of educational, cultural, and recreational services run by the city and community-based organizations. There are approximately 104 community facilities in the Bronx, 125 in Brooklyn, 179 in Manhattan, and 47 in Queens. Programs include Head Start, health clinics, child day care, sports, arts, and other educational and social services programs. **Appendix 2** depicts the number and types of community facilities operated and sponsored by NYCHA.[58]

Food Banks, Community Gardens, and Farmers Markets

There are approximately 766 food pantries located in the four boroughs.[59] **Exhibit 39** depicts available food pantry services by type and borough.

Exhibit 39: Number and Type of Food Pantries, by Borough

[55] See https://health.data.ny.gov/Health/Health-Coalitions-A-Resource-for-Community-Collabo/w43m-6kfj
[56] GNYHA-HITE. See http://www.hitesite.org
[57] See http://www.nyc.gov/html/nycha/html/about/about.shtml.
[58] Descriptions of New York City Housing Authority services can be found at http://www.nyc.gov/html/nycha/html/community/community.shtml.
[59] Food Bank for New York City. See http://www.foodbanknyc.org/foodprogramlocator

Borough	Food Pantries	Soup Kitchens	Senior Food Services	Total
Bronx	123	30	4	**157**
Brooklyn	204	54	3	**261**
Manhattan	103	61	13	**177**
Queens	147	24	5	**171**

Source: Food Bank for New York City, accessed October 2014

There are a total of 31 community gardens in the Bronx. Brooklyn has 40 community gardens, with the majority located in Bedford-Stuyvesant and East New York. There are a total of 42 community gardens located in Manhattan. The majority are located in Upper Manhattan and on the Lower East Side. There are seven community gardens in Queens.[60, 61] There are 36 farmers' markets located in the Bronx, 65 in Brooklyn, 49 in Manhattan, and 17 in Queens.[62]

Financial Assistance, including Clothing and Furniture Banks

According to GNYHA-HITE, there were a total of 415 financial assistance services within the community. Of these, 63 offer clothing services and five offer furniture services. **Exhibit 40** below depicts the number of services by type and borough.

According to GNYHA-HITE, there were also approximately 45 family financial support/welfare programs serving the Bronx, 71 serving Brooklyn, 13 serving Manhattan and 20 serving Queens.[63]

Exhibit 40: Number of Financial Assistance Programs, by Borough and Type

	Assistance Type		
Borough	Financial	Clothing	Furniture
Bronx	73	11	0
Brooklyn	92	7	1
Manhattan	162	36	2
Queens	74	9	2
Total	**401**	**63**	**5**

Source: GNYHA-HITE, accessed 2014

Transportation Services

According to the New York City Department of City Planning, there are 318 transportation

[60] Grow New York City. See http://www.grownyc.org/openspace/community-gardens
[61] New York Restoration Project. See https://www.nyrp.org/green-spaces/Community_Gardens
[62] New York State Department of Agriculture. See http://www.agriculture.ny.gov/ap/communityfarmersmarkets.asp
[63] GNYHA-HITE See http://www.hitesite.org/

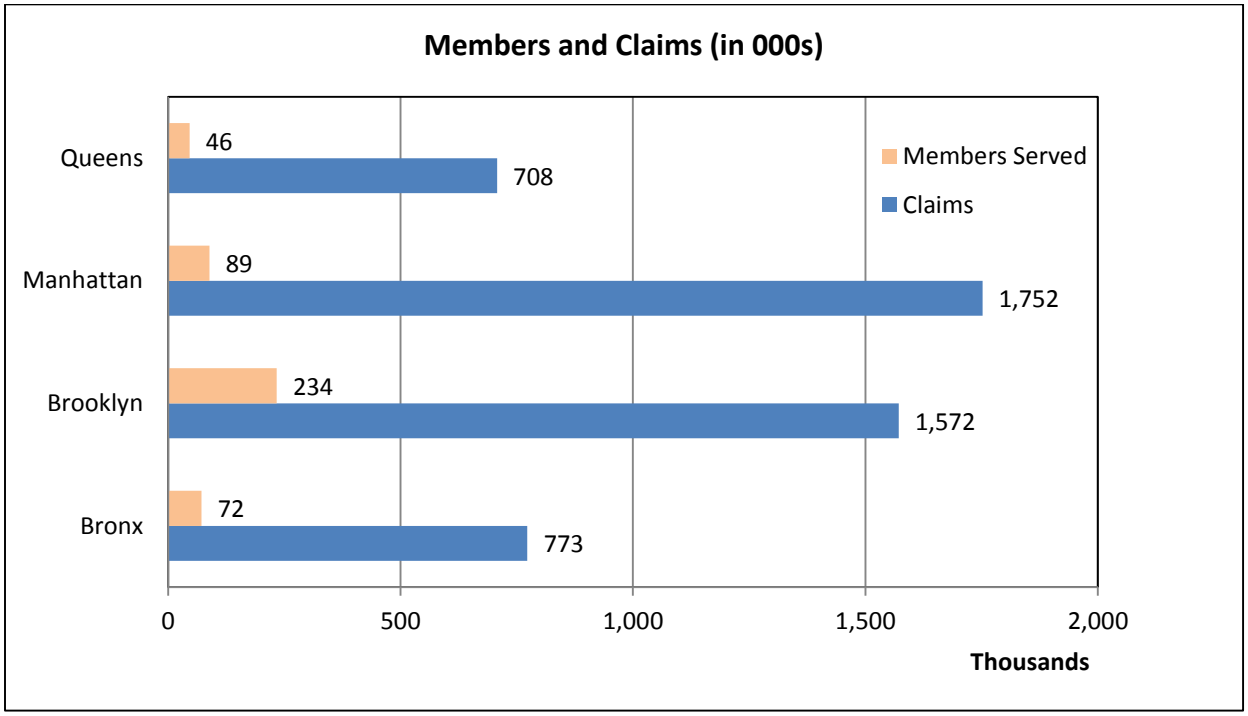
facilities located in the four boroughs.[64] There are 120 serving the Bronx, 63 serving Brooklyn, 50 serving Manhattan, and 85 serving Queens.

The **Exhibit 41** illustrates the numbers of Medicaid transportation claims and members served in each borough. Manhattan and Brooklyn had the highest numbers of claims in 2013. Brooklyn had the largest number of unique members served, while Queens had both the lowest numbers of members served and of transportation claims.

The percentages of Medicaid members using transportation services varied widely by borough. Using Medicaid enrollment figures in each borough (**Exhibit 77**) and the numbers of members served in **Exhibit 41**, Brooklyn and Manhattan have the highest proportion of Medicaid members utilizing transportation services, at 17.6 percent and 16.4 percent, respectively. In the Bronx, just over eight percent of members used transportation services, while in Queens the figure was only 4.6 percent.

[64] New York City Department of City Planning, "Selected Facilities and Program Sites"

Exhibit 41: Medicaid Transportation Claims and Members Served, by Borough, 2013



Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Services for Individuals with Intellectual or Developmental Disabilities

According to GNYHA-HITE, there were 57 developmental disability programs serving the Bronx, 57 serving Brooklyn, 58 serving Manhattan and 42 serving Queens.[65]

The organization AHRC New York City offers 54 developmental disability programs that serve all four boroughs. There are 19 programs sites located in the Bronx, 22 in Brooklyn, 20 in Manhattan and 25 in Queens.[66]

Peer and Family Mental Health Advocacy Organizations and NAMI

There are approximately 165 mental health advocacy groups within the community, including 46 in the Bronx, 43 in Brooklyn, 51 in Manhattan, and 25 in Queens. In addition to these services, organizations such as the National Alliance on Mental Illness (NAMI) of New York City and the Mental Health Association of New York City (MHA-NYC) provide a wide range of programs that reach over 500,000 people each year.[67] The organizations offer services for youth, adults, and their caregivers that include skill-building for adolescents, supportive services for recovery from mental illness, housing programs, peer support, and education.

---

[65] GNYHA-HITE. See http://www.hitesite.org
[66] AHRC New York City. See http://www.ahrcnyc.org/services/services-by-borough/servicesbyborough.html
[67] See http://www.naminycmetro.org and http://www.mhaofnyc.org.

Youth Development Programs

According to GNYHA-HITE, there are approximately 89 youth development programs serving the Bronx, 131 serving Brooklyn, 38 serving Manhattan and 33 serving Queens. While "youth development" is a broad category of service, for this assessment it includes tutoring, mentoring, summer youth programs, after school programs, and youth groups.[68]

Education Facilities and Institutions, and Libraries with Open Access Computers

According to the New York City Department of City Planning, there are 2,531 school facilities and educational institutions in the four boroughs. There are 531 in the Bronx, 889 in Brooklyn, 590 in Manhattan, and 521 in Queens. **Exhibit 42** depicts the number, type, and levels of schools in each of the four boroughs.

Exhibit 42: Number of School Facilities, by Type and Borough

Borough	Public Elementary and Secondary Schools	Private / Parochial Elementary / Secondary Schools	Colleges / Post-Secondary
Bronx	419	100	12
Brooklyn	542	331	16
Manhattan	347	170	73
Queens	337	170	14
Total	**1,645**	**771**	**115**

Source: New York City Department of City Planning "Selected Facilities," accessed October 2014

The New York Public Library serves Manhattan and the Bronx. There are 40 NYPL libraries in Manhattan and 35 in the Bronx, all with computer and internet access.[69]

The Brooklyn Public Library serves the borough of Brooklyn and has 65 locations with computer and internet access.[70] The Central Library also offers job training and research assistance.

The Queens Library serves the borough of Queens and has 68 locations with computer and internet access.[71] It also provides a wide range of other services, including: adult literacy, citizenship and immigration, community information, health information, international relations, job and business academy, ESL, multilingual services, older adult services, disability services, and veterans information.

Local Governmental Social Service Programs

The New York City Department of Social Services provides several services to all the boroughs. Some of their services include: adult protective services, domestic violence support, health

[68] GNYHA-HITE. See http://www.hitesite.org
[69] New York Public Library. See http://www.nypl.org/locations
[70] Brooklyn Public Library. See http://www.bklynlibrary.org/locations
[71] Queens Library. See http://www.queenslibrary.org/ql_findabranch and http://www.queenslibrary.org/services

insurance coverage, HIV/AIDS services administration, long term care, food programs, and Wellness Comprehensive Assessment Rehabilitation and Employment (WeCare).[72]

The city and New York State also have several offices and departments that serve the social needs of New York City residents. New York City's offices include: the Housing Authority, Department of Health, Division of Housing and Community Renewal, and the Department of Family Assistance. New York State's offices include: the Commission on Quality of Care for the Mentally Disabled, Office of Alcoholism and Substance Abuse Services, Office of Mental Health, Office of Vocational and Educational Services for Individuals with Disabilities, the office of Youth Development, and the Society for Clinical Social Work.

Family Support and Training

According to GNYHA-HITE, there are approximately 78 family support programs serving the Bronx, 115 serving Brooklyn, 39 serving Manhattan and 34 serving Queens. Programs for this search included home-based family support and parenting support.[73]

Foster Children Agencies

The New York City Administration of Children's Services (NYC-ACS) reported 1,202 foster care placements in 2013 where the Bronx was the "borough of origin," 1,258 for Brooklyn, 751 for Manhattan, and 703 for Queens. The following neighborhoods each had 150 or more placements: Highbridge/Concourse (Bronx), East New York/Starrett City (Brooklyn), East Harlem (Manhattan), Brownsville (Brooklyn), Bedford Stuyvesant (Brooklyn), and Jamaica/Hollis (Queens).[74]

There are 153 NYC-ACS "Community Partners" serving the four boroughs.[75] Forty partner organizations serve the Bronx, 49 Brooklyn, 28 Manhattan, and 36 for Queens**. Exhibit 43** depicts the types of services provided by NYC-ACS Community Partners in each borough.

---

[72] New York City Human Resources Administration. See http://www.nyc.gov/html/hra/html/services/services.shtml
[73] GNYHA-HITE. See http://www.hitesite.org.
[74] New York City Administration for Children's Services. "Foster Care Placements by Borough/CD of Origin, CY 2013 and 2012." See http://www.nyc.gov/html/acs/downloads/pdf/statistics/Placement_Stats_District_2013.pdf.
[75] New York City Administration for Children's Services. "ACS Community Partners." See https://data.cityofnewyork.us/Social-Services/ACS-Community-Partners/9hyh-zkx9.

Exhibit 43: Number and Type of ACS Community Partner Organizations

Borough	Family Treatment and Rehabilitation	General Preventive	Intensive Preventive	Medically Fragile
Bronx	12	25	2	1
Brooklyn	11	34	2	2
Manhattan	8	18	0	2
Queens	11	23	1	1
Total	**42**	**100**	**5**	**6**

Source: NYC Open Data, ACS Community Partners - accessed October 2014

Individual Employment Support Services

According to GNYHA-HITE, there are approximately 78 employment and vocational programs serving the Bronx, 121 serving Brooklyn, 43 serving Manhattan, and 42 serving Queens.[76]

In addition, Seedco is a workforce development organization that also provides family resources and employer and small business services. The organization offers employment services, career development services, health care enrollment services, and family services in all four boroughs. They have one location in the Bronx, four in both Brooklyn and Manhattan, and two in Queens.[77]

Community Outreach, Welfare Agencies, and Religious and Community Service Organizations

A search of the GNYHA-HITE tool indicates that there are at least 385 community outreach, welfare, religious, and community service programs within the community. The boroughs of Manhattan (120) and Brooklyn (116) have nearly twice as many services as Queens (61). There at least 88 such services and programs in the Bronx. This resource category is broad, many organizations deliver multiple services, and a large number of related organizations and programs are described or enumerated elsewhere within the Community Resources section.[78]

Alternatives to Incarceration/Offender Services

According to GNYHA-HITE, there are approximately 13 criminal justice offender programs serving the Bronx, 19 serving Brooklyn, six serving Manhattan, and five serving Queens.[79]

The NYC-ACS started a program in 2012 called "Close to Home," which houses juveniles who have committed a "delinquent act" near their neighborhood in an effort to reduce recidivism

[76] GYNHA-HITE. See http://www.hitesite.org
[77] Seedco. See http://www.seedco.org/where-we-work/new-york/
[78] GYNHA-HITE. See http://www.hitesite.org
[79] *Ibid.*

rates, improve the safety of the community, and have fewer juveniles in detention centers.[80] In addition, NYC-ACS operates the Juvenile Justice Oversight Board, which oversees detention facilities and placement sites, and monitors them for potential improvements.[81]

NYC-ACS operates secure detention facilities in the Mott Haven (Bronx) and Brownsville (Brooklyn) neighborhoods. The agency also operates or contracts with 15 total non-secure detention group homes across all four boroughs.[82]

Ryan White programs and HIV Prevention, Outreach, and Social Service Programs

According to the NYC DOHMH, there are 41 Ryan White program sites in Manhattan, 29 in the Bronx, 16 in Brooklyn, and only two in Queens.[83]

According to GNYHA-HITE, there are approximately 77 HIV/AIDS programs serving the Bronx, 94 serving Brooklyn, 26 serving Manhattan and 31 serving Queens.[84]

Domain 2: System Transformation Metrics (Section A.iii.)[85]

Potentially Preventable Emergency Room Visits

The following tables and maps depict Potentially Preventable Emergency Room Visit (PPV) rates by borough, payer type, and neighborhood. **Exhibit 44** shows that Manhattan had the highest risk-adjusted PPV per 100 people for Medicaid recipients, followed by the Bronx. Brooklyn and Queens were approximately equal and substantially lower than the other two boroughs.

Comparing the "Medicaid only" and "All Payers" PPV rates, the data demonstrates that potentially preventable ER visits are between 25 percent (Bronx) and 74 percent (Manhattan) more frequent for Medicaid members than for all community residents overall.

Exhibits 45 and **46** present PPV rates mapped at the zip code level and numerically by neighborhood. A discussion of these rates and their pattern across the community is in the "Quality of Healthcare" section on pages 127-130.

---

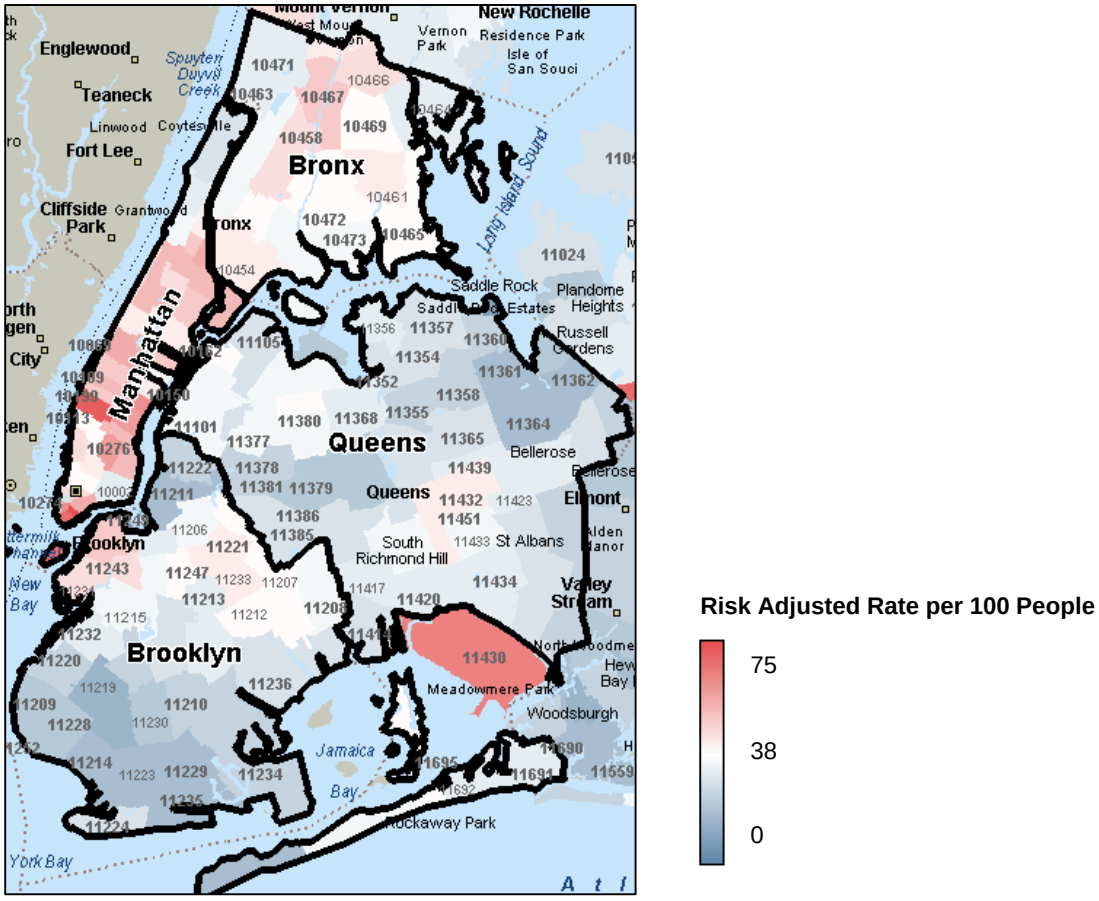
[80] New York City Administration for Children's Services.
See http://www.nyc.gov/html/acs/html/close_to_home/close_to_home.shtml
[81] New York City Administration for Children's Services.
See http://www.nyc.gov/html/acs/html/yfj/detention_services.shtml#health
[82] See http://www.nyc.gov/html/acs/html/yfj/juvenile_resident_info.shtml. Accessed October 2014.
[83] New York City Department of Health and Mental Hygiene.
See https://a816-healthpsi.nyc.gov/DispensingSiteLocator/mainView.do
[84] GYNHA-HITE. See http://www.hitesite.org
[85] Data on some Domain 2 metrics in the Guidance document were not available from the state or other identified publicly available sources at the time this report was produced.

Exhibit 44: Potentially Preventable Emergency Room Visits (PPV), by Borough and Payer Type, 2012

Borough	Medicaid only (Risk Adjusted Rate per 100 People)	All Payers (Risk Adjusted Rate per 100 People)
Bronx	38.2	30.3
Brooklyn	28.8	22.3
Manhattan	42.1	24.2
Queens	30.8	21.3
New York City	**35.2**	**24.4**
New York State	**36.1**	**23.5**

Source: NYSDOH, Open Data, Medicaid/All Payer Potentially Preventable Emergency Visits – accessed 2014[86]

Exhibit 45: Potentially Preventable Emergency Room Visits (Medicaid only), by Zip Code, 2012



Source: NYSDOH, Health Data NY accessed 2014, and Microsoft MapPoint 2010

[86] See https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7a-34ka

Exhibit 46: Potentially Preventable Emergency Room Visits (Medicaid only), by Neighborhood, 2012

Borough and Neighborhood	Number of Medicaid PPV Events	Risk Adjusted Rate per 100 People
Bronx	**346,837**	**38.2**
Bronx Park and Fordham	71,626	41.1
Central Bronx	68,998	38.4
High Bridge and Morrisania	67,220	37.7
Hunts Point and Mott Haven	44,460	38.7
Kingsbridge and Riverdale	9,287	30.9
Northeast Bronx	31,979	38.1
Southeast Bronx	53,267	36.4
Brooklyn	**346,497**	**27.5**
Borough Park	26,744	17.1
Bushwick and Williamsburg	51,907	38.5
Canarsie and Flatlands	18,647	24.5
Central Brooklyn	74,035	37.5
East New York and New Lots	47,135	35.4
Flatbush	44,131	27.9
Greenpoint	9,112	19.3
Northwest Brooklyn	23,408	38.9
Southern Brooklyn	23,227	20.4
Southwest Brooklyn	11,180	18.5
Sunset Park	16,971	24.3
Manhattan	**200,286**	**41.4**
Central Harlem	44,215	47.0
Chelsea and Clinton	19,074	57.8
East Harlem	35,244	49.7
Gramercy Park and Murray Hill	4,919	50.4
Greenwich Village and Soho	3,334	36.1
Inwood and Washington Heights	45,340	29.7
Lower East Side	22,872	38.0
Lower Manhattan	5,705	55.6
Upper East Side	4,078	39.6
Upper West Side	15,505	49.7
Queens	**246,382**	**30.5**
Central Queens	7,591	29.2
Jamaica	45,601	34.4
North Queens	17,342	25.0
Northeast Queens	2,236	18.7
Northwest Queens	21,041	31.8
Rockaways	18,553	32.6
Southeast Queens	15,953	26.5
Southwest Queens	32,067	31.2
West Central Queens	17,730	25.0
West Queens	68,268	33.8
Total	**1,140,002**	**32.8**

Source: NYSDOH, Open Data-Medicaid PPV by Zip Code – accessed 2014

Potentially Preventable Readmissions

Potentially Preventable Readmission (PPR) rates for each borough and for hospitals in each borough are below (**Exhibit 47**). Thirty-four of the 44 hospitals (77%) had risk-adjusted rates of between 5.5 and 7.5 PPRs. Four of the 10 hospitals outside of that range had fewer than 100 at-risk admissions, and their rates should be interpreted with caution due to the small sample sizes.

Exhibit 47: Potentially Preventable Readmissions (PPR), by Hospital, 2013

Borough and Facility Name	At Risk Admissions	Observed PPR Chains	Observed PPR Rate (per 100 At-Risk Admissions)	Expected PPR Rate	Risk Adjusted PPR Rate
Bronx	**95,234**	**7,061**	**7.4**		
Bronx-Lebanon Hospital Center - Concourse Division	17,467	1,581	9.1	7.7	7.4
Calvary Hospital Inc	77.0	13.0	16.9	7.9	13.6
Jacobi Medical Center	12,198	679	5.6	6.1	5.8
Lincoln Medical & Mental Health Center	15,377	1,062	6.9	5.7	7.7
Montefiore Med Center - Jack D Weiler Hospital of A Einstein College Division	36,042	2,530	7.0	6.3	7.0
North Central Bronx Hospital	4,289	289	6.7	6.6	6.5
SBH Health System	9,784	907	9.3	8.1	7.2
Brooklyn	**124,643**	**7,532**	**6.0**		
Brookdale Hospital Medical Center	8,353	531	6.4	6.6	6.1
Brooklyn Hospital Center - Downtown Campus	8,642	546	6.3	5.4	7.5
Coney Island Hospital	5,494	342	6.2	6.7	5.9
Interfaith Medical Center	4,716	686	14.6	12.2	7.5
Kings County Hospital Center	14,580	1,029	7.1	6.7	6.7
Kingsbrook Jewish Medical Center	3,028	264	8.7	7.5	7.3
Lutheran Medical Center	12,106	483	4.0	4.7	5.4
Maimonides Medical Center	23,923	951	4.0	3.7	6.7
New York Community Hospital of Brooklyn	3,059	151	4.9	6.3	4.9
New York Methodist Hospital	13,537	706	5.2	4.9	6.7
SUNY Downstate Medical Center at LICH	17	1	5.9	11.6	3.2
University Hospital of Brooklyn	9,717	665	6.8	5.6	7.7
Woodhull Medical & Mental Health Center	9,448	688	7.3	6.7	6.9
Wyckoff Heights Medical Center	8,023	489	6.1	5.3	7.2
Manhattan	**120,247**	**8,919**	**7.4**		
Bellevue Hospital Center	11,718	1,183	10.1	7.8	8.2
Coler-Goldwater Specialty Hospital & Nursing Facility - Coler Hospital Site	59	10	17.0	7.7	13.9
Harlem Hospital Center	7,485	691	9.2	8.0	7.3
Hospital for Special Surgery	399	6	1.5	3.5	2.7
Lenox Hill Hospital	4,253	319	7.5	6.0	7.9
Memorial Hospital for Cancer and Allied Diseases	385	27	7.0	6.5	6.9
Metropolitan Hospital Center	8,595	857	10.0	7.5	8.4
Mount Sinai Beth Israel	18,852	1,567	8.3	7.7	6.8

-- Exhibit 47 continued on next page --

-- Exhibit 47 continued from previous page --

Borough and Facility Name	At Risk Admissions	Observed PPR Chains	Observed PPR Rate (per 100 At-Risk Admissions)	Expected PPR Rate	Risk Adjusted PPR Rate
Mount Sinai Hospital	18,806	1,295	6.9	6.6	6.6
Mount Sinai Roosevelt	3	-	0	9.3	0
Mount Sinai St. Luke's	13,230	1,040	7.9	7.5	6.6
New York Eye and Ear Infirmary / Mt. Sinai	155	7	4.5	4.2	6.8
New York Presbyterian Hospital - Columbia Presbyterian Center	32,596	1,731	5.3	5.9	5.7
NYU Hospital for Joint Diseases	415	16	3.9	4.5	5.4
NYU Hospitals Center	3,296	170	5.2	5.8	5.7
Queens	**79,179**	**4,476**	**5.7**		
Elmhurst Hospital Center	14,936	833	5.6	5.2	6.8
Flushing Hospital Medical Center	8,864	471	5.3	4.6	7.4
Forest Hills Hospital	5,854	239	4.1	4.1	6.3
Jamaica Hospital Medical Center	11,742	677	5.8	5.5	6.7
Long Island Jewish Medical Center	12,819	865	6.8	6.5	6.5
NY Hospital Medical Center of Queens	12,426	486	3.9	4.1	6.0
Queens Hospital Center	7,837	549	7.0	6.1	7.2
St John's Episcopal Hospital So Shore	4,701	356	7.6	7.4	6.5
New York State	**708,308**	**44,716**	**6.3**		

*Note: "PPR chain" refers to the total number of admissions at that hospital that were followed by a readmission.
Source: New York State Department of Health, Health Data NY, accessed 2014

Prevention Quality Indicators

The tables and maps below show the Prevention Quality Indicators (PQI) by borough, discharge type, and location. **Exhibit 48** shows that Bronx has a much higher rate of 2,343.9 per 100,000 population, compared to the other boroughs and to New York City (1,858.9). Additionally, **Exhibit 49** illustrates that the Bronx compared unfavorably to New York State for all major discharge types.

Exhibit 48: PQI Suite – Overall Composite of All Measures, by Borough, 2012

Borough	Adult Medicaid Population (average 2011-2012)	Number of Admissions	Avg. Risk-Adjusted Area Rate (per 100,000 population)
Bronx	515,075	13,447	2,343.9
Brooklyn	807,061	14,175	1,724.4
Manhattan	363,362	7,375	1,716.2
Queens	621,478	8,316	1,481.7
New York City	**2,390,774**	**44,943**	**1,858.9***
New York State	**3,872,275**	**69,084**	**1,784.1***

*Observed rate per 100,000
Source: New York State Department of Health, Health Data NY – accessed 2014

Exhibit 49: Medicaid PQIs for Adult Discharges, by Borough, 2012

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York State
	Risk Adjusted Rate per 100,000 population				
Angina Without Procedure	31.3	27.9	20.6	26	**24.7**
Asthma in Younger Adults	217.7	118	163.6	84.6	**134.8**
Bacterial Pneumonia	290.2	207.5	225	220.5	**241.4**
Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults	1,076.9	741.2	730.6	561.1	**779.1**
Dehydration	129.3	90.7	114.3	73.6	**102.2**
Diabetes Long-term Complications	256.8	205.1	189.8	164.4	**195.5**
Diabetes Short-term Complications	131.2	101.4	114.8	83.8	**116.4**
Heart Failure	361.3	301.6	258.4	253.6	**281.5**
Hypertension	153.1	96.8	99.3	92.4	**101.7**
Lower-Extremity Amputation among Patients with Diabetes	25	17.3	12.6	13.6	**18.1**
Uncontrolled Diabetes	50.22	49.8	37.8	35.1	**43.4**
Urinary Tract Infection	236.7	178.2	187	179.5	**186.4**
Prevention Quality All Circulatory Composite	**547.7**	**426**	**378.5**	**372.2**	**407.9**
Prevention Quality All Diabetes Composite	**451.4**	**365.3**	**347.6**	**292.3**	**364.7**
Prevention Quality All Respiratory Composite	**683.3**	**453.5**	**465.6**	**341.4**	**481.7**
Prevention Quality Chronic Composite	**1,681.5**	**1,246.1**	**1,191.0**	**1,008.2**	**1,254.3**
Prevention Quality Acute Composite	**656.9**	**476.2**	**526.7**	**473.7**	**530**
Prevention Quality Overall Composite	**2,343.9**	**1,724.4**	**1,716.2**	**1,481.7**	**1,784.1**

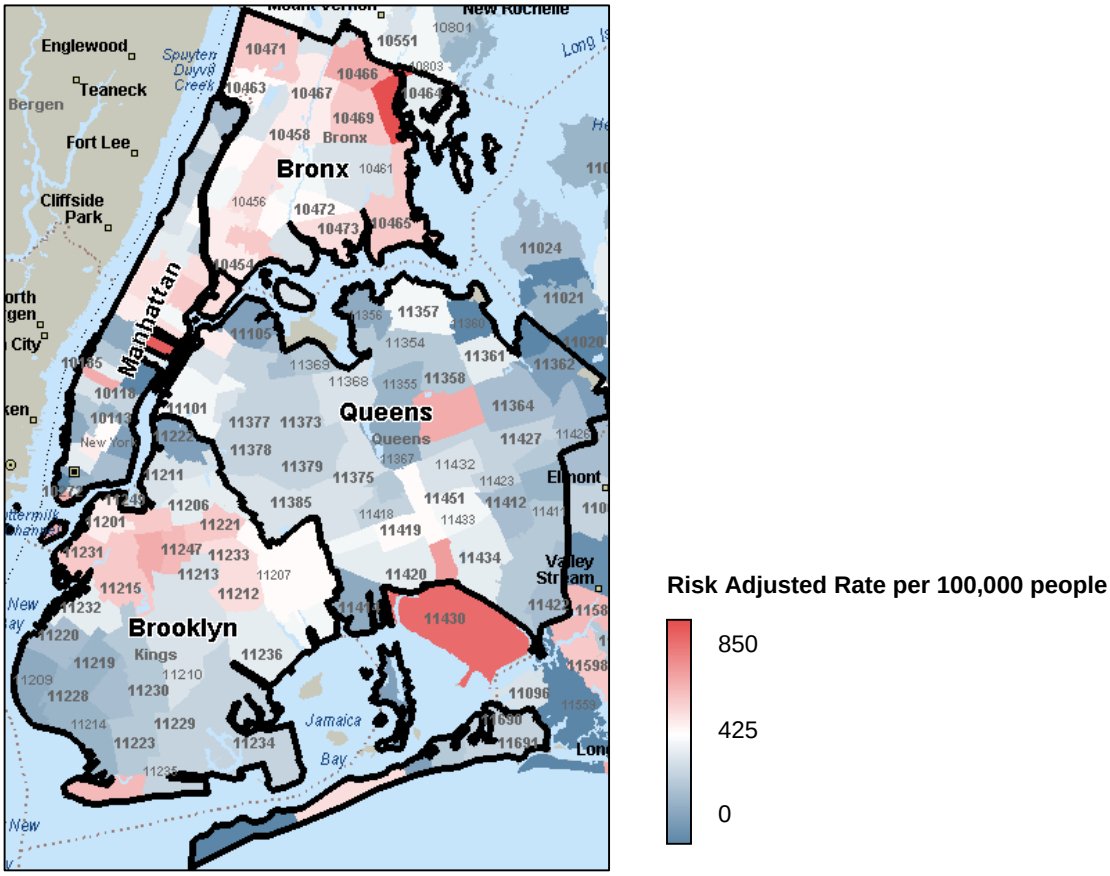
Source: New York State Department of Health, Health Data NY, accessed 2014.[87]

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
Greater than 75% worse than NYS	

The maps in **Exhibits 50** to **53** display the geographic distribution of risk-adjusted PQI rate ranges at the zip code level for the PQI All Diabetes, All Circulatory, All Respiratory, and All Acute Composites. Borough-level maps of these PQIs at the zip code level can be found in **Appendix 8, Exhibits 8B-E**.

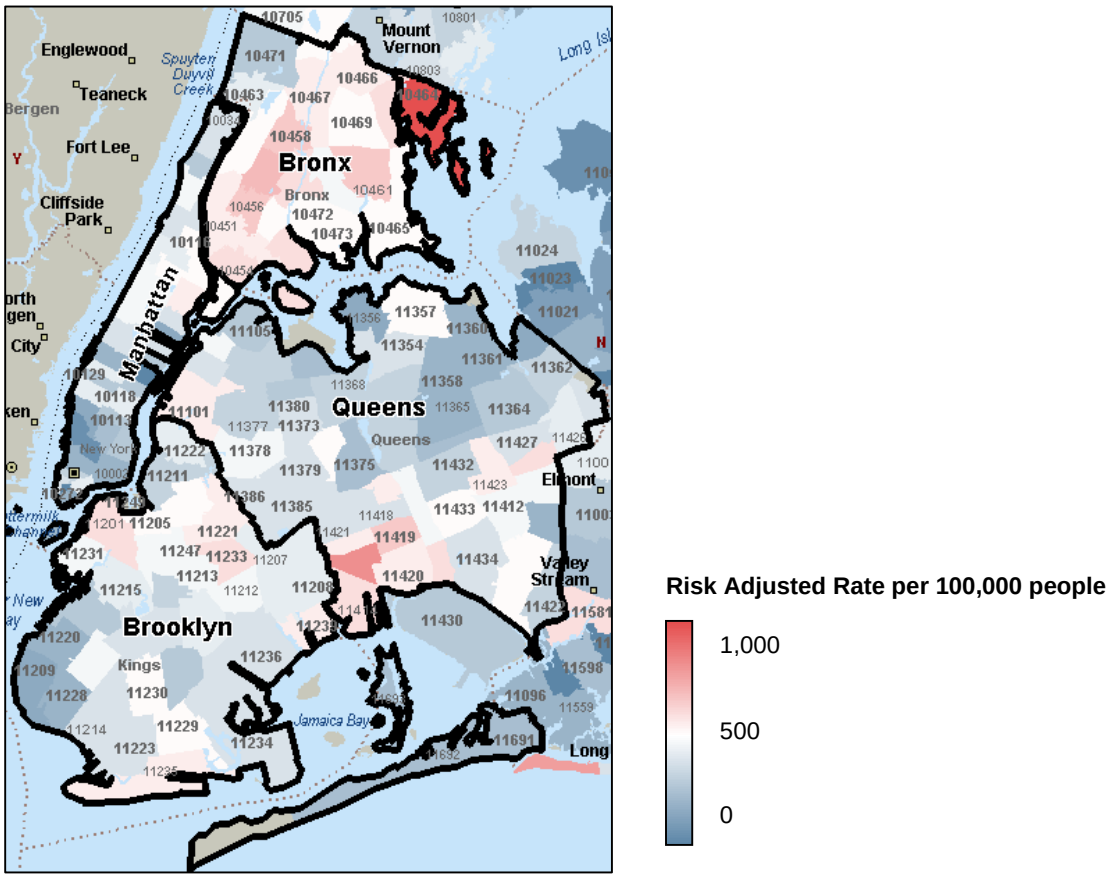
[87] See: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/izyt-3msa.

Exhibit 50: Prevention Quality Indicator - All Diabetes Composite, by Zip Code, 2012



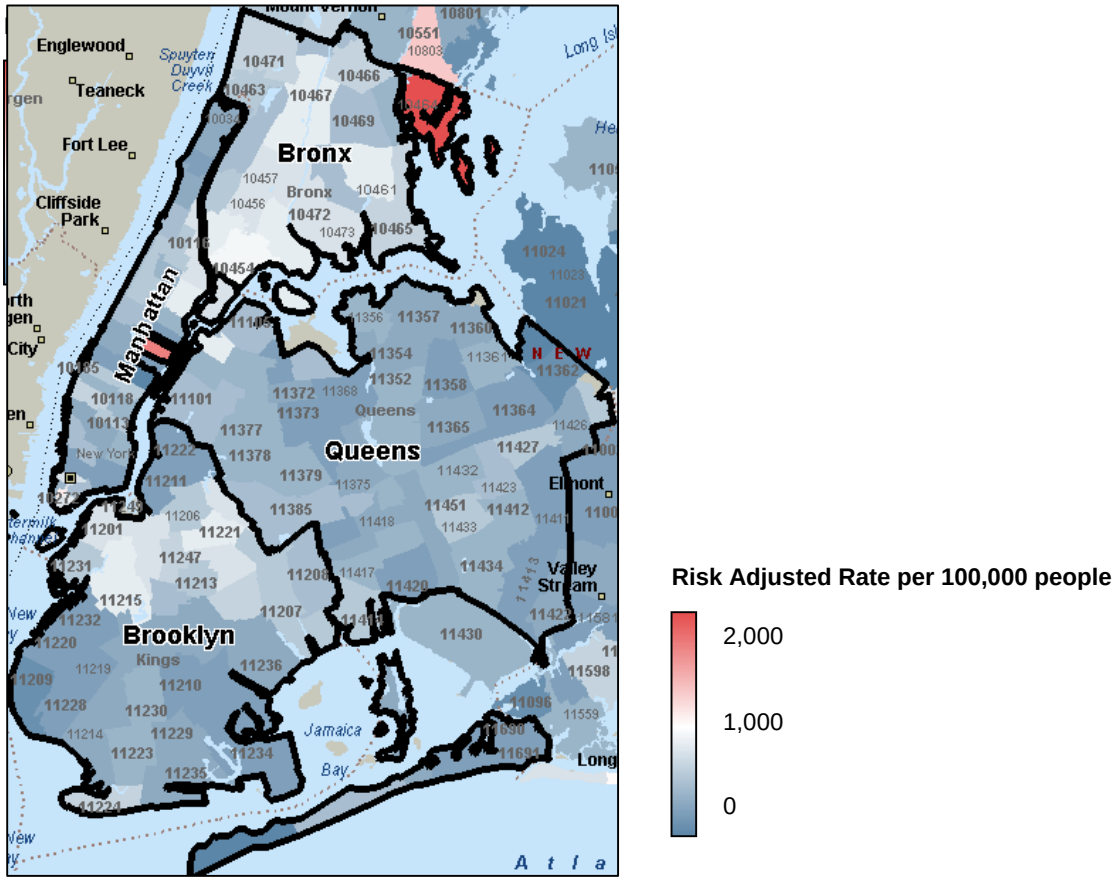
Source: New York State Department of Health, Health Data NY accessed 2014, and Microsoft MapPoint 2010

Exhibit 51: Prevention Quality Indicator - All Circulatory Composite, by Zip Code, 2012



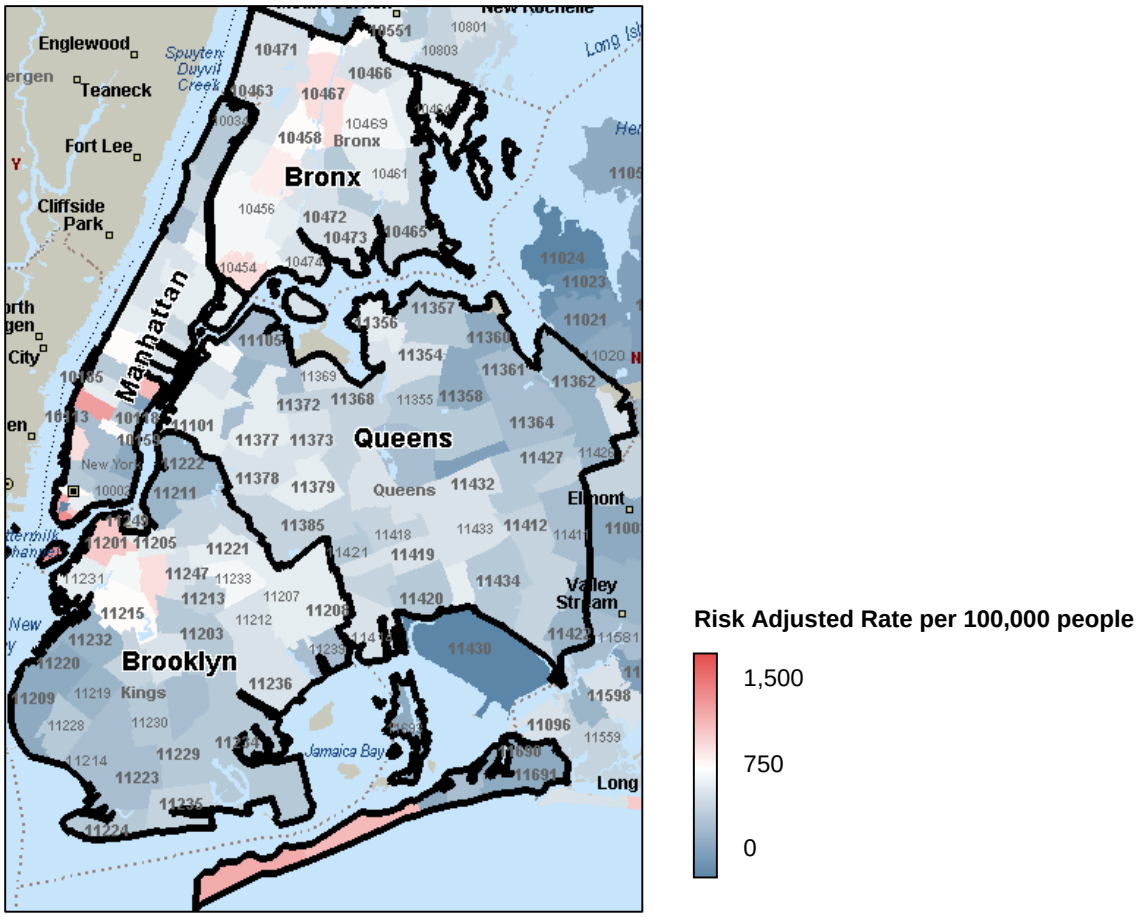
Source: New York State Department of Health, Health Data NY accessed 2014, and Microsoft MapPoint 2010

Exhibit 52: Prevention Quality Indicator - All Respiratory Composite, by Zip Code, 2012



Source: New York State Department of Health, Health Data NY accessed 2014, and Microsoft MapPoint 2010

Exhibit 53: Prevention Quality Indicator - Acute Composite, by Zip Code, 2012



Source: New York State Department of Health, Health Data NY accessed 2014, and Microsoft MapPoint 2010

Exhibit 54 below shows Pediatric Quality Indicator (PDI) rates by borough. The Bronx had the highest overall risk-adjusted rate, while Queens had the lowest. Manhattan had the second highest and Brooklyn had the second lowest rate. The Bronx and Manhattan were both significantly unfavorable to New York State, and Brooklyn was slightly unfavorable to the state.

Exhibit 54: PDI Suite – Composite of All Measures, by Borough, 2012

Borough	Pediatric Medicaid Population (average 2011-2012)	Number of Admissions	Risk-Adjusted Area Rate (per 100,000 population)
Bronx	221,842	1,151	508.8
Brooklyn	308,820	926	365.6
Manhattan	94,123	355	411.6
Queens	208,895	393	235.0
New York City	**173,101**	**582**	**367.8**
New York State	**1,420,512**	**3,774**	**322.8***

*Observed rate per 100,000

Source: New York State Department of Health – Health Data NY, accessed 2014

Exhibit 55 illustrates access, utilization, and select CAHPS measures at the New York State level and, where available, for New York City. For the CAHPS measure on whether patients reported being "given information about what to do during their recovery at home," 80 percent in Manhattan said "yes." The other three boroughs had similar, slightly lower, levels with figures between 76 and 78 percent.[88]

Exhibit 55: HEDIS and CAHPS Measures on Access and Availability of Care, 2013

Indicator	New York State	New York City
HEDIS Access/Availability of Care; Use of Services[89]		
Access to Preventative/Ambulatory Services* (percent of eligible population)	88%	-
Outpatient Utilization – ER (per 1,000 member years)	590	-
Outpatient Utilization - Outpatient Services (per 1,000 member years)	5,329	-
Inpatient Utilization – Discharges (per 1,000 member years)	95	-
Inpatient Utilization – Days (per 1,000 member years)	368	-
Mental Health Utilization (percent of eligible population)	8.2%	-
CAHPS Measures[90]		
Usual source of care (%yes)	84.1%	85.5%
Got care from a doctor/provider other than personal doctor (% yes)	57.9%	52.7%
Getting Care quickly (routine) (% usually/always)	68.6%	74.6%
Getting Care quickly (urgent) (% usually/always)	76.3%	81.5%
Wait time for appointment (% < 4 days)	60.8%	64.6%
Personal doctor informed and up-to-date about care received from other providers (% usually/always)	76.2%	77.7%
Patients who reported they were given information about what to do during their recovery at home (% yes)	83.0%	-

*Note: This number is an average of three age groups: 20-44, 45-64, and 65+.
Source: New York State Department of Health – accessed 2014

Description of the Community to be Served (Section B)

Demographics of the Population (Section B.i.)

The community was home to an estimated 7,373,239 people in 2012, with the largest number in Brooklyn (2,512,740), and the smallest in the Bronx (1,386,364).[91]

Population by Age, Gender, and Race/Ethnicity

[88] Centers for Medicare & Medicaid Services, Official Hospital Compare Data. See https://data.medicare.gov/data/hospital-compare
[89] New York State Department of Health, "2013 Health Plan Service Use in New York State Report"
[90] New York State Department of Health, Medicaid Managed Care Program, CAHPS© 5.0 Adult Medicaid Survey, "Continuous Quality Improvement Report," February 2014
[91] U.S. Census Bureau, ACS 5 Year Estimates, 2008-2012

Brooklyn and the Bronx had the youngest age distributions of the four boroughs, with both the highest proportions of people age 19 and under, and the lowest proportions of people age 65 and over. Thirty percent of people residing in the Bronx were age 19 or under, as were more than one quarter (26.4%) of those in Brooklyn. Manhattan had the highest proportion of residents age 65 and over, with 13.5 percent. Women made up a little over half (52.5%) of the entire community population, a figure that varied little by borough (**Exhibit 56**).

Exhibit 56: Population, by Borough, Age, and Sex, 2012

Borough	0-19 years	20-44 years	45-64 years	65+ years	Total Population
Bronx	**29.9%**	**36.4%**	**23.0%**	**10.5%**	**1,386,364**
Male	32.7%	36.6%	22.0%	8.6%	650,728
Female	27.7%	36.2%	23.8%	12.4%	735,630
Brooklyn	**26.4%**	**38.6%**	**23.5%**	**11.5%**	**2,512,740**
Male	28.5%	39.1%	22.7%	9.6%	1,186,163
Female	24.5%	38.0%	24.2%	13.3%	1,326,577
Manhattan	**17.4%**	**45.2%**	**23.9%**	**13.5%**	**1,596,735**
Male	18.5%	45.8%	24.2%	11.5%	751,244
Female	16.5%	44.6%	23.7%	15.2%	845,491
Queens	**23.1%**	**38.1%**	**25.8%**	**12.9%**	**2,235,008**
Male	24.5%	39.3%	25.4%	10.8%	1,082,322
Female	21.9%	36.9%	26.4%	15.0%	1,152,686
Total	**24.2%**	**39.6%**	**24.1%**	**12.1%**	**7,730,847**

Source: U.S. Census Bureau, ACS 5 Year Estimates, 2008-2012

Exhibit 57 shows that the population is very diverse by race, ethnicity, and nationality, and there are wide differences among the neighborhoods within each borough. Overall, 42.4 percent were White, 26.8 percent Black, and 12.8 percent Asian.

The Bronx and Brooklyn had the highest percentages of Black residents, at approximately 34 percent in each. In the Bronx, the neighborhoods of Northeast Bronx (62.9%) and High Bridge and Morrisania (40.7%) had the highest concentrations of Black residents. In Brooklyn, the neighborhoods of Flatbush, Central Brooklyn, Canarsie and Flatlands, and East New York and New Lots all were majority Black. While Manhattan (16.1%) and Queens (20%) had minority Black populations, Blacks were the majority in a few neighborhoods (Central Harlem in Manhattan, and Jamaica and Southeast Queens in Queens).

Queens had by far the highest proportion of Asian residents of any borough, at 23.3 percent, mainly concentrated in North, Northeast, and Central Queens. While Asians made up approximately 10 percent of the populations of Manhattan and Brooklyn, there were neighborhoods where they comprised one-quarter to over one-third of the population. These include the Lower East Side and Lower Manhattan in Manhattan, and Sunset Park and Southwest Brooklyn in Brooklyn.

As notable evidence of the community's diversity, 15 percent of the overall community was some race other than White, Black, or Asian. The Bronx was the most diverse by this measure, with nearly 36 percent of residents identifying as "some other race" in U.S. Census surveys.

Exhibit 57: Population by Race and Neighborhood, 2012

Borough and Neighborhood	Total Population	White	Black	Asian	Some Other Race*	Two or More Races
Bronx		**22.6%**	**34.5%**	**3.6%**	**35.9%**	**3.4%**
Bronx Park and Fordham	244,435	18.1%	29.4%	4.9%	44.0%	3.7%
Central Bronx	204,565	13.6%	33.2%	1.3%	48.5%	3.3%
High Bridge and Morrisania	208,247	14.1%	40.7%	1.0%	41.6%	2.6%
Hunts Point and Mott	135,687	24.6%	32.3%	0.8%	38.9%	3.3%
Kingsbridge and Riverdale	91,163	52.0%	13.1%	4.8%	26.0%	4.1%
Northeast Bronx	200,483	17.5%	62.9%	3.0%	14.1%	2.4%
Southeast Bronx	301,497	31.8%	24.0%	7.0%	32.9%	4.4%
Brooklyn	**2,512,740**	**44.6%**	**34.2%**	**10.6%**	**8.7%**	**1.9%**
Borough Park	334,688	66.8%	4.9%	20.7%	6.3%	1.3%
Bushwick and Williamsburg	213,371	35.3%	32.9%	4.6%	24.7%	2.5%
Canarsie and Flatlands	205,324	27.5%	64.2%	3.1%	4.1%	1.1%
Central Brooklyn	316,118	14.9%	74.1%	2.5%	6.6%	1.9%
East New York and New	186,052	25.4%	58.7%	2.9%	11.6%	1.4%
Flatbush	303,707	15.1%	75.2%	2.6%	5.4%	1.8%
Greenpoint	124,228	83.7%	3.9%	3.8%	6.5%	2.1%
Northwest Brooklyn	232,353	63.2%	16.0%	6.9%	9.8%	4.1%
Southern Brooklyn	270,462	70.8%	7.2%	17.2%	3.4%	1.4%
Southwest Brooklyn	197,258	68.0%	1.5%	23.6%	5.5%	1.4%
Sunset Park	129,179	37.1%	3.7%	35.6%	21.4%	2.2%
Manhattan	**1,517,634**	**55.9%**	**16.1%**	**11.4%**	**12.7%**	**4.0%**
Central Harlem	169,650	20.2%	58.4%	5.1%	11.3%	5.0%
Chelsea and Clinton	141,343	71.8%	6.0%	13.4%	4.6%	4.2%
East Harlem	113,740	30.0%	33.4%	6.7%	26.6%	3.3%
Gramercy Park and Murray	127,474	78.2%	3.6%	13.5%	2.6%	2.1%
Greenwich Village and Soho	81,686	73.1%	2.6%	19.5%	1.9%	2.8%
Inwood and Washington	263,281	33.3%	18.9%	2.4%	37.8%	7.5%
Lower East Side	199,334	53.4%	6.4%	27.3%	9.6%	3.2%
Lower Manhattan	45,040	62.8%	4.8%	24.3%	5.5%	2.8%
Upper East Side	160,199	83.5%	3.9%	9.1%	1.5%	1.9%
Upper West Side	215,887	75.2%	9.6%	8.0%	3.6%	3.6%
Queens	**2,235,361**	**42.3%**	**19.1%**	**23.3%**	**12.2%**	**3.1%**
Central Queens	94,537	47.3%	8.1%	34.3%	7.3%	3.0%
Jamaica	289,098	11.2%	55.0%	15.8%	14.1%	3.8%
North Queens	262,964	39.7%	2.4%	47.9%	7.4%	2.6%
Northeast Queens	89,965	52.2%	2.8%	38.8%	4.0%	2.3%
Northwest Queens	195,588	65.7%	6.3%	15.5%	10.1%	2.5%
Rockaways	115,352	46.8%	41.9%	2.1%	6.9%	2.3%
Southeast Queens	199,708	18.1%	59.2%	14.9%	4.2%	3.6%
Southwest Queens	278,573	36.2%	12.5%	22.0%	23.9%	5.4%
West Central Queens	247,417	74.5%	2.3%	15.3%	5.6%	2.2%
West Queens	462,159	46.1%	7.0%	25.9%	18.6%	2.5%
Total	**7,651,812**	**42.2%**	**26.3%**	**13.2%**	**15.5%**	**2.9%**

Source: U.S. Census Bureau, ACS 5 Year Estimates, 2008-2012

* "Other Race" includes the following Census-designated race groups: American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and Some Other Race.

Hispanic or Latino Population

Community residents of Hispanic or Latino (Latino) ethnicity were most prevalent in the Bronx, comprising nearly 54 percent of the population. Hunts Point and Motts Haven (72.3%) and Central Bronx (68.3%) had the highest percentages within the borough, and Northeast Bronx (23.8%) the lowest (**Exhibit 58**).

Manhattan and Queens each were a little over one-quarter Latino, with the Latino population in Manhattan being concentrated primarily in a few neighborhoods. Inwood and Washington Heights (66.7%) and East Harlem (49.6%) were the only two Manhattan neighborhoods where greater than one-quarter of the population was Latino. In Queens, the West Queens neighborhood (50.2%) had nearly double the percentage of Latinos as the borough overall, and Southwest Queens was one-third (33.6%) Latino. And while fewer than 20 percent of Brooklyn residents were Latino, the neighborhoods of Bushwick and Williamsburg (51.5%), Sunset Park (43.3%), and East New York and New Lots (38%) had much higher proportions of Latino residents.

Within the Latino population is a wide diversity of cultural backgrounds and communities, as is evident by the range of nationalities of Latino residents. The percentage of Latinos who were Puerto Rican (32.2%) was higher than for those who are Mexican (13.2%), overall and in each borough. The difference was least in Queens (15.4% Mexican and 17.9% Puerto Rican), and greatest in the Bronx (9.5% Mexican and 41.7% Puerto Rican). The neighborhood where Puerto Ricans were a higher proportion of Latinos than any other in the community was the Lower East Side in Manhattan (60.8%).

It is notable that Latinos who were other than Mexican, Puerto Rican, or Cuban comprised from 43.3 percent of the Latino population in Brooklyn to 64.6 percent in Queens (**Exhibit 59**). Eighty percent of Latinos in Inwood and Washington Heights in Manhattan were "Other Latino."[92] In 2005, 73 percent of Latinos in the neighborhood were Dominican.[93]

[92] U.S. Census Bureau ACS 5 year estimates, 2008-2012

[92] Bergard, Laird W., "Washington Heights/Inwood Demographic, Economic, and Social Transformations 1990 – 2005 with a Special Focus on the Dominican Population." Center for Latin American, Caribbean & Latino Studies, City University of New York, 2008.

Exhibit 58: Hispanic or Latino Ethnicity, Percent of Population, by Neighborhood, 2012

Borough and Neighborhood	Total Population	Percent Hispanic or Latino
Bronx	**1,386,077**	**53.8%**
Bronx Park and Fordham	244,435	58.3%
Central Bronx	204,565	68.3%
High Bridge and Morrisania	208,247	61.3%
Hunts Point and Mott Haven	135,687	72.3%
Kingsbridge and Riverdale	91,163	41.9%
Northeast Bronx	200,483	23.8%
Southeast Bronx	301,497	50.3%
Brooklyn	**2,512,740**	**19.8%**
Borough Park	334,688	12.8%
Bushwick and Williamsburg	213,371	51.5%
Canarsie and Flatlands	205,324	9.0%
Central Brooklyn	316,118	12.5%
East New York and New Lots	186,052	38.0%
Flatbush	303,707	10.7%
Greenpoint	124,228	23.3%
Northwest Brooklyn	232,353	19.1%
Southern Brooklyn	270,462	10.4%
Southwest Brooklyn	197,258	13.4%
Sunset Park	129,179	43.3%
Manhattan	**1,517,634**	**26.2%**
Central Harlem	169,650	22.6%
Chelsea and Clinton	141,343	15.2%
East Harlem	113,740	49.6%
Gramercy Park and Murray Hill	127,474	8.0%
Greenwich Village and Soho	81,686	5.5%
Inwood and Washington Heights	263,281	66.7%
Lower East Side	199,334	20.0%
Lower Manhattan	45,040	12.0%
Upper East Side	160,199	7.7%
Upper West Side	215,887	15.3%
Queens	**2,235,361**	**27.6%**
Central Queens	94,537	15.7%
Jamaica	289,098	17.8%
North Queens	262,964	16.3%
Northeast Queens	89,965	11.0%
Northwest Queens	195,588	29.1%
Rockaways	115,352	22.1%
Southeast Queens	199,708	11.1%
Southwest Queens	278,573	33.6%
West Central Queens	247,417	27.4%
West Queens	462,159	50.2%

Total	7,651,812	29.5%

Source: U.S. Census Bureau, ACS 5 year estimates, 2008-2012

Exhibit 59: Hispanic or Latino Nationalities, by Borough, 2008-2012

Nationality	Bronx	Brooklyn	Manhattan	Queens	Total
Total Hispanic/Latino Population	745,661	497,620	397,236	523,302	**2,163,819**
Mexican	9.5%	18.7%	10.5%	15.4%	**13.2%**
Puerto Rican	41.7%	36.4%	27.8%	17.9%	**32.2%**
Cuban	1.1%	1.6%	2.6%	2.2%	**1.7%**
Other Hispanic or Latino	47.7%	43.3%	59.2%	64.6%	**52.9%**

Source: U.S. Census Bureau, ACS 5 Year Estimates, 2008-2012

Asian Population

The Asian population is similarly diverse, and its composition by nationality also varies significantly by borough. One-half of Asian residents in the community overall were Chinese, but Chinese made up as much as 69.7 percent of the Asian population in Brooklyn and only 16.5 percent in the Bronx. Asian Indians were the second largest Asian nationality in the community, with the largest proportions in the Bronx (27.7%) and Queens (20.1%). Koreans were just under 10 percent of the Asian community overall. "Other Asian" nationalities comprised 13.4 percent of the Asian population across the four boroughs, but a little over 30 percent in the Bronx (**Exhibit 60**).

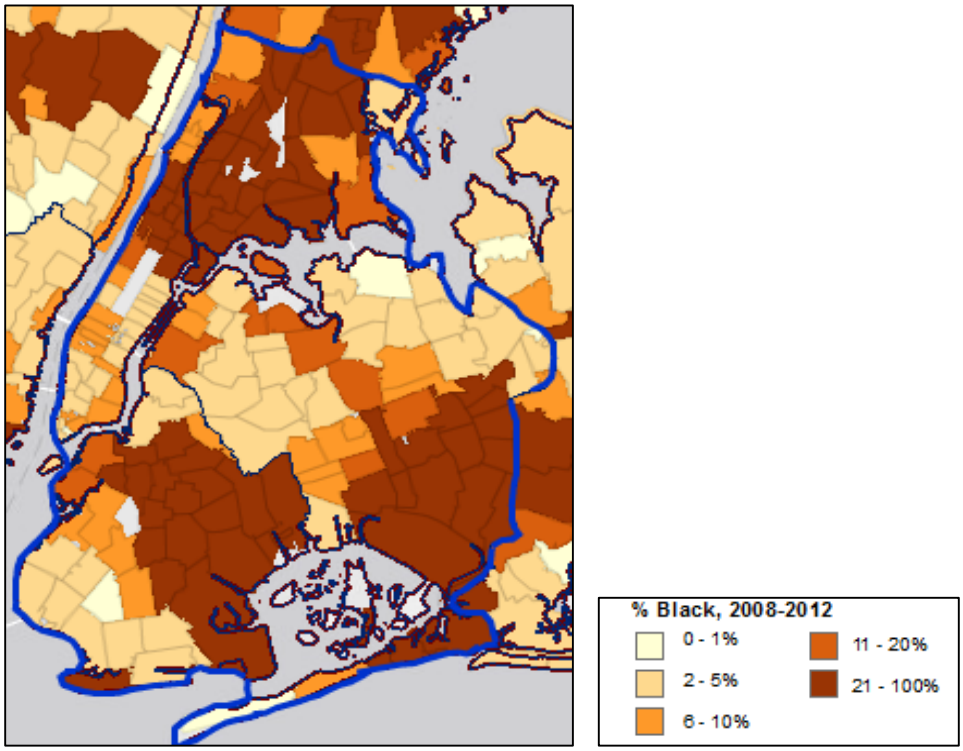
Exhibit 60: Asian Nationalities, by Borough, 2008-2012

Nationality	Bronx	Brooklyn	Manhattan	Queens	Total
Total Asian Population	49,359	266,557	172,265	458,964	**947,145**
Asian Indian	27.7%	9.1%	13.3%	20.1%	**16.2%**
Chinese	16.5%	67.9%	54.7%	41.8%	**50.2%**
Filipino	11.4%	3.5%	6.0%	7.9%	**6.5%**
Japanese	1.1%	1.6%	7.8%	1.4%	**2.6%**
Korean	5.7%	3.0%	10.4%	13.7%	**9.7%**
Vietnamese	7.2%	1.4%	1.5%	0.8%	**1.4%**
Other Asian	30.5%	13.5%	6.3%	14.3%	**13.4%**

Source: U.S. Census Bureau, ACS 5 Year Estimates, 2008-2012

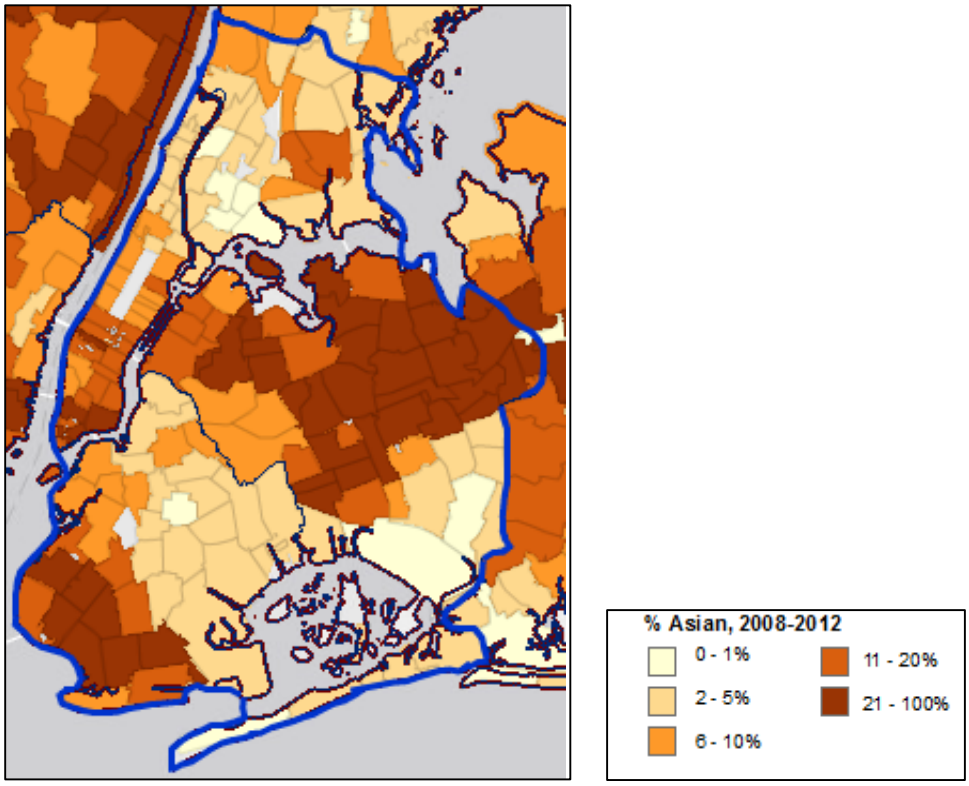
The maps below in **Exhibits 61** to **63** depict geographic regions across the four boroughs where Blacks, Asians, and people of Hispanic ethnicity are most (dark shading) and least (light shading) concentrated. They convey visually the borough- and neighborhood-level clustering of racial and ethnic groups in different regions of the community.

Exhibit 61: Percent of Population - Black, 2008–2012



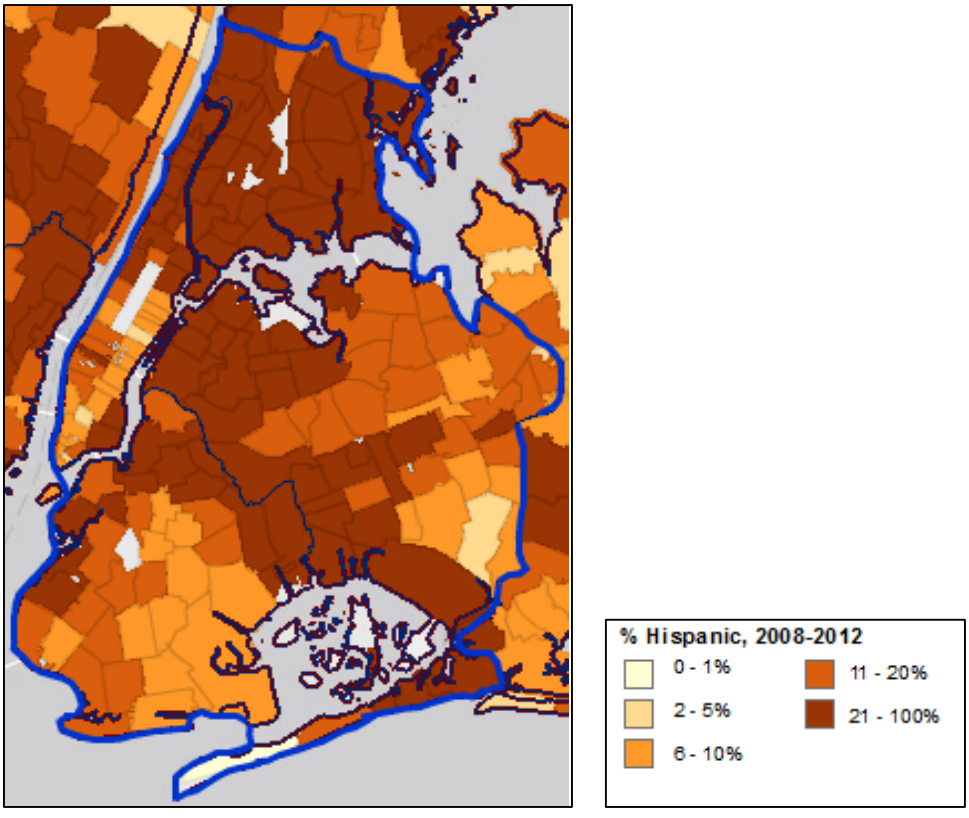
Source: UDS Mapper, 2014

Exhibit 62: Percent of Population – Asian, 2008-2012



Source: UDS Mapper, 2014

Exhibit 63: Percent of Population - Hispanic, 2008–2012



Source: UDS Mapper, 2014

Immigrants, Citizenship, and Language

Thirty percent or more of the population was foreign born in each of the four boroughs. The highest concentration of foreign-born residents was in Queens (50%) and Brooklyn (40%). These two boroughs also were also the places where the largest numbers of people live (Brooklyn with over 2.3 million and Queens 2.1 million).

The neighborhoods in each borough with the highest percentages of foreign born residents were: Bronx Park and Fordham (42%) in the Bronx; Sunset Park (55%) in Brooklyn; Inwood and Washington Heights (49%) in Manhattan; and West Queens (64%) in Queens (**Exhibit 64**). **Exhibit 65** maps the locations of the population that is foreign born by zip code.

Exhibit 64: Foreign Born and Non-U.S. Citizen Population, by Neighborhood, 2008-2012

Borough and Neighborhood	Total Population	Percent Foreign Born	Percent Non US Citizens	Percent Foreign Born that are not US Citizens
Bronx	**1,280,665**	**36.2%**	**20.1%**	**55.4%**
Bronx Park and Fordham	225,428	42.0%	24.7%	58.9%
Central Bronx	186,145	40.6%	25.9%	63.9%
High Bridge and Morrisania	191,817	38.6%	24.2%	62.7%
Hunts Point and Mott Haven	123,111	31.3%	21.1%	67.2%
Kingsbridge and Riverdale	85,202	31.8%	12.8%	40.3%
Northeast Bronx	188,277	37.3%	14.2%	38.2%
Southeast Bronx	280,685	29.9%	15.3%	51.0%
Brooklyn	**2,332,684**	**40.2%**	**17.9%**	**44.7%**
Borough Park	304,160	46.4%	21.8%	47.0%
Bushwick and Williamsburg	196,562	33.2%	21.5%	64.7%
Canarsie and Flatlands	192,696	43.3%	13.3%	30.7%
Central Brooklyn	293,292	31.2%	14.6%	46.9%
East New York and New Lots	170,408	37.0%	17.3%	46.9%
Flatbush	283,709	50.3%	21.7%	43.2%
Greenpoint	114,044	25.7%	13.3%	51.7%
Northwest Brooklyn	216,297	19.9%	9.9%	49.9%
Southern Brooklyn	256,438	51.3%	15.3%	29.7%
Southwest Brooklyn	185,614	43.0%	16.4%	38.3%
Sunset Park	119,464	55.5%	36.9%	66.5%
Manhattan	**1,443,646**	**30.0%**	**16.1%**	**53.8%**
Central Harlem	159,715	24.1%	14.1%	58.5%
Chelsea and Clinton	136,480	26.6%	14.8%	55.5%
East Harlem	106,618	27.8%	17.5%	62.7%
Gramercy Park and Murray Hill	122,557	23.9%	13.0%	54.3%
Greenwich Village and Soho	78,551	26.1%	13.0%	49.8%
Inwood and Washington Heights	248,809	49.1%	27.4%	55.8%
Lower East Side	192,980	31.9%	14.7%	46.2%
Lower Manhattan	42,718	32.0%	17.8%	55.7%
Upper East Side	151,613	22.8%	11.8%	51.9%
Upper West Side	203,605	22.9%	11.5%	50.4%
Queens	**2,101,135**	**50.4%**	**23.4%**	**46.4%**

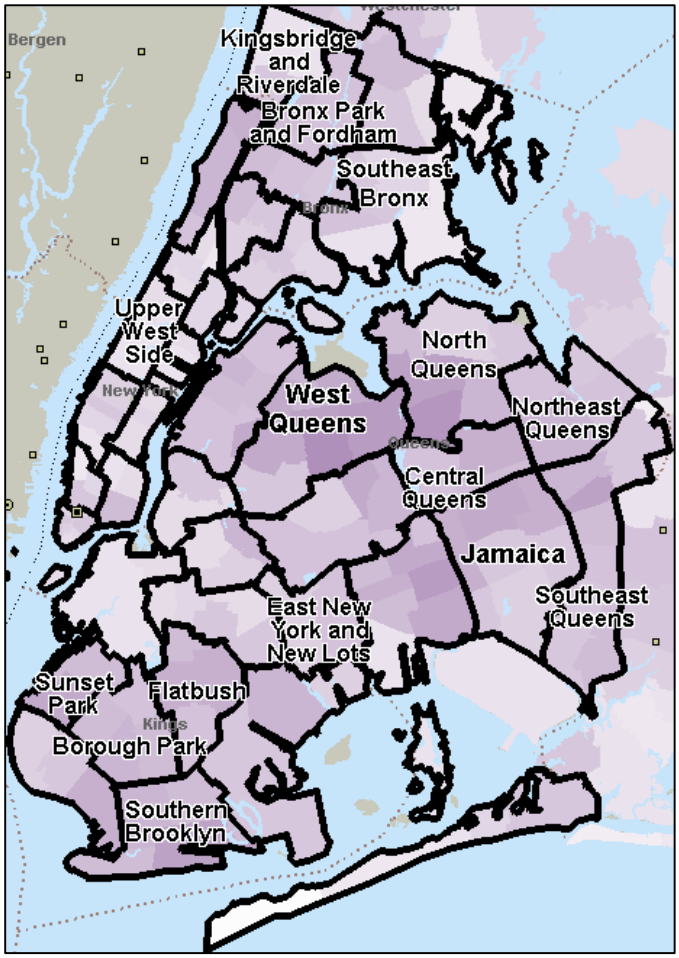
-- Exhibit 64 continued on next page --

-- Exhibit 64 continued from previous page --

Borough and Neighborhood	Total Population	Percent Foreign Born	Percent Non US Citizens	Percent Foreign Born that are not US Citizens
Central Queens	87,705	47.1%	17.0%	36.1%
Jamaica	271,137	45.8%	19.5%	42.6%
North Queens	249,125	56.6%	27.1%	47.8%
Northeast Queens	84,997	43.6%	14.0%	32.1%
Northwest Queens	186,298	46.0%	22.5%	48.8%
Rockaways	106,095	27.7%	12.1%	43.7%
Southeast Queens	188,810	44.7%	14.7%	32.8%
Southwest Queens	261,393	51.3%	21.7%	42.2%
West Central Queens	232,453	45.8%	18.9%	41.2%
West Queens	433,122	63.7%	37.3%	58.6%
Total	**7,158,130**	**40.4%**	**19.6%**	**48.4%**

Source: U.S. Census Bureau, ACS 5-year estimates 2008-2012, accessed 2014

Exhibit 65: Percent of the Population that is Foreign Born, by Zip Code



Source: U.S. Census Bureau, ACS 5-year estimates 2008-2012, accessed 2014 and Microsoft MapPoint 2010

Limited English speaking households in the community made up 16 percent of all households, with borough-wide highs of just over 18 percent in the Bronx and in Queens.

Within Queens, West Queens had 31.5 percent of households that were limited English speaking, and North Queens had 27.6 percent of such households. In the Bronx, 31.7 percent of households in Hunts Point and Mott Haven were limited English speaking households, as were 24.4 percent in High Bridge and Morrisania, and 24 percent in Central Bronx.

In Brooklyn, 36.8 percent of the households in Sunset Park were limited English speaking, as we 34.6 percent in Southern Brooklyn. In Manhattan, Inwood and Washington Heights and Harlem topped the neighborhoods with the highest concentrations of limited English speaking households, with 23.8 percent and 17.4 percent, respectively. Manhattan and Brooklyn both had several neighborhoods with proportions of limited English speaking households in the single digits (**Exhibit 66**). **Exhibit 67** maps the location of limited speaking households by zip code.

Exhibit 66: Limited English Speaking Households, by Neighborhood, 2008-2012

Borough and Neighborhood	Total Households	Percent Limited English Speaking
Bronx	**476,647**	**18.2%**
Bronx Park and Fordham	84,245	20.2%
Central Bronx	66,567	24.0%
High Bridge and Morrisania	70,016	24.4%
Hunts Point and Mott Haven	44,346	31.7%
Kingsbridge and Riverdale	36,144	12.5%
Northeast Bronx	68,293	5.3%
Southeast Bronx	107,036	13.4%
Brooklyn	**911,995**	**17.2%**
Borough Park	106,413	27.9%
Bushwick and Williamsburg	71,830	22.9%
Canarsie and Flatlands	69,857	8.3%
Central Brooklyn	124,705	4.6%
East New York and New Lots	59,795	8.9%
Flatbush	108,073	8.8%
Greenpoint	50,235	15.6%
Northwest Brooklyn	98,654	6.6%
Southern Brooklyn	107,173	34.6%
Southwest Brooklyn	76,143	24.3%
Sunset Park	39,117	36.8%
Manhattan	**697,219**	**10.4%**
Central Harlem	67,906	8.0%
Chelsea and Clinton	81,462	6.0%
East Harlem	41,504	17.4%
Gramercy Park and Murray Hill	72,144	5.4%
Greenwich Village and Soho	42,033	8.2%
Inwood and Washington Heights	91,302	23.8%
Lower East Side	89,748	16.1%
Lower Manhattan	21,632	7.8%
Upper East Side	83,926	4.7%
Upper West Side	105,562	5.4%

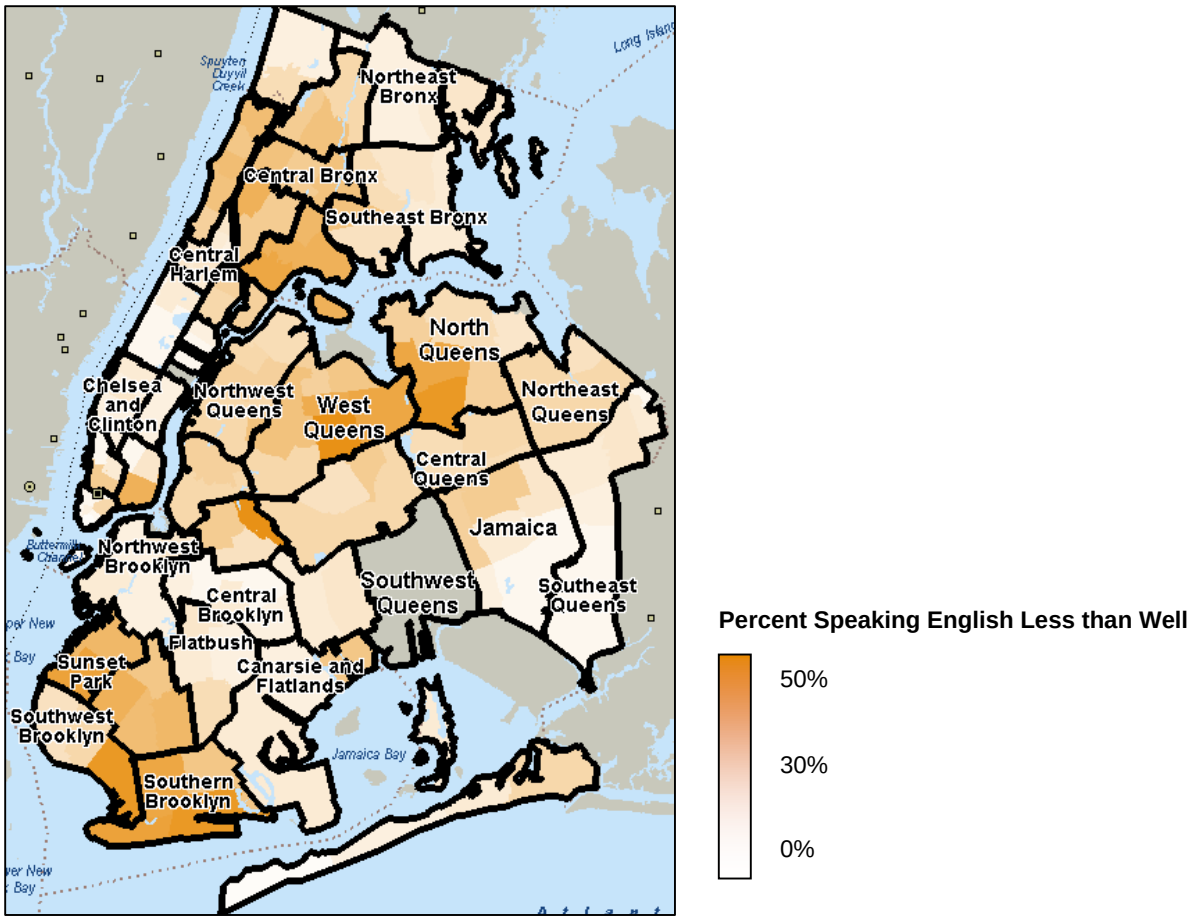
-- Exhibit 66 continued on next page --

-- Exhibit 66 continued from previous page --

Borough and Neighborhood	Total Households	Percent Limited English Speaking
Queens	**772,381**	**18.1%**
Central Queens	33,966	15.0%
Jamaica	92,380	10.7%
North Queens	93,301	27.6%
Northeast Queens	33,719	15.6%
Northwest Queens	85,381	17.5%
Rockaways	39,548	11.2%
Southeast Queens	61,806	4.6%
Southwest Queens	84,862	10.2%
West Central Queens	99,402	16.2%
West Queens	148,016	31.5%
Grand Total	**2,858,242**	**15.9%**

Note: Limited English Speaking households are households in which no one age 14 or over speaks only English or speaks English "very well."
Source: U.S. Census Bureau ACS 5 year estimates, 2008-2012

Exhibit 67: Map of Limited English Speaking Households, by Zip Code



Source: U.S. Census Bureau ACS 5 year estimates, 2008-2012 and Microsoft MapPoint 2010

Household Income, Poverty, Unemployment, and Educational Attainment

Household Income

Median household income in the four boroughs ranged from a high of $73,362 in Manhattan to a low of $36,084 in the Bronx, a two-fold difference. The lowest median household income of all boroughs and neighborhoods was $21,501 in Hunts Point and Mott Haven, in the Bronx. Also in the Bronx, High Bridge and Morrisania and Central Bronx were the only two other neighborhoods in all four boroughs with median household incomes below $25,000.

In Brooklyn, the lowest median income was in Bushwick and Williamsburg and East New York and New Lots, both slightly over $34,000 in 2012. Manhattan exhibited the widest income disparities, with three neighborhoods over $100,000, and lows in East Harlem ($29,756), Central Harlem ($37,701), and Inwood and Washington Heights ($39,284). Queens had the second-highest median income of the boroughs ($57,326), and the least amount of variation by neighborhood (**Exhibit 68**). **Exhibit 69** maps the median income by zip code.

Exhibit 68: Median Household Income, by Neighborhood, 2012

Borough and Neighborhood	Total Housing Units	Median Income ($)
Bronx	**476,647**	**36,194**
Bronx Park and Fordham	84,245	31,404
Central Bronx	66,567	24,548
High Bridge and Morrisania	70,016	24,989
Hunts Point and Mott Haven	44,346	21,130
Kingsbridge and Riverdale	36,144	57,645
Northeast Bronx	68,293	49,230
Southeast Bronx	107,036	45,219
Brooklyn	**911,995**	**47,933**
Borough Park	106,413	43,661
Bushwick and Williamsburg	71,830	34,107
Canarsie and Flatlands	69,857	60,853
Central Brooklyn	124,705	40,220
East New York and New Lots	59,795	34,097
Flatbush	108,073	45,356
Greenpoint	50,235	50,110
Northwest Brooklyn	98,654	80,148
Southern Brooklyn	107,173	42,183
Southwest Brooklyn	76,143	51,865
Sunset Park	39,117	38,789
Manhattan	**697,219**	**73,445**
Central Harlem	67906	36,632
Chelsea and Clinton	81,462	85,048
East Harlem	41,504	29,756
Gramercy Park and Murray Hill	72,144	102,641
Greenwich Village and Soho	42,033	87,557
Inwood and Washington Heights	91,302	39,195
Lower East Side	89,748	59,491

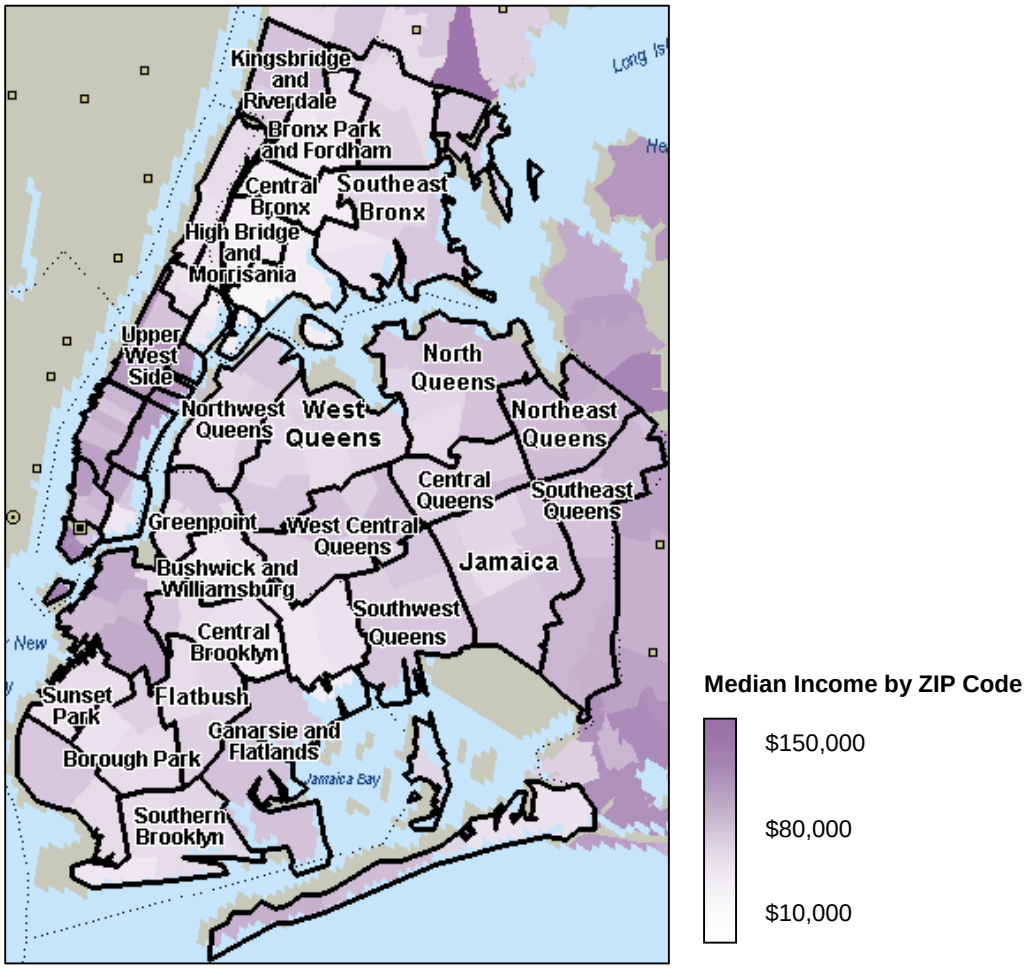
-- Exhibit 68 continued on next page --

-- Exhibit 68 continued from previous page --

Borough and Neighborhood	Total Housing Units	Median Income ($)
Lower Manhattan	21,632	109,383
Upper East Side	83,926	101,706
Upper West Side	105,562	91,432
Queens	**772,381**	**57,719**
Central Queens	33,966	56,992
Jamaica	92,380	56,102
North Queens	93,301	57,617
Northeast Queens	33,719	77,176
Northwest Queens	85,381	52,019
Rockaways	39,548	49,650
Southeast Queens	61,806	76,661
Southwest Queens	84,862	59,122
West Central Queens	99,402	61,038
West Queens	148,016	49,029
Total	**2,858,242**	**54,843**

Source: U.S. Census Bureau ACS 5 year estimates, 2008-2012

Exhibit 69: Map of Median Income, by Zip Code, 2008-2012

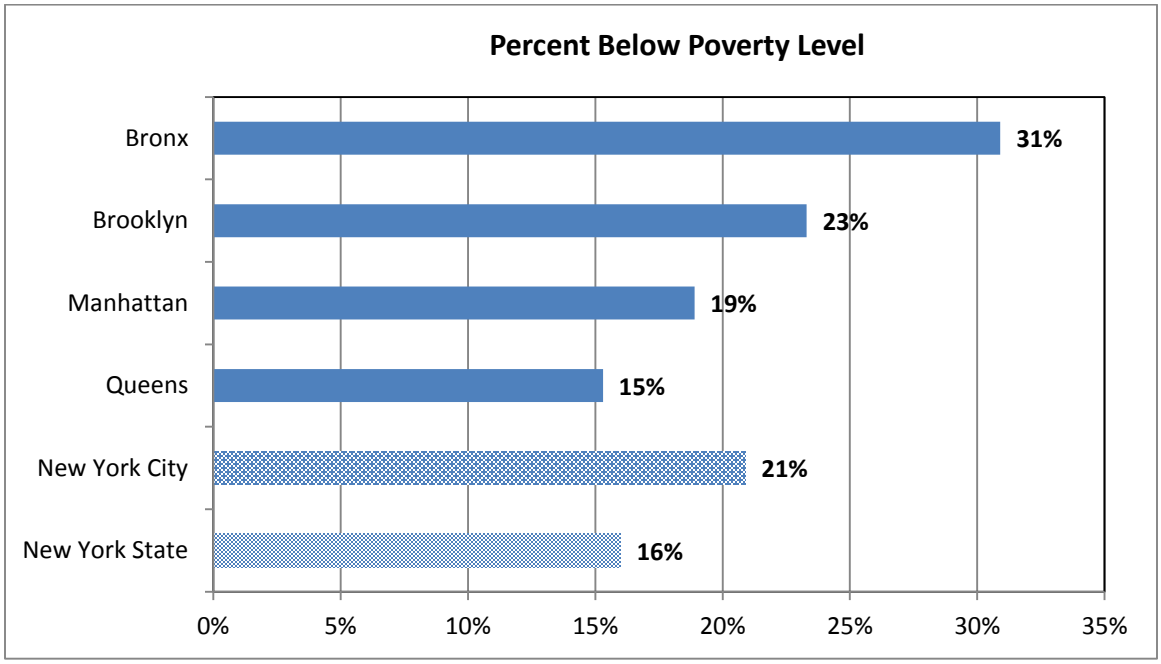


Source: U.S. Census Bureau ACS 5 year estimates, 2008-2012 and Microsoft MapPoint 2010

Poverty

In 2013, the U.S. Census reported that 16 percent of the residents of New York State and 21 percent of those in New York City were living in poverty. Within the community, Queens was the only borough to have a lower percentage of people in poverty (15%) than the state. Brooklyn and Manhattan had poverty rates a couple percentage points above and below that of the city, respectively. With 31 percent of its residents living in poverty, the Bronx's poverty rate is nearly twice as high as New York State and significantly higher than the rates in the other boroughs (**Exhibit 70**).

Exhibit 70: Percent of Population below Poverty, by Borough, 2013



Source: U.S. Census Bureau, ACS 1 year estimates, 2013

The borough figures mask significant poverty disparities by race and ethnicity within each borough and overall. In the Bronx, nearly 37 percent of Latinos were living below the poverty level, as were just over 30 percent in Brooklyn and Manhattan. Blacks and Asians had approximately equal poverty rates in the Bronx and in Brooklyn, while in Manhattan 34.6 percent of Blacks were in poverty compared to only 20.4 percent of Asians. Blacks in Queens had a lower poverty rate (13.6%) than in any other borough. White poverty rates ranged from 10.8 percent in Manhattan to nearly 24 percent in the Bronx, but were the lowest among racial/ethnic groups in every borough (**Exhibit 71**).

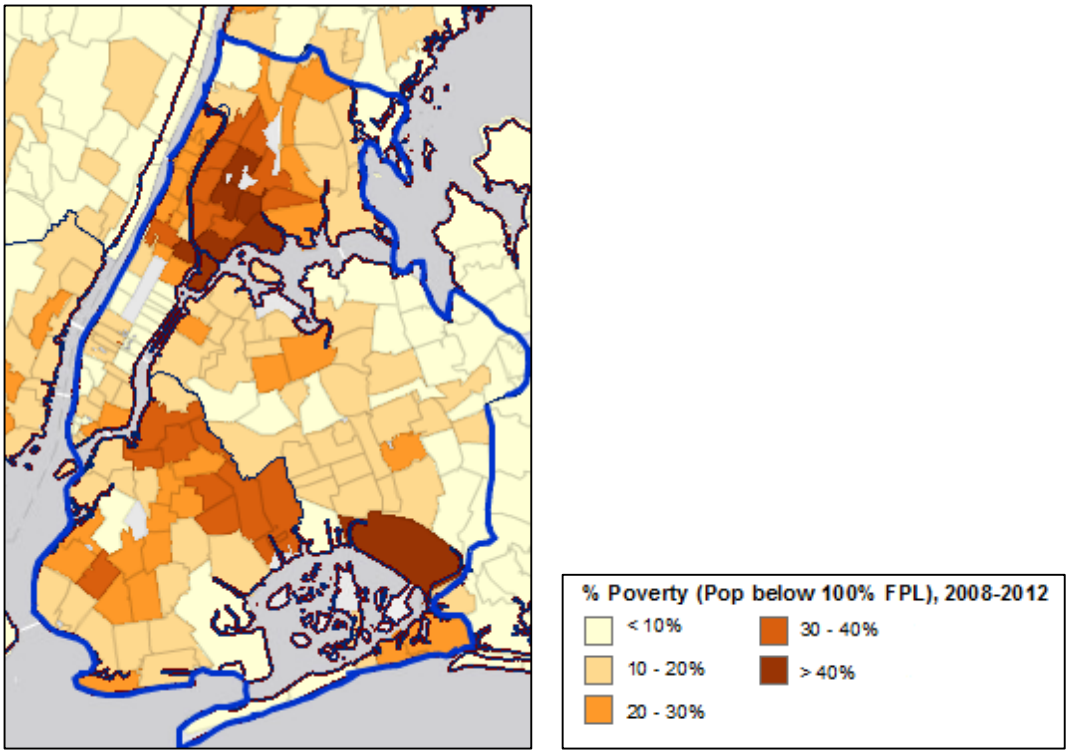
Exhibit 72 maps the percent of people in poverty by zip code.

Exhibit 71: Population below Poverty Level, by Race/Ethnicity and Borough, 2013

Race/ethnicity	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
White	23.7%	20.6%	10.8%	13.3%	15.4%	**11.5%**
Black or African American	27.5%	23.7%	34.6%	13.6%	23.7%	**24.3%**
Asian	26.4%	24.2%	20.4%	18.4%	20.4%	**18.4%**
Hispanic or Latino (of any race)	36.9%	30.4%	30.8%	19.4%	29.3%	**26.0%**

Source: U.S. Census Bureau, ACS 1 year estimates, 2013

Exhibit 72: Map of Percentage of People in Poverty, 2008-2012



Source: UDS Mapper, 2014

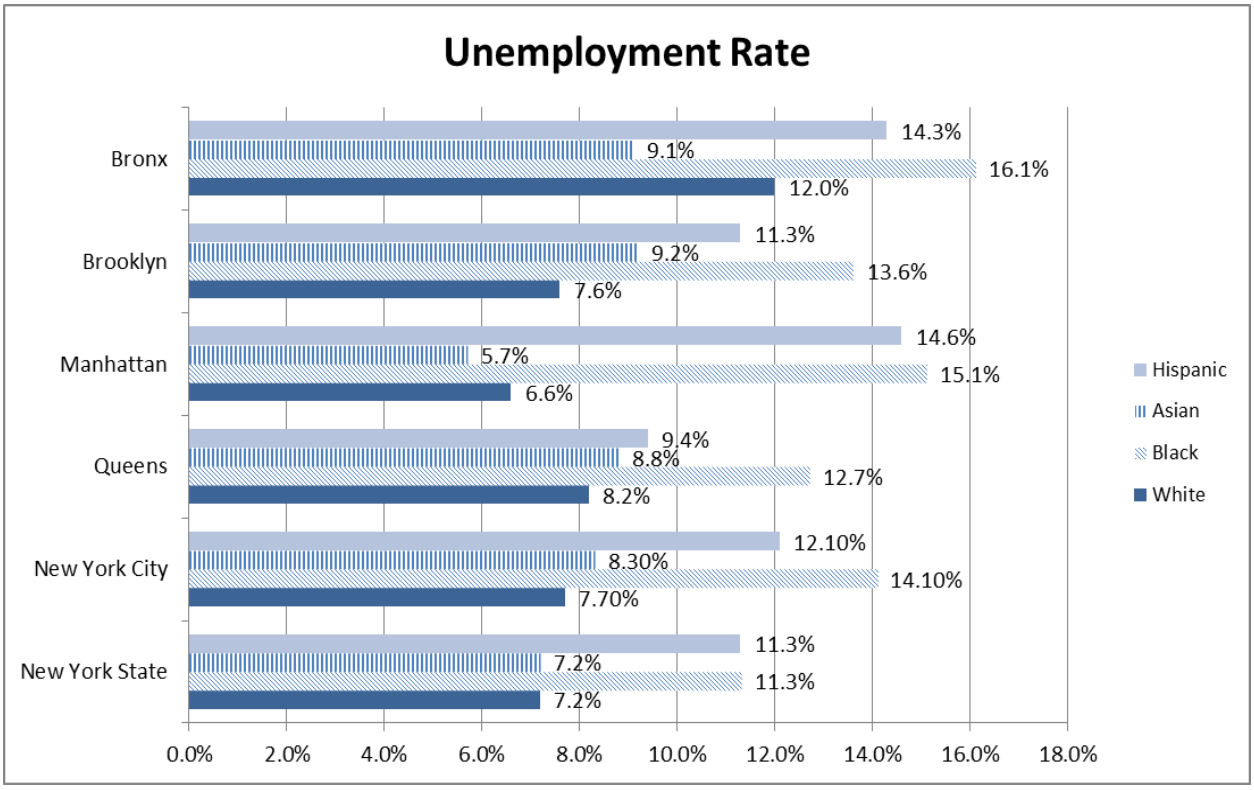
Unemployment

Rates of unemployment in the community overall and for each racial and ethnic group were consistently higher than the New York State averages in each borough except for Manhattan, where unemployment rates for Whites and Asians were lower than the state rates. Blacks had the highest unemployment rates of all racial and ethnic groups in each borough, followed by Hispanics. Whites had the lowest rates.

Manhattan and the Bronx had the highest unemployment rates for Blacks, at just over 15 and 16 percent, respectively. Somewhat over 14 percent of Hispanics living in both boroughs were unemployed. Blacks and Hispanics in Queens had marked lower unemployment rates than those

in other boroughs. Asian unemployment was below 10 percent in the four boroughs. Unemployment among Whites exceeded 10 percent only in the Bronx (**Exhibit 73**).

Exhibit 73: Unemployment Rates by Race/Ethnicity and Borough, 2008-2012



Source: U.S. Census, ACS 5 year estimates, 2008-2012

Educational Attainment

While Brooklyn overall had a considerably lower percentage of residents without a high school diploma (21.9%), the neighborhoods of Sunset Park (45.7%) and Bushwick and Williamsburg (37.2%) had some of the highest concentrations within the overall community. Educational attainment in Queens by this measure was slightly better than Brooklyn, and did not display as significant disparities by neighborhood. The Queens neighborhood of West Queens had the highest percentage in the borough without a diploma, at 29.5 percent. While Manhattan had the lowest percentage among all boroughs of residents age 25 and over without a diploma, for residents of East Harlem and Inwood and Washington Heights the figure was a little over 30 percent (**Exhibit 74**).

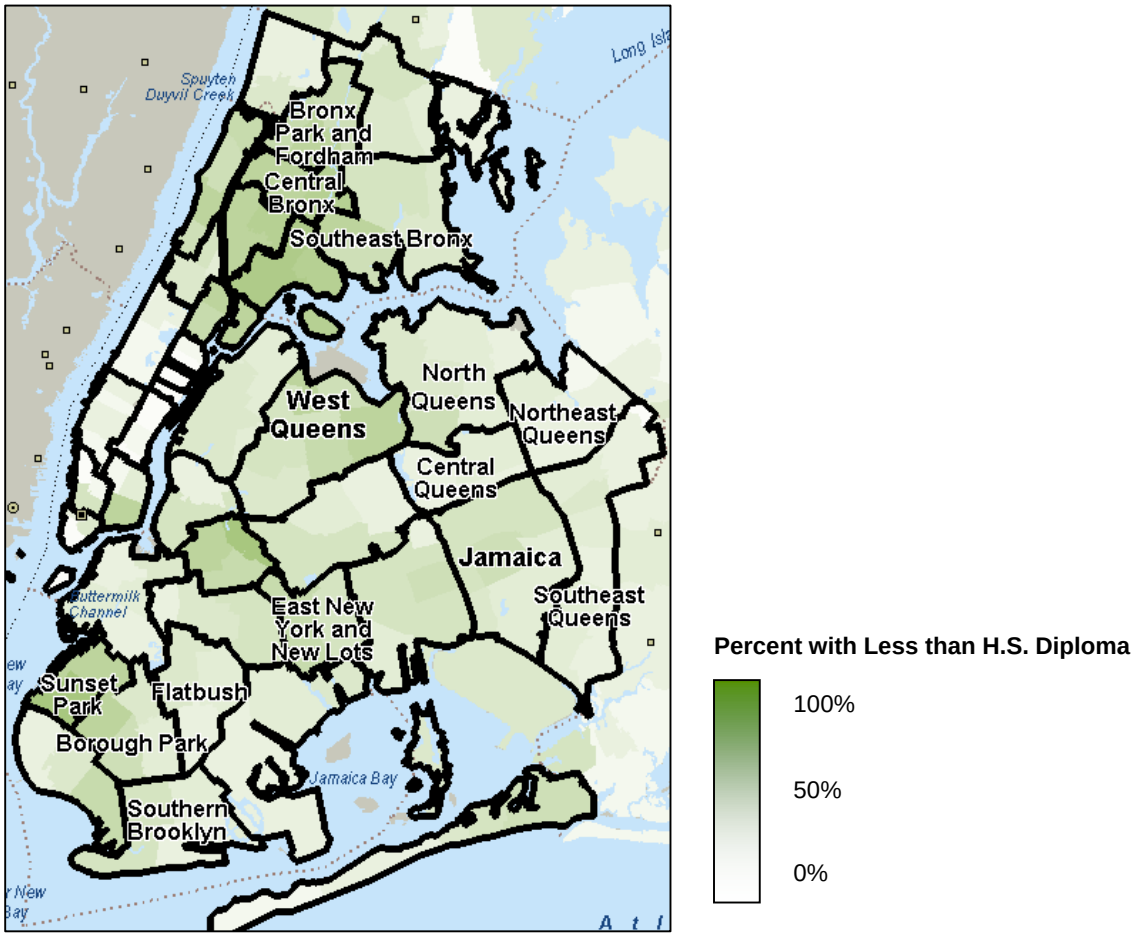
The percentage of residents age 25 years and over without a high school diploma (or equivalent) was significantly higher in the Bronx (30.6%) than in the other boroughs. The neighborhoods of Hunts and Mott Haven (44.6%), High Bridge and Morrisania (39.1%), and Central Bronx (38.7%) had particularly high concentrations of residents lacking a complete high school education (**Exhibit 75**).

Exhibit 74: Educational Attainment, by Neighborhood, 2012

Borough and Neighborhood	Population (age 25 and over)	Less than High School Graduate
Bronx	**856,317**	**30.6%**
Bronx Park and Fordham	147,300	31.3%
Central Bronx	115,564	38.7%
High Bridge and Morrisania	122,742	39.1%
Hunts Point and Mott Haven	75,282	44.4%
Kingsbridge and Riverdale	63,594	17.5%
Northeast Bronx	133,140	19.7%
Southeast Bronx	198,695	26.2%
Brooklyn	**1,654,388**	**21.9%**
Borough Park	204,667	24.4%
Bushwick and Williamsburg	128,908	37.2%
Canarsie and Flatlands	135,219	13.4%
Central Brooklyn	205,854	20.0%
East New York and New Lots	106,966	27.0%
Flatbush	199,135	17.2%
Greenpoint	82,744	18.6%
Northwest Brooklyn	167,934	11.7%
Southern Brooklyn	195,925	18.6%
Southwest Brooklyn	142,642	21.8%
Sunset Park	84,394	45.7%
Manhattan	**1,121,349**	**15.1%**
Central Harlem	110,752	19.8%
Chelsea and Clinton	115,812	6.6%
East Harlem	73,679	32.2%
Gramercy Park and Murray Hill	101,727	2.5%
Greenwich Village and Soho	64,015	9.3%
Inwood and Washington Heights	180,359	30.9%
Lower East Side	148,562	21.6%
Lower Manhattan	33,442	10.1%
Upper East Side	126,814	4.1%
Upper West Side	166,187	6.4%
Queens	**1,556,527**	**20.3%**
Central Queens	64,181	12.9%
Jamaica	192,299	20.1%
North Queens	193,683	20.0%
Northeast Queens	66,076	10.5%
Northwest Queens	146,309	18.1%
Rockaways	72,976	21.4%
Southeast Queens	137,238	13.6%
Southwest Queens	185,374	23.0%
West Central Queens	179,527	14.5%
West Queens	318,864	29.5%
Total	**5,188,581**	**21.4%**

Source: U.S. Census Bureau, ACS 5 year estimates, 2008-2012

Exhibit 75: Percentage of Population with Less than a High School Diploma, by Zip Code



Source: U.S. Census Bureau, ACS 5 year estimates, 2008-2012 and Microsoft MapPoint 2010

Educational attainment varied significantly by race and ethnicity.[94] Residents who identified as Hispanic were more likely than non-Hispanics in every borough to have less education than a high school diploma. The percentages of Hispanic without a high school diploma were highest in the Bronx (40%) and Brooklyn (41%), and somewhat lower in Manhattan (36%) and Queens (31%).

White had the highest educational attainment (lowest percentage with a high school diploma) in Brooklyn (16%) and Manhattan (6%), but not in the Bronx (28%) and Queens (18%). Black educational attainment was only somewhat less than that of Whites in the Bronx (23%), Brooklyn (19%), and Queens (16%), but much worse in Manhattan (23%). The percentage of Asians without a high school degree was 40 percent in Brooklyn, but between 21 and 24 percent in the other three boroughs.

[94] All data on education attainment are from the U.S. Census Bureau, ACS 5 year estimates, 2008-2012.

Statewide, 11 percent of Whites, 19 percent of Blacks, 22 percent of Asians, and 35 percent of Hispanics have less education than a high school diploma.

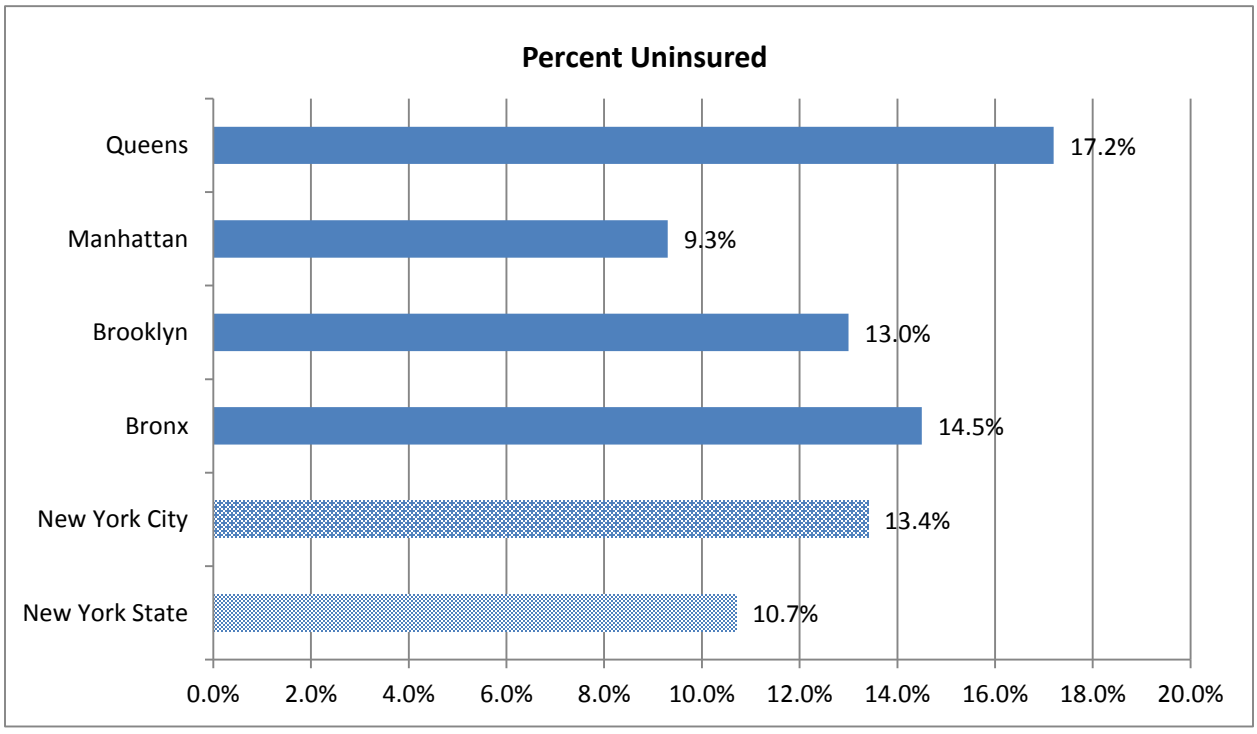
Insurance Status and Medicaid Members

Uninsured Rates

According to U.S. Census estimates, the percentage of the population that was uninsured varied substantially by borough, from a low of 9.3 percent in Manhattan to a high of over 17 percent in Queens. Only Manhattan's rate was below the New York State average (**Exhibit 76**). These estimates are based on data collected before the health care coverage expansions of the Patient Protection and Affordable Care Act took effect.

While data on current rates of uninsured are incomplete, it is known that private insurance and Medicaid enrollment increases in the past year have reduced these rates. At least 700,000 New York City residents have gained coverage in the past year through either Medicaid or private coverage. And, gains in coverage have been strongest in areas with higher rates of uninsured before the coverage expansions.[95]

Exhibit 76: Uninsured Population, by Borough, 2013



[95] Goldberg, Dan. "Mapping Obamacare by New York City zip code," Capital New York, October 20, 2014. Accessed at http://www.capitalnewyork.com/article/city-hall/2014/10/8554538/mapping-obamacare-new-york-city-zip-code

Source: U.S. Census ACS 3 year estimates 2010-2012

Medicaid Members

Exhibit 77 below shows that overall, Brooklyn had the highest annual member enrollment of all four boroughs, while Manhattan had the lowest. Both Brooklyn and Queens have annual enrollment over 1,000,000 individuals.

Exhibit 77: Medicaid Enrollment, by Borough, 2013-2014

Borough	Annual Member Enrollment
Bronx	891,395
Brooklyn	1,329,382
Manhattan	542,999
Queens	1,003,686
New York City	**3,837,692**

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0, accessed 2014

The Bronx was the borough with the greatest proportion of Medicaid members among its total population, at 38 percent. Brooklyn had the second highest figure, at 32 percent. Manhattan and Queens were below 30 percent. In the Bronx, the highest levels of Medicaid membership were observed in Central Bronx, High Bridge and Morrisania, and Hunts Point and Mott Haven, with percentages close to 50 percent. Brooklyn had neighborhoods reaching 50 percent (Sunset Park), 40 percent (East New York and New Lots), and 37 percent (Southern Brooklyn).

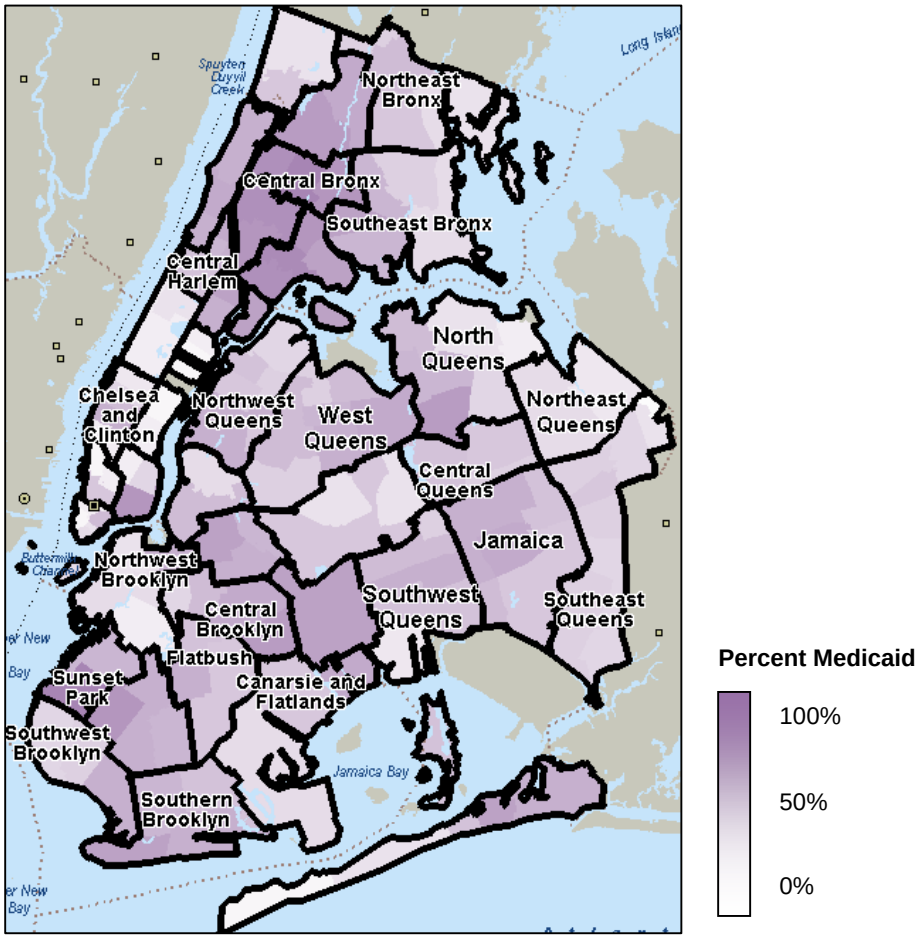
East Harlem and Inwood and Washington Heights topped the list in Manhattan, with four out of 10 residents on Medicaid, while Central Harlem's Medicaid membership was 32 percent. Finally, four neighborhoods in Queens (North Queens, West Queens, Jamaica, and the Rockaways) were at or above the 30 percent (**Exhibit 78**). **Exhibit 79** maps the Medicaid members by zip code.

Exhibit 78: Medicaid Members as a Percent of Total Population, by Neighborhood, 2012

Borough and Neighborhood	Total Population	Medicaid Population	Percent Medicaid
Bronx	**1,386,077**	**523,724**	**38%**
Bronx Park and Fordham	244,435	100,560	41%
Central Bronx	204,565	98,999	48%
High Bridge and Morrisania	208,247	99,090	48%
Hunts Point and Mott Haven	135,687	63,600	47%
Kingsbridge and Riverdale	91,163	21,615	24%
Northeast Bronx	200,483	49,494	25%
Southeast Bronx	301,497	90,366	30%
Brooklyn	**2,512,740**	**809,272**	**32%**
Borough Park	334,688	121,292	36%
Bushwick and Williamsburg	213,371	75,974	36%
Canarsie and Flatlands	205,324	47,966	23%
Central Brooklyn	316,118	108,547	34%
East New York and New Lots	186,052	74,649	40%
Flatbush	303,707	89,157	29%
Greenpoint	124,228	29,461	24%
Northwest Brooklyn	232,353	39,233	17%
Southern Brooklyn	270,462	100,684	37%
Southwest Brooklyn	197,258	57,891	29%
Sunset Park	129,179	64,418	50%
Manhattan	**1,517,634**	**357,407**	**24%**
Central Harlem	169,650	54,915	32%
Chelsea and Clinton	141,343	27,189	19%
East Harlem	113,740	45,030	40%
Gramercy Park and Murray Hill	127,474	8,258	6%
Greenwich Village and Soho	81,686	11,977	15%
Inwood and Washington Heights	263,281	103,609	39%
Lower East Side	199,334	62,613	31%
Lower Manhattan	45,040	9,180	20%
Upper East Side	160,199	9,419	6%
Upper West Side	215,887	25,217	12%
Queens	**2,235,361**	**664,737.00**	**30%**
Central Queens	94,537	25,066	27%
Jamaica	289,098	89,007	31%
North Queens	262,964	90,483	34%
Northeast Queens	89,965	15,474	17%
Northwest Queens	195,588	50,238	26%
Rockaways	115,352	34,482	30%
Southeast Queens	199,708	41,346	21%
Southwest Queens	278,573	118,156	42%
West Central Queens	247,417	54,485	22%
West Queens	462,159	146,000	32%
Total	**7,651,812**	**2,355,140**	**31%**

Source: New York State Department of Health, Health Data NY - accessed 2014

Exhibit 79: Medicaid Members as a Percent of the Population, by Zip Code



Source: New York State Department of Health, Health Data NY and Microsoft MapPoint 2010

Housing and Homelessness

Public Housing

Black and Hispanic populations together make up 97 percent of more than 400,000 people[96] served by New York City Housing Authority (NYCHA) programs. Of the NYCHA population, Queens reported a much higher percentages of NYCHA residents who are 62 years and older and living alone. White families were more likely than other cohorts to have a head of household that is over the age of 62. In all four boroughs, Black and Hispanic populations had higher percentages of single parent families compared to other groups (**Exhibit 80**).

[96] New York City Housing Authority, Resident Data Summary Sheets, 2013.
See http://www.nyc.gov/html/nycha/downloads/pdf/res_data.pdf

Exhibit 80: Characteristics of Families and Individuals Served by NYCHA, January 2013

Race and Ethnicity	Percent of NYCHA Population Under 18	Percent of NYCHA Families with Head of Household 62+	Percent of NYCHA Population 62+ and Living Alone	Percent of NYCHA Families with One Parent and Minors Under 18	Percent of NYCHA Families with One or More Employed
Bronx					
White	23.8%	45.9%	16.8%	21.0%	36.7%
Black	31.1%	32.7%	8.3%	31.4%	48.2%
Hispanic	29.8%	35.3%	9.4%	31.7%	46.9%
Asian	12.1%	41.3%	10.9%	25.2%	47.2%
Other	36.3%	24.6%	3.6%	49.4%	60.7%
Total	**30.3%**	**34.4%**	**9.0%**	**31.4%**	**47.2%**
Brooklyn					
White	20.3%	62.6%	18.7%	8.8%	35.9%
Black	29.9%	31.9%	8.5%	33.8%	48.5%
Hispanic	29.0%	35.2%	8.6%	30.3%	48.1%
Asian	23.1%	25.7%	2.0%	7.9%	77.1%
Other	41.7%	28.9%	4.9%	40.6%	56.4%
Total	**28.9%**	**34.6%**	**8.8%**	**30.5%**	**48.4%**
Manhattan					
White	18.1%	53.2%	20.2%	12.5%	37.8%
Black	26.6%	35.6%	10.0%	28.1%	45.5%
Hispanic	24.4%	43.0%	11.3%	24.8%	44.5%
Asian	15.0%	50.0%	7.1%	6.0%	62.0%
Other	37.3%	29.5%	4.8%	23.8%	53.0%
Total	**24.1%**	**41.3%**	**10.6%**	**23.8%**	**46.3%**
Queens					
White	13.9%	59.7%	34.6%	9.7%	32.4%
Black	29.0%	29.7%	13.4%	32.4%	50.6%
Hispanic	29.3%	32.4%	13.5%	31.5%	53.2%
Asian	14.2%	58.6%	26.0%	6.7%	51.6%
Other	34.6%	44.1%	15.5%	22.9%	46.6%
Total	**27.4%**	**34.8%**	**15.5%**	**28.6%**	**49.9%**
New York City					
White	18.3%	58.2%	19.6%	11.7%	34.9%
Black	29.5%	32.5%	8.8%	31.9%	48.0%
Hispanic	28.0%	37.6%	9.7%	29.0%	46.7%
Asian	16.7%	47.1%	6.4%	7.0%	63.3%
Other	37.9%	32.0%	5.2%	32.1%	53.4%
Total	**27.8%**	**36.6%**	**9.5%**	**28.6%**	**47.5%**

Source: New York City Housing Authority, Resident Data Summary Sheets, 2013.

Key	
Up to 10% worse than NYC	
10-50% worse than NYC	
50-75% worse than NYC	
Greater than 75% worse than NYC	

The average NYCHA family size ranges from 2.2 to 2.4 persons. Average gross income is approximately $23,000, and the average length of time living in public housing is 21 years, figures that do not vary much by borough **(Exhibit 81**).

Exhibit 81: Family Size, Income, and Years in Public Housing, January 2013

Borough	Average NYCHA Family Size	Average Gross Income	Average Number of Years in Public Housing
Brooklyn	2.3	$22,721	20.0
Bronx	2.4	$21,796	19.6
Manhattan	2.2	$24,044	24.0
Queens	2.3	$24,221	20.1
New York City	**2.3**	**$22,994**	**21.0**

The average gross income of households in NYCHA housing was approximately $23,000

Source: New York City Housing Authority, Resident Data Summary Sheets, 2013

Homelessness

Exhibit 82 shows the number of unsheltered (homeless) individuals in the four New York City boroughs of the community. The number has fallen sharply over the past decade. The number of unsheltered individual has fallen by approximately two-thirds in the Bronx and Brooklyn, and by 25 percent in Queens. New York City's rate of 39.9 estimated homeless individuals per 100,000 population is somewhat higher than for the East Coast cities of Boston (30.3) and Philadelphia (32.3), but substantially lower than those for Chicago (63.4) and Washington, DC (105).[97]

Exhibit 82: Unsheltered Individuals, by Borough, 2005 and 2014

Borough	Unsheltered Estimate 2005	Unsheltered Estimate 2014	Percent Change 2005-2014
Surface Areas	**3,550**	**1,549**	**(56.4%)**
Bronx	587	193	(67.1%)
Brooklyn	592	219	(63.0%)
Manhattan	1,805	817	(54.7%)
Queens	335	253	(24.5%)
Subways	**845**	**1,808**	**114.0%**
Total Unsheltered Individuals	**4,395**	**3,357**	**(23.6%)**

Source: New York City Department of Homeless Services, 2014

Food Deserts (Lack of Access to Nutritious and Affordable Food)

A "food desert" is an urban or rural geographic area that is both a low income community and a

[97] New York Department of Homeless Services, 2014

place where there is low access to food that is healthy, fresh, and affordable. There are different thresholds by which "low access" to food is defined for determining food deserts.

Using a threshold where at least one-third of the population lives more than one-half mile from a supermarket or a large grocery store, there are several food deserts within the community.[98]

Food deserts in the community are relatively few and are not widespread. Most of the food deserts in the community are located in sections of the Bronx and Queens, with a few small areas in parts of Brooklyn. Maps in **Appendix 3** illustrate the locations of food deserts in the four boroughs.

Disability and Mobility

There is not a consistent pattern of greater or lesser disability by race and ethnicity, except that Asians had the lowest disability rates by far. Disability rates among Whites were generally low, but varied significantly by borough and were not in every case among the lowest (**Exhibit 84 and 85**).

Residents of the Bronx between ages five and 64 years had markedly higher rates of disability than those in other boroughs, with rates as much as double those other boroughs for specific disabilities. One of the most salient disabilities for Bronx residents in this age ranges was cognitive difficulty, at between five and 5.6 percent (**Exhibit 86**).

The percentage of individuals with a disability is higher among older age segments throughout the community. Among those age 65 over, between one-quarter and one-third of residents in each borough experienced ambulatory difficulties. Ambulatory limitations contribute to more general mobility and transportation difficulties for older individuals, as was reported in interviews. These are followed among senior citizens by independent living difficulties, with all boroughs near or slightly above the 20 percent mark (**Exhibit 86**).

Exhibit 84: Disability Status by Race and Borough, 2012

Race	Percent with Disability					
	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
One Race	13.5%	9.7%	9.9%	9.6%	10.4%	**10.9%**
White alone	18.4%	10.6%	8.3%	11.6%	10.9%	**11.3%**
Black or African American alone	13.1%	10.0%	15.8%	10.9%	11.6%	**12.0%**
Asian alone	7.7%	5.4%	6.9%	6.2%	6.2%	**5.9%**
Some other race alone*	51.5%	33.3%	55.0%	26.9%	38.4%	**36.4%**
Two or more races	13.6%	10.8%	11.0%	10.3%	11.3%	**11.0%**

* Some other race includes Native Hawaiian and other Pacific Islanders, American Indian and Alaska Natives or some other race.
Source: U.S. Census Bureau, ACS 5-year Estimates, 2008-2012

[98] U.S. Department of Agriculture. See http://apps.ams.usda.gov/fooddeserts/fooddeserts.aspx.

Exhibit 85: Disability Status by Ethnicity and Borough, 2012

Race	Percent with Disability					
	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
White alone, not Hispanic or Latino	16.6%	10.7%	6.8%	13.5%	10.6%	**11.5%**
Hispanic or Latino (of any race)	13.7%	9.8%	14.3%	7.9%	11.2%	**10.2%**

Source: U.S. Census Bureau, ACS 5-year Estimates, 2008-2012

Exhibit 86: Disability Status by Age and Disability Type, 2012

Age and Disability Type	Percent with Disability					
	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Population under 5 years	**1.0%**	**0.5%**	**0.8%**	**0.7%**	**0.7%**	**0.8%**
With a hearing difficulty	0.7%	0.4%	0.6%	0.5%	0.5%	0.5%
With a vision difficulty	0.7%	0.3%	0.4%	0.5%	0.5%	0.4%
Population 5 to 17 years	**6.6%**	**3.1%**	**4.4%**	**3.5%**	**4.2%**	**4.7%**
With a hearing difficulty	0.6%	0.5%	0.4%	0.5%	0.5%	0.5%
With a vision difficulty	0.9%	0.5%	0.8%	0.6%	0.7%	0.6%
With a cognitive difficulty	5.0%	2.1%	2.9%	2.3%	2.9%	3.6%
With an ambulatory difficulty	1.1%	0.5%	1.0%	0.7%	0.7%	0.7%
With a self-care difficulty	1.0%	0.8%	1.0%	0.8%	0.9%	0.9%
Population 18 to 64 years	**12.4%**	**7.0%**	**6.9%**	**6.9%**	**7.8%**	**8.5%**
With a hearing difficulty	1.7%	0.9%	1.0%	1.1%	1.1%	1.5%
With a vision difficulty	2.3%	1.5%	1.3%	1.3%	1.5%	1.4%
With a cognitive difficulty	5.6%	2.7%	2.7%	2.4%	3.1%	3.4%
With an ambulatory difficulty	7.1%	3.9%	3.6%	3.8%	4.3%	4.5%
With a self-care difficulty	2.1%	1.3%	1.1%	1.3%	1.4%	1.5%
With an independent living difficulty	4.3%	2.6%	2.2%	2.4%	2.8%	3.0%
Population 65 years and over	**43.3%**	**41.0%**	**34.4%**	**35.6%**	**37.9%**	**34.6%**
With a hearing difficulty	11.0%	12.2%	9.2%	10.8%	10.9%	12.2%
With a vision difficulty	10.8%	10.4%	7.0%	7.4%	8.5%	6.6%
With a cognitive difficulty	13.0%	14.6%	10.0%	9.9%	11.6%	9.0%
With an ambulatory difficulty	32.4%	31.1%	25.4%	25.4%	27.9%	23.5%
With a self-care difficulty	11.8%	15.2%	10.4%	10.2%	11.9%	9.1%
With an independent living difficulty	21.1%	24.0%	17.3%	18.4%	20.1%	16.6%

Source: US Census Bureau, ACS 5-year Estimates, 2008-2012

Health Literacy

Health literacy is defined as "the degree to which an individual has the capacity to obtain, communicate, process and understand basic health information and services to make appropriate health decisions". Health literacy has a significant impact on the ability of individuals in communities to keep themselves and their families healthy, and to seek, obtain, and effectively use available health services.

Among the barriers to health literacy are overall educational attainment and the ability to speak English. Thus, the data and discussions above about these topics also are relevant to helping

identify populations and neighborhoods within the overall community that may have lower levels of health literacy and benefit from special attention to provide information and education in ways that are educationally, culturally, and linguistically appropriate.

In addition, the interviews and survey conducted by this needs assessment obtained data on questions of health education, and about knowledge of and ability to navigate the health care system, which are related to health literacy. See those sections for a discussion of findings relevant to health literacy.

Institutionalized and Criminal Justice System Population

Crime rates in New York City were higher than for the state overall, particularly with respect to violent crime including robbery and aggravated assault. Among young adults age 16 to 21, drug-related arrests occurred at much higher rates than those for property crime (**Exhibit 88 and 89**).

The New York City Department of Correction processes more than 100,000 "admissions" to 15 facilities in a year, and has an average daily census of roughly 14,000 individuals.[99] On a daily basis, among the adult inmates, there were nearly 500 adolescents 16-18 years old.[100]

Nonetheless, crime has been declining in the city for a number of years, the jail population was around 22,000 in 1991 before dropping to current levels, and the number of parolees who had spent time in New York City jails fell 36 percent between 1997 and 2008.[101]

Exhibit 88: Crime Rates per 100,000 Population, 2012

Indicator	New York City	New York State
Violent Crime rate	**639.3**	**406.8**
Murder and non-negligent manslaughter rate	5.1	3.5
Forcible rape rate	14.0	14.6
Robbery rate	243.7	146.4
Aggravated assault rate	376.5	242.3
Property crime rate	**1,722.2**	**1,922.0**
Burglary rate	224.8	329.9
Larceny-theft rate	1,398.6	1,503.5
Motor vehicle theft rate	98.8	88.6

Note: Exhibit shading key on next page.
Source: Federal Bureau of Investigation, Uniform Crime Reporting Program, 2012

[99] New York City Department of Correction. See http://www.nyc.gov/html/doc/html/about/about_doc.shtml.
[100] New York City Department of Correction, "Average Daily Adolescent Population," accessed at http://www.nyc.gov/html/doc/downloads/pdf/adolescent/census_data/ANNUAL_REPORT_FY14_ADOLESCENT.pdf.
[101] Brennan Center for Justice, New York University School of Law. "How New York City Reduced Mass Incarceration: A Model for Change?" January 2013. Accessed at http://www.brennancenter.org/sites/default/files/publications/How_NYC_Reduced_Mass_Incarceration.pdf.

Exhibit 89: Young Adult (Ages 16 – 21) Crime Rates per 10,000 Population, 2013

Borough	Drug Use / Possession / Sale Arrests		Property Crimes Arrests	
	Number	Rate*	Number	Rate*
Bronx	4,571	352	1,424	109.7
Brooklyn	4,435	238.9	2,075	111.8
Manhattan	3,046	311.3	3,020	308.7
Queens	3,320	214.6	1,848	119.4
New York City	16,156	267.5	8,810	145.9
New York State	23,801	149	23,199	145.2

* Rates are per 10,000 young adults aged 16-21 years.
Source: New York State Division of Criminal Justice Services, via Kids' Well-being Indicators Clearinghouse, 2014

Key to Exhibits 88 and 89	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
Greater than 75% worse than NYS	

The racial and ethnic composition of inmates during New York City's fiscal year 2012 was: 57 percent Black, 33 percent Hispanic, seven percent White, and one percent Asian, with the remaining two percent unknown. Males made up 93 percent of all inmates. The age distribution of inmates was fairly even between ages 19 and 64. Twenty-three percent were 19 to 24 years, 28 percent were 25 to 34 years, 20 percent were 35 and 44 years, and 22 percent were 45 to 64. Seven percent were 16 to 18, and less than one percent was over 65 years or of an unknown age.[102]

The New York City Department of Correction operates health clinics in the prisons, as well as two hospital prison wards at Bellevue Hospital in Manhattan and Elmhurst Hospital in Queens. In fiscal year 2013, there were 75,664 inmate visits to the health clinics.[103]

Of significant importance for the wider community, particularly upon parole or other release, 38 percent of inmates in 2013 had been diagnosed with a mental health condition. The Department of Correction and the Department of Health and Mental Hygiene have begun two programs to better serve the needs of mentally ill inmates, Clinical Alternative to Punitive Segregation and Restricted Housing Units.[104]

[102] New York City Independent Budget Office. "New York City by the Numbers," August 22, 2013. Accessed at http://ibo.nyc.ny.us/cgi-park2/?cat=21.
[103] New York City Department of Correction, "Preliminary Mayor's Management Report FY2014." Accessed at http://www.nyc.gov/html/doc/downloads/pdf/MMR-2014.pdf
[104] *Ibid.*

Health Status and Health Issues: Secondary Data (Section B.ii.)

Leading Causes of Death and Premature Death

Leading Causes of Death

Heart disease, cancer, and pneumonia/influenza have been in the top three leading causes of death every year from 2003 to 2012 in New York City. Heart disease and cancer deaths are by far the most prevalent. In 2012, the age-adjusted death rate for heart disease was 188 per 100,000 population, 146 per 100,000 for cancer, and 26 per 100,000 for pneumonia/influenza. The death rates for other leading causes of death ranged from 19 to 24 deaths per 100,000 between 2003 and 2012.[105]

The leading causes of death in the four boroughs of the community are closely in line with New York City and with statewide results. They are depicted by borough and sex below (**Exhibit 90**).

For non-Hispanic Whites in New York State, the top three leading causes of death have been heart disease, cancer, and chronic lower respiratory disease (CLRD) since 2003. In 2012, the age-adjusted death rate for heart disease among this group was 187 per 100,000, 165 per 100,000 for cancer, and 35 per 100,000 for CLRD.

For non-Hispanic Blacks in New York State, the top three leading causes of death have been heart disease, cancer, and diabetes since 2005. In 2003 and 2004, the third leading cause of death was AIDS. In 2012, the age-adjusted death rate among non-Hispanic Blacks for heart disease was 220 per 100,000, 176 per 100,000 for cancer, and 35 per 100,000 for diabetes.

For Hispanics in New York State, the top two leading causes of death were heart disease and cancer. The third leading cause has varied in recent years between unintentional injury (2007-2009 and 2011-2012), pneumonia/influenza (2004-2007 and 2010), and AIDS in 2003. In 2012, the age-adjusted death rate among Hispanics for heart disease was 142 per 100,000, 115 per 100,000 for cancer, and 20 per 100,000 for unintentional injury.

For Asians and Pacific Islanders in New York State, the top two leading causes of death have been heart disease and cancer since 2003. The third leading cause of death has been either stroke (2003-2004, 2006-2007, and 2010-2012) or pneumonia/influenza (2005 and 2008-2009). In 2012, the age-adjusted death rate among Asians for cancer was 99 per 100,000, 95 per 100,000 for heart disease, and 20 per 100,000 for stroke.

For American Indian and Alaska Natives in New York State, the top two leading causes of death were heart disease and cancer. The third leading cause of death in recent years has varied among unintentional injury (2003 tied with CLRD), diabetes (2009), and chronic lower respiratory disease (2003). In 2012, there were 52 deaths caused by heart disease, 40 caused by cancer, and 17 caused by unintentional injury.

---

[105] New York State Department of Health, "Leading Causes of Death." Accessed at https://www.health.ny.gov/statistics/leadingcauses_death/ .

Exhibit 90: Top Five Leading Causes of Death, by Borough and Sex, 2010-2012

Borough	Sex	Leading Causes of Death				
Bronx		**# 1**	**# 2**	**# 3**	**# 4**	**# 5**
	Male	Heart Disease	Cancer	Unintentional Injury	Pneumonia and Influenza	Diabetes
	Female	Heart Disease	Cancer	Pneumonia and Influenza	Diabetes	Stroke
Brooklyn						
	Male	Heart Disease	Cancer	Pneumonia and Influenza	Unintentional Injury	Diabetes
	Female	Heart Disease	Cancer	Pneumonia and Influenza	Diabetes	Stroke
Manhattan						
	Male	Heart Disease	Cancer	Unintentional Injury	Pneumonia and Influenza	CLRD*
	Female	Heart Disease	Cancer	CLRD*	Pneumonia and Influenza	Stroke
Queens						
	Male	Heart Disease	Cancer	Pneumonia and Influenza	Unintentional Injury	Stroke
	Female	Heart Disease	Cancer	Pneumonia and Influenza	Stroke	CLRD*
New York City						
	Male	Heart Disease	Cancer	Unintentional Injury	Pneumonia and Influenza	Diabetes
	Female	Heart Disease	Cancer	Pneumonia and Influenza	Stroke	CLRD*
New York State						
	Male	Heart Disease	Cancer	Unintentional Injury	CLRD*	Stroke
	Female	Heart Disease	Cancer	CLRD*	Stroke	Pneumonia and Influenza

*Note: CLRD refers to Chronic Lower Respiratory Diseases.
Source: New York State Department of Health, Statistics and Data – Leading Causes of Death, accessed at https://www.health.ny.gov/statistics/leadingcauses_death/, October 2014.

Leading Causes of Premature Death

Cancer and heart disease have been in the top three leading causes of premature death every year since 2003, and unintentional injury has been in the top three since 2007. According to NYSDOH data using deaths before age 75 as the metric, in 2012 the age-adjusted premature

death rate for cancer was 84 per 100,000 population, 61 per 100,000 for heart disease, and 17 per 100,000 for unintentional injury.[106]

The top three leading causes of premature death are highly consistent across the boroughs, with most differences among boroughs and across males and females in the fourth and fifth leading causes. These include diabetes, CLRD, stroke, AIDS, homicide, and suicide (**Exhibit 91**).

There are significant racial and ethnic disparities in premature death rates, and by borough. Both Black non-Hispanics and Hispanics had premature death rates between two and two and one-half times the rate of Whites in all boroughs except for Manhattan. These disparities were greatest in the Bronx (**Appendix 7 – Exhibit 7A).**

Exhibit 91: Top Five Leading Causes of Premature Death, by Borough and Sex, 2010-2012

Borough	Sex	Leading Causes of Premature Death				
Bronx		**# 1**	**# 2**	**# 3**	**# 4**	**# 5**
	Male	Heart Disease	Cancer	Unintentional Injury	AIDS	Homicide/Legal Intervention
	Female	Cancer	Heart Disease	Diabetes	AIDS	CLRD*
Brooklyn						
	Male	Cancer	Heart Disease	Unintentional Injury	Diabetes	Homicide/Legal Intervention
	Female	Cancer	Heart Disease	Diabetes	Stroke	Unintentional Injury
Manhattan						
	Male	Cancer	Heart Disease	Unintentional Injury	AIDS	Diabetes
	Female	Cancer	Heart Disease	Unintentional Injury	Diabetes	CLRD*
Queens						
	Male	Cancer	Heart Disease	Unintentional Injury	Diabetes	Suicide
	Female	Cancer	Heart Disease	Diabetes	Stroke	Unintentional Injury
NYC						
	Male	Cancer	Heart Disease	Unintentional Injury	Diabetes	AIDS
	Female	Cancer	Heart Disease	Diabetes	Unintentional Injury	CLRD*
NYS						
	Male	Cancer	Heart Disease	Unintentional Injury	CLRD*	Suicide
	Female	Cancer	Heart Disease	CLRD*	Unintentional Injury	Stroke

*Note: CLRD refers to Chronic Lower Respiratory Diseases.
Source: New York State Department of Health, Statistics and Data – Leading Causes of Death, accessed at https://www.health.ny.gov/statistics/leadingcauses_death/, October 2014.

[106] *Ibid.*

Leading Causes of Hospitalization and Preventable Hospitalization

Hospitalizations of Medicaid members for ambulatory care sensitive conditions in New York State were led by chronic obstructive pulmonary disease (COPD), with an observed rate of 779.1 discharges per 100,000 population, heart failure (281.5), and bacterial pneumonia (241.4).

These three conditions also were the top three causes of hospitalization for ambulatory care sensitive conditions in the four New York City boroughs of the community (**Exhibit 49**). The Bronx had the highest risk-adjusted rate for COPD (1,076.9 per 100,000), nearly double the rate for Queens (561.1).[107]

On the composite measure of all PQIs on hospitalizations for ambulatory care sensitive conditions, the Bronx has by far the highest rate, at 2,343.9 per 100,000 people. Brooklyn and Manhattan each had approximately 1,700 per 100,000 (**Exhibit 48**). Further, the Bronx had the highest rates for every condition measured by PQIs (**Exhibit 49**).

Rates of preventable hospitalizations of Blacks and Hispanics were between one and one-half and two times the rate for Whites in most boroughs. In Manhattan, Blacks had four times the rate of preventable hospitalizations as Whites (**Appendix 7 - Exhibit 7A**).

Within each borough, considerable differences in hospitalization rates existed among neighborhoods for each ambulatory care sensitive condition. The higher hospitalization rates generally were in the areas with the greatest needs on socio-economic and other indicators. Details are in **Appendix 4**, and diagnosis-specific highlights are mentioned with discussion of specific conditions below in this section.

Finally, potentially preventable hospital emergency room visits also varied by borough. The risk-adjusted visit rate per 100 people was 42.1 in Manhattan, 38.2 in the Bronx, 30.8 in Queens, and 28.8 in Brooklyn (**Exhibit 44**).

Exhibit 46 breaks down the PPV rates by neighborhood. In the Bronx, Bronx Park/Fordham, Hunts Point/Mott Haven, and Central Bronx all had slightly higher rates than the borough wide rate. In Brooklyn, Bushwick/Williamsburg, Central Brooklyn, East New York/New Lots, Flatbush, and Northwest Brooklyn had higher rates than Brooklyn's overall rate. In Manhattan, the only neighborhoods that had lower rates than the borough were: Greenwich Village, Inwood/Washington Heights, Lower East Side, and the Upper East Side. In Queens, Jamaica, Northwest Queens, Rockaways, Southwest Queens, and West Queens all had rates higher than the borough-wide rate.

<u>Psychiatric Hospitalizations and Readmissions</u>

[107] New York State Department of Health. SPARCS Data Set Starting 2011. See https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn

In the table below (**Exhibit 92**), four boroughs had lower general hospital inpatient census rates for adults compared to New York State; however, all four boroughs had slightly higher rates in State psychiatric hospitals.

The Bronx had the highest inpatient census rate in general hospitals, followed by Manhattan and Brooklyn. The Bronx was the only borough with a slightly higher adult rate in private psychiatric hospitals.

All of the boroughs had higher inpatient census rates for children in general hospitals. Manhattan and the Bronx had the highest rates compared to the other boroughs and New York State. Children's inpatient rates were generally lower than the state except for the Bronx, which had a slightly higher rate in private hospitals and almost double the rate in state hospitals. Among Residential Treatment Facilities (RTFs) for youth up to age 21, the Bronx had the highest inpatient census rate by approximately double the other boroughs.

Exhibit 92: Psychiatric Inpatient Average Daily Census and Rate per 10,000, by Borough and Hospital Type, 2012

		General Hospital (Medicaid patients)		Private Psychiatric Hospital (Medicaid patients)		State Psychiatric Hospital (All patients)		RTF (0-21 years)	
Borough	Age Group	Daily Census	Rate	Daily Census	Rate	Daily Census	Rate	Daily Census	Rate
Bronx									
	Adults (18+)	483.5	4.7	27.6	0.3	215.1	2.1	N/A	N/A
	Children	42.5	1.1	66.0	1.8	54.5	1.5	95.2	2.6
Brooklyn									
	Adults (18+)	754.7	3.8	26.2	0.1	419.6	2.1	N/A	N/A
	Children	44.1	0.7	27.8	0.5	35.7	0.6	42.5	0.7
Manhattan									
	Adults (18+)	598.3	4.4	15.8	0.1	355.4	2.6	N/A	N/A
	Children	33.0	1.3	25.0	1.0	12.1	0.5	40.1	1.6
Queens									
	Adults (18+)	552.2	3.1	30.9	0.2	317.7	2.1	N/A	N/A
	Children	33.4	0.7	31.7	0.7	35.6	0.8	45.5	1.0
New York State									
	Adults (18+)	4,254.2	5.1	339.7	0.2	3,124.4	2.0	N/A	N/A
	Children	297.0	0.7	392.6	0.9	378.6	0.9	523.8	1.2

Source: New York State Office of Mental Health - Inpatient Use Dashboard, accessed 2014

Examining discharges from and readmissions to psychiatric units by location of the hospital facility, approximately 20 percent of adults and 13 percent of children in the community were readmitted within 30 days of discharge. These figures were roughly in line with statewide averages (**Exhibit 93**).

Exhibit 93: Psychiatric Inpatient Discharges and 30-day Readmissions, by Borough and Hospital Type, 2013

Borough	Age Group	General Hospital (Medicaid patients)		Private Psychiatric Hospital (Medicaid patients)		State Psychiatric Hospital (All patients)	
		Number of Discharges	Percent Readmitted	Number of Discharges	Percent Readmitted	Number of Discharges	Percent Readmitted
Bronx							
	Adults (18+)	6,120	20.2%	n/a	n/a	346	14.7%
	Children	374	12.6%	n/a	n/a	n/a	n/a
Brooklyn							
	Adults (18+)	9,829	20.5%	n/a	n/a	175	5.1%
	Children	731	9.4%	n/a	n/a	n/a	n/a
Manhattan							
	Adults (18+)	10,059	21.5%	1,012	19.4%	22,961	20.9%
	Children	1,152	12.8%	n/a	n/a	n/a	n/a
Queens							
	Adults (18+)	6,455	24.5%	323	21.7%	304	14.5%
	Children	476	13.9%	731	15.9%	176	6.3%
New York State							
	Adults (18+)	354,084	19.5%	2,290	17.2%	4,116	11.5%
	Children	10,826	12.8%	3,830	13.7%	n/a	n/a

Note: 30-day readmissions means the percentage of discharged patients that are readmitted within 30 days.
Source: New York State Office of Mental Health, Dashboard - Inpatient Readmissions, accessed 2014

Additional data on mental health services utilization is in the mental health portion of the Disease Prevalence and Mortality section, below.

Analysis of Medicaid Data

As shown in **Exhibit 78** in the Insurance Status and Medicaid Member section above, there were 2,355,140 Medicaid members in the overall community.

Exhibit 94 shows that, in New York City, there were a total of 3,231,599 Medicaid enrollees, almost one million of whom are Temporary Assistance to Needy Families (TANF) children. The second largest eligibility category is the safety net adult category, with just over 700,000 members.

New York City's Medicaid managed care penetration rate was 37 percent, substantially higher than the state's at a little over 27 percent. The Bronx had the highest penetration (43.1%), while Queens had the lowest (32.9%). The penetration rate in each county was calculated by dividing the county's total managed care plan enrollment by its estimated total population.[108]

[108] New York State Department of Health, "2014 Managed Care Enrollment Report." Accessed at https://www.health.ny.gov/health_care/managed_care/report/q_report.htm.

Exhibit 94: Average Number of Medicaid Enrollees, by Eligibility Category, 2013

Eligibility Category	New York City	New York State
TANF* Children	957,808	1,711,518
TANF* Adults	311,698	614,509
Safety Net Children	226,077	275,492
Safety Net Adults	710,826	947,437
Aged	309,858	471,769
Blind & Disabled	396,047	778,391
Family Health Plus	283,650	457,239
Other	35,636	47,020
Total	**3,231,599**	**5,303,375**

*Note: TANF is Temporary Assistance to Needy Families.
Source: New York State Department of Health, Medicaid Statistics, accessed 2014 at https://www.health.ny.gov/statistics/health_care/medicaid/eligible_expenditures.

Medicaid Primary Care and Emergency Room Visits

Brooklyn had the highest number and rate managed care primary care visits, with 374.7 visits per 1,000 member months. Queens had the second-highest visit rate at 368.6, while the Bronx and Manhattan had nearly identical rates lower than both New York City and the state (**Exhibit 95**)

The Fee for Service primary care visit rates follow the same pattern among boroughs, with Brooklyn and Queens having the highest rates of the four boroughs. All four visit rates were lower than the city's (although Manhattan's rate was essentially equal to that if the city), but higher than the state rate (**Exhibit 96**).

Whereas they had the two lowest primary care visit rates among the four boroughs, both the Bronx and Manhattan had the highest emergency room visit rates, at 55 to 56 visits per 1,000 member months. Their rates also were higher than New York City and the state. Brooklyn and Queens had lower rates than the city and State (**Exhibit 97**).

Exhibit 95: Medicaid Members Making Primary Care Visits – Managed Care

Service Location	Members with Primary Care Visits	Primary Care Visit Rate per 1,000 Member Months
Bronx	456,096	333.3
Brooklyn	706,170	374.7
Manhattan	241,236	336.1
Queens	513,572	368.6
New York City	1,464,484	361.5
New York State	3,038,753	343.5

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Exhibit 96: Medicaid Members Making Primary Care Visits – Fee for Service

Service Location	Members with Primary Care Visits	Primary Care Visit Rate per 1,000 Member Months
Bronx	135,209	250.2
Brooklyn	205,461	312.0
Manhattan	87,906	243.3
Queens	161,943	307.9
New York City	1,961,154	356.0
New York State	1,133,353	243.2

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Exhibit 97: Medicaid Members Making Emergency Room Visits

Service Location	Members with ER Visits	ER Visit Rate per 1,000 Member Months
Bronx	246,991	56.3
Brooklyn	256,542	37.4
Manhattan	130,317	54.8
Queens	193,859	36.6
New York City	**859,773**	**44.5**
New York State	**1,470,916**	**46.6**

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Medicaid Claims for Certain Physical Diseases and Mental Disorders

Medicaid service claims can be examined by the borough of the member (typically their borough of residence), and by the borough in which services are received. This identifies the extent to which Medicaid members obtain services in their home borough or "migrate" for services to other parts of the community.

For health services relating to circulatory, respiratory, and endocrine diseases, from 40 to nearly 86 percent of claims are for service in the same borough as the member's borough. In all boroughs, inpatient and clinics or emergency room (ER) visits were most likely to be in the member's borough, while "practitioner" visits (e.g. physicians) were generally 10 to 20 percentage points less likely to be in the member's borough. That is, patients were more likely to travel for a doctor visit than for a hospital stay, clinic visit or trip the ER. For example, roughly 80 percent of Bronx members' claims for inpatient, clinic, and emergency room claims were in the Bronx, while only a little more than 53 percent of practitioner claims were in the borough (**Exhibit 98**).

Medicaid members in Manhattan had the highest percentage of claims for services in Manhattan (73.8 to 85.9%, depending on service type). Members in Queens were least likely to obtain services in Queens (40.1% to 65.3%) and more likely than the other boroughs to do so in Manhattan. Not surprisingly given the density of its providers, Manhattan was the borough to which Medicaid members were most likely to travel for services. Approximately 10 percent of claims for practitioner services were for services received outside the four boroughs.

The distribution of Medicaid claims for mental disorders follows a similar pattern to the claims for circulatory, respiratory and endocrine claims. A member's "home" borough is where the single largest percentage obtain services, and of those that receive services in a borough other than their own, the largest percentage do so in Manhattan (**Exhibit 99**).

However, there was a higher percentage of claims for mental disorders in boroughs other than the member's own borough than was the case for the physical diseases discussed above. Further, between 12 and 20 percent of claims for practitioner services were outside of the four boroughs. And, on average slightly less than one-quarter of claims for inpatient services were outside the community.

Exhibit 98: Medicaid Claims for Circulatory, Respiratory, and Endocrine Diseases, by Service Type and Borough

Member Borough: Bronx	Percent of Claims in Service Borough (Rows total to 100%)				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	80.2%	1.2%	15.4%	0.7%	2.5%
Clinic/ER	78.2%	1.1%	17.9%	0.7%	2.1%
Practitioner	53.8%	4.6%	27.6%	3.0%	11.0%
Member Borough: Brooklyn	**Percent of Claims in Service Borough**				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	1.3%	77.4%	14.5%	3.7%	3.1%
Clinic/ER	1.3%	77.2%	14.4%	3.6%	3.5%
Practitioner	1.3%	61.8%	21.2%	5.1%	10.6%
Member Borough: Manhattan	**Percent of Claims in Service Borough**				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	7.1%	4.0%	83.5%	2.3%	3.1%
Clinic/ER	6.4%	4.0%	85.9%	1.8%	1.9%
Practitioner	6.4%	6.8%	73.8%	4.0%	9.0%
Member Borough: Queens	**Percent of Claims in Service Borough**				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	1.7%	6.9%	16.0%	65.3%	10.1%
Clinic/ER	1.7%	8.1%	22.6%	61.9%	5.7%
Practitioner	3.5%	7.9%	36.6%	40.1%	11.9%

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Exhibit 99: Medicaid Claims for Mental Disorders, by Service Type and Borough

Member Borough: Bronx	Percent of Claims in Service Borough				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	43.2%	2.3%	22.4%	5.6%	26.5%
Clinic/ER	65.4%	6.7%	18.0%	8.3%	1.6%
Practitioner	42.5%	6.8%	32.8%	2.3%	15.6%
Member Borough: Brooklyn	**Percent of Claims in Service Borough**				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	4.2%	44.9%	21.0%	8.2%	21.7%
Clinic/ER	1.9%	61.9%	18.0%	16.4%	1.8%
Practitioner	2.4%	50.6%	24.6%	6.4%	16.0%

-- Exhibit 99 continued on next page --

Member Borough: Manhattan	Percent of Claims in Service Borough				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	9.2%	5.3%	54.9%	7.4%	23.2%
Clinic/ER	7.9%	5.6%	76.8%	7.8%	1.9%
Practitioner	8.4%	8.0%	67.8%	4.0%	11.8%
Member Borough: Queens	**Percent of Claims in Service Borough**				
	Bronx	Brooklyn	Manhattan	Queens	Other Area
Inpatient	4.8%	6.8%	16.9%	48.6%	22.9%
Clinic/ER	1.6%	8.3%	14.6%	71.9%	5.6%
Practitioner	3.0%	10.5%	21.5%	44.3%	20.7%

Note: Rows total to 100 percent.
Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

In addition, maps and tables in **Appendix 5, Exhibits 5E-5L** depict Medicaid beneficiary disease prevalence for respiratory, cardiovascular, diabetes, and mental health conditions at the neighborhood level. These data are discussed in the Disease Prevalence and Mortality section.

Disease Prevalence and Mortality

Asthma and Respiratory Diseases

The table below depicts the morality and hospitalization rates by borough for respiratory disease. Overall, the Bronx compared unfavorably to New York State and had rates greater than 75 unfavorable to the state in nine of 11 mortality and hospitalization indicators (**Exhibit 100)**.

Exhibit 100: Respiratory Disease Mortality and Hospitalization Rates, 2008-2011

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Age-adjusted CLRD hospitalization rate per 10,000	79.9	44.7	35.1	31	44.6	**37.0**
Age-adjusted CLRD mortality rate per 100,000	27.4	17.3	19.2	18.1	20.1	**31.0**
Age-adjusted asthma hospitalization rate per 10,000	61.5	31.2	25.1	18.8	31.0	**19.9**
Ages 0-4 years	157.6	73.3	59.7	59.5	82.3	**56.8**
Ages 5-14 years	62.4	31.7	31.4	22.8	34.8	**20.8**
Ages 15-24 years	23.8	10.7	10.7	6.6	12.1	**7.4**
Ages 25-44 years	31.0	12.3	7.7	6.4	12.5	**10.1**
Ages 45-64 years	73.5	38.6	29.7	18.2	35.6	**21.6**
Ages 65 years or older	96.8	59.6	45.0	34.7	53.0	**32.0**
Age-adjusted asthma mortality rate per 100,000	4.3	2.0	1.6	1.1	2.0	**1.2**
Age-adjusted % of adults with current asthma (2008-2009)	8.1	3.9	6.0	4.8	9.2	**9.7**

Source: New York State Department of Health, 2014

-- Key to Exhibit100 on next page --

-- Exhibit 100 continued from previous page --

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
>75% worse than NYS	

The Bronx had the highest self-reported percentage of residents who had "ever been told had asthma" (18.1%) of all four boroughs and New York City. The neighborhoods of Northeast Bronx (20.8%) and South Bronx (20.6%) had the highest percentages of self-reported asthma. Canarsie and the Flatlands (17.9%) and Williamsburg/Bushwick (18.0%) in Brooklyn, Central (18.6%) and East Harlem (20.5%) in Manhattan, and Long Island City/Astoria (17.6%) in Queens also had relatively high proportions (**Appendix 5 – Exhibit 5C**).

Exhibit 101 below shows that in all four boroughs, Blacks generally had the highest rates of asthma and chronic lower respiratory disease (CLRD) hospitalizations. The rates for Hispanics also compared unfavorably to the total population, with the second highest hospitalization rates.

Exhibit 101 shows that, overall, the Bronx had the highest age-adjusted chronic lower respiratory disease (CLRD) rate compared to all other boroughs and New York State. Brooklyn also had a rate significantly higher than the state. The Bronx also compared unfavorably (over 75% worse) to the state for all asthma and respiratory indicators, except for the age-adjusted percentage of adults with current asthma. Brooklyn was over 75 percent worse than the state for the asthma hospitalization rate for ages 45-64, and for 65 and older. Both Brooklyn and Manhattan also compared unfavorably to the state for most indicators, while Queens compared favorably to the state rates.

Blacks and Hispanics compared unfavorably to other races and ethnicities for asthma hospitalization and asthma hospitalization ages 0-17, across all boroughs. Whites compared unfavorably in all boroughs for CLRD mortality, except in Manhattan where Blacks had the highest rate. The Bronx's CLRD hospitalization rate was almost double the state rate. Blacks and Hispanics in the Bronx, Brooklyn, and Manhattan had the highest hospitalization rates compared to the other races. In Queens, Whites had a higher CLRD hospitalization rate, while Hispanics had a lower rate when compared to the trends in the other three boroughs (**Exhibit 101).**

Exhibit 101: Selected Respiratory Disease Indicators, by Borough and Race/Ethnicity, 2009-2011

Borough and Race/Ethnicity	Asthma Hospitalization Rate,* Age-adjusted	Asthma Hospitalizations Rate,* (0-17 Years)	CLRD Mortality Rate,** Age-adjusted	CLRD Hospitalizations Rate,* Age-adjusted
Bronx	**61.5**	**83.1**	**27.4**	**79.9**
White	20.8	20.6	36.2	39.3
Black	59.3	92.3	26.8	75.9
Asian/Pacific Islander (A/PI)	16.9	25.4	10.7	26.9
Hispanic	54.9	61.6	22.9	65.8
Brooklyn	**31.2**	**41.3**	**17.3**	**44.7**

--Exhibit 101 continued on next page--

--Exhibit 101 continued from previous page--

Borough and Race/Ethnicity	Asthma Hospitalization Rate,* Age-adjusted	Asthma Hospitalizations Rate,* (0-17 Years)	CLRD Mortality Rate,** Age-adjusted	CLRD Hospitalizations Rate,* Age-adjusted
White	9.3	7.9	17.5	22.7
Black	50.3	72.6	18.1	63.2
A/PI	6.5	6.4	10.3	12.2
Hispanic	40.7	44.6	18.7	53
Manhattan	**25.1**	**39**	**19.2**	**35.1**
White	6.4	13.3	17.6	12.9
Black	58.6	85.7	28.7	75
A/PI	3.8	4.6	16.9	9.5
Hispanic	35.6	38.5	17.2	44.4
Queens	**18.8**	**31.1**	**18.1**	**31**
White	11.3	17.1	23.4	26.5
Black	34.1	55.4	17.7	47.4
A/PI	7.5	13.1	10.4	12.1
Hispanic	17.3	26.3	10.3	24.9
New York City	**31**	**45.6**	**20.1**	**44.6**
White	9.9	12	21.7	23.5
Black	49.6	74.3	21.5	64
A/PI	7	10.6	12	12.3
Hispanic	37.8	44.1	17.4	47.7
New York State	**19.9**	**28.3**	**31**	**37**
White	8.8	10.7	35.1	25.9
Black	42.8	59.1	22	58.5
A/PI	6.4	9.7	11.1	11.2
Hispanic	32.7	35.7	16.8	45

* Age-adjusted rate per 10,000 population. ** Age-adjusted rate per 100,000 population.
Note: CLRD is Chronic Lower Respiratory Disease.
Source: New York State Department of Health – Health Indicators by Race/Ethnicity 2009-2012

Among Medicaid beneficiaries, 11.9 percent in the Bronx had a respiratory condition, which is the highest overall of all four boroughs. The neighborhoods in the Bronx with the highest prevalence of respiratory conditions are High Bridge/Morrisania (12.1%) and Hunts Point/Mott Haven (14.1%). In Brooklyn, 9.1 percent had a respiratory condition. The neighborhoods with the highest prevalence were Central Brooklyn (10.8%), Northwest Brooklyn (11.0%), and Southern Brooklyn (11.5%). In Manhattan, 10.5 percent had a respiratory condition, with Central Harlem (11.6%), Chelsea and Clinton (11.8%), Upper West Side (12.0%), and East Harlem (14.0%) the neighborhoods with the highest prevalence. For Queens, 7.5 percent of Medicaid beneficiaries had a respiratory condition. The neighborhoods with the highest prevalence were West Central Queens (9.2%) and Rockaways (15.2%) (**Appendix 5, Exhibits 5E-F)**.

Cancer

The table below shows that generally, the four boroughs compared favorably to the state for most cancer indicators.

Exhibit 102: Selected Cancer Incidence and Mortality Rates (Age-Adjusted), 2008-2010

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
All Cancers						
Incidence per 100,000	456.8	457.3	478.6	446.2	462.8	**499.9**
Mortality per 100,000	164.7	148.8	152.1	137.4	149.8	**162.5**
Lip, Oral Cavity, and Pharynx Cancer						
Incidence per 100,000	10.1	9.1	12	10.5	9.8	**10.5**
Mortality per 100,000	2.5	2.3	2.6	2.1	2.3	**2.1**
Colon and Rectum Cancer						
Incidence per 100,000	47.1	47.9	38.8	45.6	45.2	**44.7**
Mortality per 100,000	18.3	17.4	14.2	14.7	16.1	**15.4**
Lung and Bronchus Cancer						
Incidence per 100,000	51.7	49.1	51.1	50.3	51.6	**63.6**
Mortality per 100,000	36.4	32.3	34.5	30.6	33.8	**42.3**
Female Breast Cancer						
Incidence per 100,000	108.2	109.9	137.8	113.9	117.5	**127.8**
Mortality per 100,000	23.8	22.3	21.8	18	21.4	**21.6**
Ovarian Cancer						
Incidence per 100,000	10.8	11.9	13.4	12.9	12.4	**12.9**
Mortality per 100,000	6.0	6.5	7.6	7.0	6.9	**7.8**
Prostate Cancer						
Incidence per 100,000	175.2	155.7	151	154.1	156.7	**165.7**
Mortality per 100,000	31.6	23.4	25.7	19.9	23.7	**21.1**
Melanoma Cancer Mortality						
Mortality per 100,000	0.8	1.3	1.5	1.4	1.3	**2.2**
Screenings						
Percent of women 18 years and older with pap smear in past 3 years (2008-2009)	81.2	83.8	85.3	79.4	82.5	**82.7**
Percent of women 40 and older with mammography screening in past 2 years (2008-2009)	78.2	78.4	80.3	74.8	77.8	**79.7**

Source: New York State Department of Health, accessed 2014

Key	
Up to 10% worse than NYS	
10-50% worse tha	
50-75% worse than NYS	
>75% worse than NYS	

Bronx, Brooklyn, and Manhattan compared unfavorably to the state for prostate cancer mortality. In the Bronx, several other cancer indicators were worse than the comparable state rates, including, lip, oral, pharynx (LOP) cancer mortality, colon/rectal cancer mortality, and female breast cancer mortality. Manhattan also compared unfavorably for LOP incidence and mortality, and Brooklyn for colon and rectal cancer mortality (**Exhibit 102**).

Cardiovascular Diseases

As shown in the table below, the Bronx and Brooklyn compared unfavorably to New York State for most cardiovascular mortality and hospitalization indicators.

Both the Bronx's congestive heart failure hospitalization rate and hypertension hospitalization rate were significantly worse than in the other boroughs and the state overall. Manhattan compared unfavorably to the state for both the coronary heart disease mortality and hospitalization indicators. Queens compared unfavorably for all coronary heart disease indicators (**Exhibit 103**).

Exhibit 103: Cardiovascular Mortality, Hospitalization and Premature Death, 2009-2011

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Cardiovascular Disease						
Hospitalization rate*	210.8	192.8	140.2	158.5	173.6	**159.9**
Mortality rate**	270	267.4	203.1	242.9	249.3	**242.3**
Premature death rate ***	136.3	124.1	81.3	95.2	107.8	**100**
Cerebrovascular Disease (Stroke)						
Hospitalization rate*	29.4	26.9	20.3	23.1	24.7	**24.9**
Mortality rate**	21	19.1	20.2	18.6	19.3	**26.9**
Premature death rate	13.6	13.5	7.8	9.8	10.9	**10.7**
Congestive Heart Failure						
Hospitalization rate*	41.8	36.2	23.7	25.8	30.5	**27.6**
Mortality rate**	5.4	3.7	5.3	4.5	4.4	**11.2**
Premature death rate	1.3	1.0	0.6	0.8	0.9	**1.5**
Coronary Heart Disease						
Hospitalization rate*	48.6	57.9	33.4	48.1	48.2	**43**
Mortality rate**	204	212.9	145.1	192.9	194.4	**160.4**
Premature death rate	96.2	88.4	54.8	71.1	77.4	**66.5**
Diseases of the Heart						
Hospitalization rate*	131.5	130.6	90.2	108.5	114.9	**107.9**
Mortality rate**	225.8	229	165.1	209.7	212.2	**198.6**
Premature death rate	109.2	98.8	63.8	78.5	86.9	**81.2**
High Blood Pressure						
Percentage of adults ever told they have high blood pressure*	33.4	29.6	23.6	29.7	n/a	**25.7**
Hypertension						
Hypertension hospitalization (18 years and older) rate per 10,000 pop.	18.2	11.8	8.2	9.0	11.3	**7.9**

*Note: Rates are per 10,000 and age-adjusted. **Note: Rates are per 100,000 and age-adjusted.
***Note: Premature death rate is ages 35 – 64 years, per 100,000 population.
Source: New York State Department of Health, accessed 2014

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
>75% worse than NYS	

Brooklyn had the highest age-adjusted heart attack hospitalization rate (per 10,000) of all four boroughs at 15.9. This is higher than the 2013-2017 Prevention Agenda (PA) Goal rate of 14.0. Manhattan had the lowest rate, while the rate in Queens was lower than the PA goal (**Appendix 7 – Exhibit 7B**).

In all four boroughs, Whites and Blacks had the highest mortality rates for diseases of the heart. However, Hispanics also had fairly high hospitalization rates, particularly in the Bronx and Brooklyn (along with both Whites and Blacks) for diseases of the heart. Asians had the lowest rates of both hospitalization and mortality for diseases of the heart in all boroughs, particularly in Manhattan (**Appendix 5 – Exhibit 5D**).

In New York State, 63 percent of providers reported that their patients were actively controlling their blood pressure, while only 40 percent reported discussing and using aspirin. Approximately half of providers reported their Medicaid patients were using medical assistance with smoking and tobacco use cessation (**Appendix 6 – Exhibit 6C**).

In the Bronx, 26.6 percent of Medicaid beneficiaries had cardiovascular conditions, the lowest of the four boroughs. The Bronx neighborhoods with the highest prevalence were Northeast Bronx (32.0%) and Kingsbridge/Riverdale (40.9%). In Brooklyn, the percentage of beneficiaries with cardiovascular conditions is 31.4 percent. The neighborhoods with the highest prevalence are Northwest Brooklyn (32.1%), Southwest Brooklyn (38.5%), Canarsie/Flatlands (38.6%), and Southern Brooklyn (57.0%). In Manhattan, 32.4 percent were affected, the highest among the four boroughs. The neighborhoods with the highest prevalence are the Upper East Side (36.7%) and the Upper West Side (40.7%). In Queens, 28.7 percent of Medicaid beneficiaries had cardiovascular conditions, and North Queens (31.4%) and Rockaways (44.5%) had the highest rates (**Appendix 5, Exhibits 5G-H)**.

Communicable Diseases

The table below illustrates that the four boroughs compared unfavorably to New York State for tuberculosis (TB) and acute hepatitis B incidence. Brooklyn and Queens were over 75 percent worse than the state for TB, and the Bronx was between 50 and 75 percent worse. Brooklyn compared negatively to the other boroughs for acute hepatitis B, and was 50 to 75 percent worse than the state. Both the Bronx and Manhattan were over 75 percent worse than the state in meningococcal incidence. Hepatitis A was over 75 percent worse in Queens, while Mumps was over 75 percent worse in Brooklyn (**Exhibit 104).**

Exhibit 104: Communicable Disease Indicators, by Borough, 2012

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Acute hepatitis B incidence per 100,000	0.9	1.1	1.0	0.8	0.9	**0.7**
E. coli O157 incidence per 100,000	0.4	0.2	0.7	0.2	0.3	**0.6**
H. influenza incidence per 100,000	2.0	1.4	1.4	1.3	1.5	**1.5**
Hepatitis A incidence per 100,000	0.7	0.7	1.0	1.3	0.9	**0.7**

-- Exhibit 104 continued on next page--

-- Exhibit 104 continued from previous page--

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Meningococcal incidence per 100,000	0.4	0.2	0.4	0.2	0.3	**0.2**
Mumps incidence per 100,000	0.7	23.5	0.9	0.6	7.7	**5.5**
Percentage of adults aged 65 years and older who ever received pneumonia shot	48.3	44.2	55.8	49.9	-	**64.7**
Percentage of adults aged 65 years and older with flu shot in last year	58.6	53.8	59.7	55.9	-	**75.0**
Pertussis incidence per 100,000	1.6	1.8	2.5	1.3	2.2	**4.2**
Pneumonia/flu hospitalization rate (Aged 65 years and older) per 10,000	125.7	96.7	101.7	107.8	105.5	**122.3**
Shigella incidence per 100,000	4.1	6.6	6.3	2.8	4.8	**3.5**
Tuberculosis incidence per 100,000	8.5	8.7	6.6	11.5	8.7	**4.9**

Source: New York State Department of Health, Health Data NY – Community Health Indicator Reports 2012.[109]

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
> 75% worse than NYS	

Diabetes and Cirrhosis

Overall, the Bronx compared the least favorably to the city and the state of all four boroughs, and was over 75 percent worse for cirrhosis hospitalization, diabetes hospitalization, and short-term diabetes complications. Brooklyn also compared unfavorably for all indicators except for cirrhosis mortality. Both Queens and Manhattan compared favorably to the state (**Exhibit 105**).

Exhibit 105: Selected Cirrhosis and Diabetes Indicators, by Borough, 2009-2011

Indicator	Bronx	Brooklyn	Queens	Manhattan	New York City	New York State
Cirrhosis						
Hospitalization rate*	4.9	3.6	2.7	2.6	3.3	**2.6**
Mortality rate**	7.9	5.8	5.2	4.9	5.8	**6.4**
Diabetes						
Hospitalization rate* (any diagnosis)	399.1	299.6	227.8	200.1	270.5	**226**
Hospitalization rate* (primary diagnosis)	41.9	30	18.6	17.7	25.6	**18.8**
Mortality rate**	27.3	23.4	15.8	15.4	20.1	**17.0**
Percentage of adults with physician diagnosed diabetes	11.3	10.5	11	6.1	n/a	**9.0**

-- Exhibit 105 continued on next page--

[109] See https://health.data.ny.gov/Health/Community-Health-Indicator-Reports-CHIRS-Latest.

-- Exhibit 105 continued from previous page--

Indicator	Bronx	Brooklyn	Queens	Manhattan	New York City	New York State
Short-term complications hospitalization rate* (18+ years)	11.9	7.6	4.8	5.2	6.8	**5.8**
Short-term complications hospitalization rate* (6-17 years)	5.3	3.7	2.3	3.0	3.5	**3.1**

*Note: Rates are per 10,000. **Note: Rates are per 100,000.
All rates are age-adjusted, except the short-term complication indicators.
Source: New York State Department of Health, accessed 2014

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
>75% worse than NYS	

The Bronx had the highest rate among all four boroughs of hospitalizations for short-term complications related to diabetes ages 6-17 years (5.0 per 10,000). The 2013-2017 Prevention Agenda (PA) Goal is 3.1. Queens had the lowest rate of all the boroughs (2.3). The Bronx also had the highest rate of hospitalizations for long-term complications related to diabetes aged 18 and up (12.0 per 10,000). Queens had the lowest rate for long-term complications, but this was still slightly higher than the 2013-2017 PA goal rate of 4.9 (**Appendix 7 – Exhibit 7B)**.

Blacks and Hispanics were disproportionately burdened with diabetes mortality and the number of hospitalizations. Blacks had the highest diabetes hospitalization rates (any diagnosis) in all four boroughs (**Appendix 5 – Exhibit 5D**).

In New York State, providers reported that 50 percent of Medicaid patients were receiving comprehensive diabetes screening and care. They also reported that slightly more than half had achieved Hemoglobin A1c (HbA1c) control (**Appendix 6 – Exhibit 6D**).

In the Bronx, 11 percent of Medicaid had diabetes conditions, the lowest of the four boroughs. The neighborhoods with the highest prevalence were Northeast Bronx (12.9%) and Kingsbridge/Riverdale (13.1%). In Brooklyn, 11.2 percent overall had diabetes conditions, and the neighborhoods with the highest prevalence were Northwest Brooklyn (12.0%), Canarsie/Flatlands (14.0%), and Southern Brooklyn (17.3%). In Manhattan, 12.1 percent of Medicaid beneficiaries had diabetes conditions, the highest of the four boroughs by a slight margin. The neighborhoods with the highest prevalence were Inwood/Washington Heights (12.6%), East Harlem (13.7%), and Upper West Side (13.7%). The prevalence in Queens was 11.1 percent. The Queens neighborhoods with the highest prevalence were Jamaica (11.9%), Southwest Queens (12.3%), and Rockaways (15.5%) (**Appendix 5, Exhibits 5I-J)**.

HIV/AIDs and STDs

The New York State average "viral load suppression (always)" was 62.7 percent. Queens was the only borough with better performance that the state average, achieving 69.1 percent. Both the Bronx and Manhattan had approximately 60 percent of patients with viral loads suppressed,

while Brooklyn had the worst viral suppression percentage at only 55.5 percent (**Appendix 6 – Exhibit 6F**).

The table below depicts the prevalence rate of HIV and AIDS. New York City as a whole was nearly twice as high as the state average in 2011. Queens had the lowest total rate of residents living with HIV and AIDS, although the prevalence rate for the White population was greater than 75 percent worse than the state average. Bronx and Manhattan compare most unfavorably. Every cohort in Manhattan was worse than the state, ranging from nearly double to more than six times higher than the statewide figure (**Exhibit 106)**.

Exhibit 106: HIV and AIDS Cases, Prevalence Rate per 100,000, by Borough, 2012

Cohort	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Male	2,245.3	1,512.7	3,402.7	1,006.6	1,795.8	**923.3**
Female	1,276.5	736.1	732.8	384.3	695.8	**373.7**
White	594.0	348.1	1,430.9	396.7	656.6	**221.0**
Black	2,368.3	1,986.2	4,615.0	1,440.7	2,242.3	**1,814.0**
Hispanic	1,658.7	1,461.5	2,342.6	997.9	1,528.8	**1,273.5**
Asian/Pacific Islander	150.3	93.7	303.0	90.1	124.7	**103.3**
Native American	308.9	162.2	829.3	181.9	299.2	**152.4**
Total	**1,713.3**	**1,094.9**	**2,020.8**	**686.0**	**1,213.2**	**639.0**

Source: New York State Department of Health, Bureau of HIV/AIDS - HIV/AIDS Surveillance Annual report 2012

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
> 75% worse than NYS	

Generally, all four boroughs (and New York City) compared negatively to New York State for all races and both sexes. However, Manhattan was over 75 percent worse than the state for all races and both sexes. The Bronx was over 75 percent worse for both males and females, Whites and Native Americans. In Brooklyn, the rates were over 75 percent worse for females and Native Americans, and in Queens for Whites (**Exhibit 107).**

Exhibit 107: HIV/AIDS and STD Indicators, by Borough

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Age-adjusted AIDS case rate per 100,000	46.4	29.1	34.5	16.6	28.3	**15.2**
Age-adjusted AIDS mortality rate per 100,000	20.0	9.7	10.5	3.7	9.4	**4.7**
Age-adjusted HIV case rate per 100,000	48.6	36.2	49.3	23.4	35.9	**20.0**

--Exhibit 107 continued on next page--

-- Exhibit 107 continued from previous page--

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Chlamydia case rate per 100,000 females - Aged 15-19 years	9,162	5,949.6	6,247.1	3,754.5	5,913.4	**3,773.9**
Chlamydia case rate per 100,000 females - Aged 20-24 years	7,033.2	4,663.3	3,183.9	3,348.5	4,308.9	**3,344.7**
Chlamydia case rate per 100,000 females - All ages	1,689.4	1,044.7	822.4	666.2	973.9	**674.0**
Chlamydia case rate per 100,000 males - Aged 15-19 years	2,689.5	1,700.6	1,947.9	1,536.7	1,829	**1,077.1**
Chlamydia case rate per 100,000 males - Aged 20-24 years	3,357.7	1,983.2	2,129.6	1,653.7	2,121	**1,484.3**
Chlamydia case rate per 100,000 males - All ages	823.7	489.3	583.1	364.5	508.7	**323.0**
Early syphilis case rate per 100,000	27.0	24.4	49.8	13.7	25.7	**12.4**
Gonorrhea case rate per 100,000 - Aged 15-19 years	942.3	642.9	659.7	388.5	620.2	**362.0**
Gonorrhea case rate per 100,000 - All ages	240.8	157.7	179.7	91.2	151.8	**95.8**
Pelvic inflammatory disease (PID) hospitalization rate per 10,000 females - Aged 15-44 years	9.8	5.0	3.2	3.1	4.8	**3.5**

Source: New York State Department of Health, Community Health Indicator Reports Data, 2012

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
>75% worse than NYS	

Mental Health (Conditions and Service Utilization)

In the NYC DOHMH Community Health Survey, residents of the Bronx (7.1%) and Brooklyn (6.1%) reported having "serious psychological distress" (a composite measure addressing symptoms of anxiety, depression, and other emotional issues) at the highest rates of the four boroughs. The city-wide average was 5.5 percent (**Exhibit 108**).

Exhibit 108: Percentage Reporting Serious Psychological Distress, by Borough, 2012

Borough	Serious Psychological Distress
Bronx	7.1%
Brooklyn	6.1%
Manhattan	4.9%
Queens	4.6%
New York City	**5.5%**

Source: New York City Department of Health and Mental Hygiene, Community Health Survey, 2012

Males (5.7%) and females (5.2%) were not appreciably different in the percentage reporting serious psychological distress. Among racial and ethnic groups, Hispanics (8.4%) reported this distress at the highest rate, followed by non-Hispanic Whites (5.5%), Asian/Pacific Islanders (4.2%), and non-Hispanic Blacks (3.2%). Household poverty was strongly correlated with this indicator; over nine percent of respondents in the "highest poverty" households reported this distress, as did 5.7 percent of those in "high poverty," and two and three percent for those in lower poverty (higher income) groupings.[110]

The Community Health Survey also found that, of those in New York City overall experiencing serious psychological distress, 45.2 percent reported receiving "mental health counseling or (prescription medication) treatment for a mental health problem" in the past 12 months. Reliable data are not available at the borough level, due to small sample sizes.

The CAHPS survey of Medicaid managed care recipients also contains information to help understand the extent and nature of mental health challenges. Just over 12 percent of respondents in New York City reported needing "emotional or mental health treatment or counseling" within the past six months, lower than the statewide figure (16.6%). Of those who did use treatment, 67 percent said that is was "usually or always" easy to obtain the treatment or counseling they needed. This was somewhat unfavorable to the statewide 71 percent.

Nearly 19 percent of New York City respondents reported being depressed at the time of they took the CAHPS survey, and 11.6 percent reported having "emotional problems or mental illness." These both were lower than the statewide figures of 26.6 percent and 18 percent, respectively. Finally, although co-morbidity of mental health and substance abuse issues is a serious concern and does have a significant adverse effect on readmissions for these conditions (Exhibit 111), only 2.5 percent of respondents in the city reported have a "drinking or other drug problem" at the time of the survey.[111]

As shown below, in **Exhibit 109,** individuals of Hispanic ethnicity utilized mental health services (emergency, inpatient, outpatient, residential, and support) at lower rates than non-Hispanics overall. There was an exception in the case of multi-racial Hispanics, who utilized services at the highest rate of any racial or ethnic group.

Exhibit 109: Mental Health Service Utilization in New York City, by Race, Ethnicity, and Gender, 2013

Race and Sex	Hispanic		Non-Hispanic	
	Number	Rate (per 100,000 population)	Number	Rate (per 100,000 population)
White	8,922	520	20,143	730
Black	1,868	408	27,887	1,467

-- Exhibit 109 continued on next page--

[110] New York City Department of Health and Mental Hygiene, Community Health Survey, 2012. See https://a816-healthpsi.nyc.gov/epiquery/

[111] New York State Department of Health, Medicaid Managed Care Program, CAHPS© 5.0 Adult Medicaid Survey, "Continuous Quality Improvement Report," February 2014.

-- Exhibit 109 continued from previous page--

Race and Sex	Hispanic		Non-Hispanic	
	Number	Rate (per 100,000 population)	Number	Rate (per 100,000 population)
Asian	44	163	2,731	244
Multi-Racial	2,095	2,229	1,995	1,563
Native Hawaiian / Other Pacific Islander	96	767	79	1,595
American Indian / Alaska Native	70	70	116	592
Other/Unknown	18,547	n/a	2,311	n/a
Male	14,472	1,239	28,311	1,010
Female	17,138	1,384	26,837	859

Note: The table does not include 1,017 individuals for whom Hispanic ethnicity was unknown.
Source: NYS Office of Mental Health – Patient Characteristics Survey 2013

All four boroughs compared favorably to the 2013-2017 Prevention Agenda (PA) Goal (10.1) for percentage of adults with poor mental health for 14 or more days in the last month. Queens had the lowest proportion of the four boroughs (7.2%), while the Bronx had the highest (9.1%). However, both Manhattan (6.9) and Queens (6.1) compared unfavorably to the PA goal rate of 5.9 per 100,000 for suicide. The Bronx and Brooklyn had suicide rates lower than the PA goal. New York State's suicide rate of 7.8 was higher than all four boroughs and the PA goal (**Appendix 7 – Exhibit 7E**).

Exhibit 110 shows that roughly one-half of all individuals receiving NYS OMH-funded mental health services have a chronic medical condition.[112] In Manhattan, three quarters of those receiving mental health services have chronic disease co-morbidities.

Exhibit 110: Percentage of Mental Health Service Clients with Selected Chronic Co-Morbidities, 2013

Borough	Chronic Medical Condition (All Ages)	Adults, 18+, with Cardiac and Metabolic Illnesses	Children, ≤ 17 , with Pulmonary Condition
Bronx	46.1%	42.9%	10.5%
Brooklyn	48.3%	45.1%	7.9%
Manhattan	74.9%	66.4%	12.9%
Queens	51.8%	51.7%	7.3%
New York City	52.6%	49.1%	9.3%
New York State	50.1%	46.8%	7.2%

Source: New York State Office of Mental Health – Patient Characteristics Survey 2013.

Exhibit 111 below depicts rates of potentially preventable readmissions (PPR) among Medicaid patients per 100 at-risk admissions in both New York City and New York State. Medicaid recipients with either a mental health or substance abuse health condition, or both, in New York City had much higher rates than "all other" health conditions. Recipients who had both a

[112] New York State Office of Mental Health, Patent Characteristics Survey. See http://www.omh.ny.gov/omhweb/statistics/pcs-message.htm

substance abuse and mental health condition had the highest PPR rates for both the city and the state. New York City's PPR rate was slightly higher (20.9) than that for New York State (17.9).

Exhibit 111: Potentially Preventable Readmission (PPR) Rates per 100 at Risk Admissions, by Medicaid Recipient Health Condition and Region, 2007

	New York City			New York State		
Recipient Health Condition	**Initial Admissions***	**At Risk Events****	**PPR Rate**	**Initial Admissions**	**At Risk Events**	**PPR Rate**
Mental Health	6,808	79,815	8.5	10,523	131,931	8.0
Substance Abuse	4,111	35,578	11.6	5,634	54,869	10.3
Mental Health and Substance Abuse	13,043	62,409	20.9	20,876	116,490	17.9
All Others	6,485	132,269	4.9	9,082	188,503	4.8
Total	**30,447**	**310,071**	**9.8**	**46,115**	**491,793**	**9.4**

*Note: Non-excluded admissions followed by at least one clinically related admission.
**Note: All inpatient events that were not excluded according to defined PPR criteria.
Source: New York State Department of Health, Office of Health Insurance Programs – accessed 2014[113]

In the Bronx, 22.7 percent of Medicaid beneficiaries had mental health conditions. The neighborhoods with the highest prevalence are Hunts Point/Mott Haven (24.9%) and Kingsbridge/Riverdale (29.3%). In Brooklyn, 17.5 percent had with mental health conditions, and tbe most affected neighborhoods were Southern Brooklyn (25.3%) and Northwest Brooklyn (26.6%). In Manhattan, 26 percent had mental health conditions, the highest of the four boroughs. The neighborhoods with the highest prevalence were Gramercy Park/Murray Hill (34.3%), Upper West Side (34.4%), and Chelsea/Clinton (46.9%). In Queens, 14 percent of Medicaid beneficiaries had mental health conditions, the lowest of the four boroughs. The neighborhoods with the highest prevalence were West Central Queens (20.0%) and Rockaways (32.5%) (**Appendix 5, Exhibits 5K-L)**.

Maternal and Child Health Outcomes

In New York City 6.9 percent of mothers received late or no prenatal care, while only 5.4 percent did in New York State. New York City and New York State had similar percentages for percent of mothers receiving postpartum checkups (89.2% and 90.2% respectively). In addition, New York City and New York State had similar proportions of children who had five or more well care visits in the first 15 months, with 83 and 85 percent, respectively (**Appendix 6 – Exhibit 6J**).

Maternal and child health indicators overall were not unfavorable to New York State. Three of the four boroughs (Bronx, Brooklyn, and Queens) had higher percentages of births with late or no prenatal care, and two (Brooklyn and Queens) had higher percentage of women in WIC who

[113] See https://www.health.ny.gov/health_care/managed_care/reports/statistics_data/3hospital_readmissions_mentahealth.pdf

were pre-pregnancy underweight. The Bronx was worse off compared to the other boroughs and New York State in half of the maternal and child health indicators (**Exhibit 112**).

Bronx residents had the highest percentage of births to out-of-wedlock mothers. In addition, they had the lowest percentage of births with early prenatal care and adequate prenatal care. The Bronx also had the highest percentage of pregnant women in WIC who were pre-pregnancy obese (**Exhibit 112**).

Exhibit 112: Maternal and Child Health Indicators, 2012

Indicator	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
Mortality rate per 1,000 live births - Infant (<1 year)	5.7	4.4	3.9	4.3	4.6	**5.1**
Mortality rate per 1,000 live births - Neonatal (<28 days)	3.8	2.8	2.6	2.8	3.0	**3.5**
Percentage of births to out-of-wedlock mothers	68.8%	40.8%	33.7%	41.5%	44.8%	**41.5%**
Percentage of births with adequate prenatal care (Kotelchuck)	54.6%	65.0%	69.4%	65.1%	64.3%	**65.9%**
Percentage of births with early (1st trimester) prenatal care	60.9%	71.2%	75.8%	70.8%	70.5%	**72.4%**
Percentage of births with late (3rd trimester) or no prenatal care	10.5%	6.2%	5.0%	7.4%	7.0%	**5.6%**
Percentage of pregnant women in WIC who were pre-pregnancy obese (BMI 30 or higher)	27.0%	20.4%	20.3%	18.0%	21.4%	**24.2%**
Percentage of pregnant women in WIC who were pre-pregnancy underweight (BMI less than 18.5)	3.6%	5.9%	5.1%	5.3%	5.1%	**4.7%**
Percentage of pregnant women in WIC with early (1st trimester) prenatal care	84.5%	84.7%	83.9%	87.8%	85.2%	**85.6%**
Percentage of pregnant women in WIC with gestational diabetes	4.9%	4.8%	5.2%	6.6%	5.3%	**5.4%**
Percentage of pregnant women in WIC with hypertension during pregnancy	7.0%	4.9%	6.6%	5.3%	5.8%	**7.2%**

Source: New York State Department of Health, Community Health Indicator Reports, accessed 2014

Key	
Up to 10% worse than NYS	
10-50% worse than NYS	
50-75% worse than NYS	
> 75% worse than NYS	

The Bronx had the highest percentage (9.6%) of low birth weight (LBW) births compared to the other boroughs, New York City (8.6%), and New York State (8.2%). In the Bronx, Blacks and Asians had the highest proportions of LBW births. In the other three boroughs, Blacks and Hispanics had the highest proportions of LBW births. The Bronx also had the highest infant mortality rate (per 1,000 live births) of all the boroughs at 5.7. This was also higher than New

York City and New York State's rates. In the Bronx, Black and Whites had the highest infant mortality rates. In all other boroughs, Blacks had much higher infant mortality rates than any other race or ethnicity (**Appendix 5 – Exhibit 5A**).

Self-Reported Health Status and Health Behaviors

The NYC DOHMH conducts a Community Health Survey annually by telephone. The survey captures respondents from all five New York City boroughs in stratified random samples of approximately 8,500 adults ages 18 and older. The survey includes approximately 125 questions and covers topics ranging from access to care to cardiovascular disease to sexual behavior.[114]

Overall Health Status

Both the Bronx and Brooklyn had higher proportions of residents reporting fair or poor health status compared to New York City overall, while Manhattan and Queens were favorable to the city overall. Brooklyn in particular had two neighborhoods with over 40 percent of residents reporting fair or poor health status, Sunset Park and Coney Island. Despite Manhattan's overall low percentage of those reporting fair or poor health status (17.7%), over 37 percent of East Harlem residents reported fair or poor health (**Exhibit 113**).

Exhibit 113: Self-Reported Health Status, by Neighborhood 2012

Borough and UHF Neighborhood	Self Reported Health Status (% Fair or Poor)
Bronx	**24.0%**
Kingsbridge and Riverdale	12.0%
The Northeast Bronx	14.7%
Fordham/Bronx Park	21.8%
Pelham/Throgs Neck	25.6%
The South Bronx	29.2%
Brooklyn	**25.0%**
Greenpoint	23.7%
Downtown Brooklyn/Heights/Slope	16.6%
Bedford Stuyvesant/Crown Heights	16.4%
East New York/New Lots	26.2%
Sunset Park	40.9%
Borough Park	18.1%
Flatbush	17.8%
Canarsie and Flatlands	22.4%
Bay Ridge/Bensonhurst	25.9%
Coney Island	42.0%
Williamsburg/Bushwick	31.4%
Manhattan	**17.7%**

--Exhibit 113 continued on next page--

[114] New York City Department of Health and Mental Hygiene. See http://www.nyc.gov/html/doh/html/data/survey.shtml

-- Exhibit 113 continued from previous page --

Borough and UHF Neighborhood	Self Reported Health Status (% Fair or Poor)
Washington Heights/Inwood	25.5%
Central Harlem	19.5%
East Harlem	37.5%*
Upper West Side	12.0%*
Upper East Side/Gramercy	7.1%
Chelsea/Greenwich Village	19.4%
Union Square/Lower Manhattan	26.6%
Queens	**19.6%**
Long Island City/Astoria	22.4%
West Queens	24.6%
Flushing/Clearview	29.2%
Bayside/Little Neck/Fresh Meadows	14.1%
Ridgewood/Forest Hills	15.1%
Southwest Queens	12.6%
Jamaica	16.6%
Southeast Queens	14.3%
The Rockaways	27.8%*
New York City	**21.3%**

*Note: Estimate should be interpreted with caution due to small sample size
Source: New York City Department of Health and Mental Hygiene, Community Health Survey, 2012

Key	
Up to 10% worse than NYC	
10-50% worse than NYC	
50-75% worse than NYC	
Greater than 75% worse than NYC	

Alcohol Consumption

Manhattan reported the highest proportion (26.2%) of binge drinking compared to the other boroughs and to New York City (19.6%). Brooklyn had the lowest proportion of binge drinkers at only 16.4 percent, while both the Bronx and Queens reported approximately 18 percent. Three neighborhoods in Manhattan stood out with over 29 percent reporting binge drinking: Upper East Side/Gramercy, Chelsea/Greenwich Village, and Lower Manhattan/Union Square (**Appendix 5 – Exhibit 5B**).

Exercise and Food Habits

Nearly one-quarter of residents in the Bronx, Brooklyn, and Queens reported not exercising in the past 30 days, compared Manhattan at 16.5 percent. In Brooklyn, Bay Ridge/Bensonhurst and Greenpoint stood out with over 30 percent of residents reporting no exercise in the past 30 days.

The Bronx reported the highest percentage (38.6%) of residents consuming on average more than one sugary beverage per day, compared to the other boroughs and to New York City (28.2%). The other three boroughs were slightly lower than or approximately the same as the city's

reported percentages. The Bronx and Queens had the most neighborhoods with percentages 10 to 50 percent worse than the city.

The Bronx had the highest percentages of residents consuming "no servings of fruit and/or vegetables yesterday" (20.5%), compared to the other boroughs and the city. Brooklyn also reported a relatively high percentage, at 13.9. In Manhattan and Queens, the percentage not eating fruit or vegetables was under 10 percent. Fordham/Bronx Park, Pelham/Throgs Neck, East New York/New Lots, and Flatbush are four neighborhoods in the Bronx and Brooklyn that reported over 21 percent (**Appendix 5 – Exhibit 5B**).

Smoking

The percentage of New York City residents who reported being a current smoker was 15.5 percent, a figure that did not vary by more than a percentage point between boroughs. The percentages of smokers did vary more within boroughs, however. In a few neighborhoods, more than 20 percent of survey respondents reported being a current smoker. These were: Pelham/Throgs Neck (Bronx), Coney Island (Brooklyn), Union Square/Lower Manhattan (Manhattan), and The Rockaways (Queens) (**Appendix 5 – Exhibit 5B)**.

By race and ethnicity citywide, non-Hispanic Whites reported the highest smoking rate (17.6%), followed by Other races (16.3%), Hispanics (15.9%), non-Hispanic Blacks (14.2%), and Asians (12%). A significantly higher percentage of men (19.7%) than women (11.7%) reported being a current smoker. Respondents in the 25-44 year old age range reported smoking at the highest rate (19.2%) of all age ranges.[115]

Additional data on smoking behavior is available at the borough level, but cannot be reliably interpreted at the neighborhood level due to small sample sizes.

Exhibit 114 shows that while 15.5 percent of New York residents reported being current smokers, 3.6 percent reported smoking more than 10 cigarettes a day (heavy smoker). In the community being assessed, the Bronx had the lowest proportion of people who reported being heavy smokers (2.9%), and Manhattan had the highest (4.5%).

Among current smokers, nearly 75 percent in the Bronx reported attempting to quit for 24 hours or more in the past year. This was the highest attempted quit rate among the boroughs. Survey respondents in the Bronx also reported using nicotine replacement therapy at higher rates (26.3%) than residents of the other boroughs, 16 to 17 percent of whom reported using nicotine replacement therapy. A larger proportion of Bronx survey respondents reported being exposed to secondhand smoke at home all or most of the time (6.5%) than did the other boroughs (**Exhibit 114**).

[115] New York City Department of Health and Mental Hygiene, Community Health Survey, 2012. Accessed at https://a816-healthpsi.nyc.gov/epiquery/.

Exhibit 114: Smoking Indicators, by Borough, 2012

Smoking Indicators	Bronx	Brooklyn	Manhattan	Queens	New York City
Type of Smoker (% Heavy Daily)	2.9%	3.1%	4.5%	3.3%	**3.6%**
Quit Attempts (% Yes)	74.7%	68.7%	57.5%	66.9%	**66.7%**
Nicotine Replacement Therapy (% Yes)	26.3%	17.4%	17.5%	16.5%	**18.9%**
Exposed to Second Hand Smoke at Home (% Yes)	6.5%	4.3%	4.2%	4.9%	**4.8%**

Source: New York City Department of Health and Mental Hygiene, Community Health Survey, 2012

Key	
Up to 10% worse than NYC	
10-50% worse than NYC	
50-75% worse than NYC	
>75% worse than NYC	

County Health Rankings

The *County Health Rankings* is a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation. It examines a variety of health-related indicators and ranks each county within each state (borough in New York City) in terms of "health factors" and "health outcomes." These health factors and outcomes are composite measures based on several variables grouped into the following categories: health behaviors, clinical care,[116] social and economic factors, and physical environment.[117] *County Health Rankings* is updated annually. *County Health Rankings 2014: New York* relies on data from 2005 to 2013, with most data originating in 2008 to 2012.

Exhibit 115 illustrates rankings of the four boroughs for each composite category in 2014. Rankings indicate how the borough ranked compared to the 62 counties in the state of New York. A rank of 1 indicates the best borough/county in the state. Indicators are shaded based on the borough's percentile for the state ranking. For example, Bronx compared unfavorably to other New York counties for education with a rank of 62 out of 62 counties and placing in the bottom 25th percentile of all New York counties.

[116]A composite measure of Access to Care, which examines the percent of the population without health insurance and ratio of population to primary care physicians, and Quality of Care, which examines the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last eight months of life

[117]A composite measure that examines Environmental Quality, which measures the number of air pollution-particulate matter days and air pollution-ozone days, and Built Environment, which measures access to healthy foods and recreational facilities and the percent of restaurants that are for fast food.

Exhibit 115: County Health Ranking Indicators, 2014

Indicator Category	Bronx	Brooklyn	Manhattan	Queens
Health Outcomes	62	50	22	18
Length of Life	60	44	9	7
Quality of Life	62	57	53	48
Health Factors	62	57	11	43
Health Behaviors	54	16	4	10
Tobacco Use	28	11	5	7
Diet and Exercise	60	21	1	11
Alcohol Use	3	2	26	5
Sexual Activity	62	60	58	51
Clinical Care	62	58	8	60
Access to Care	61	59	2	62
Quality of Care	61	51	37	44
Social & Economic Factors	62	61	39	52
Education	62	61	23	54
Employment	62	53	12	23
Income	62	61	54	44
Family and Social	62	61	60	59
Community and Safety	58	53	47	42
Physical Environment	30	22	1	27
Air and Water Quality	11	13	2	10
Housing and Transit	57	57	1	55

Source: County Health Rankings, 2014

Key	
50th to 100th percentile of NY counties	
25th to 49th percentile of NY counties	
Bottom 25th percentile of NY counties	

Access to Healthcare

The supply of non-emergency services for the uninsured population is generally more limited than for the insured population. Not all physicians and other providers accept Medicaid, the location of services is an important factor due to personal transportation limitations, and the languages spoken by and cultural competency of providers is a crucial factor in health care utilization, quality, and the ability of patients to obtain the information they need to follow a health professional's post-visit or post-discharge instructions.

In addition to access indicators discussed above, the Community Health Care Association of New York State has identified 16 highest priority geographic areas in New York City that are in

need of more primary care resources.[118] By borough, these are:

- in the Bronx: Fordham/Bronx Park, Crotona/Tremont, High Bridge/Morrisania, Hunts Point/Mott Haven;
- in Brooklyn: Bedford Stuyvesant/Crown Heights, East New York, Sunset Park, East Flatbush/Flatbush, Williamsburg/Bushwick;
- in Manhattan: Washington Heights/Inwood, Central Harlem/Morningside Heights, East Harlem; and
- in Queens: Long Island City/Astoria, West Queens, Flushing/Clearview; and Jamaica.

The Community Health Survey of the NYC DOHMH asks residents several questions relating to access to care and care-seeking.

There was not much variation by borough in the percentage of people who reported having no personal doctor, but the Bronx had the highest figure at more than 21 percent. Survey respondents in a few neighborhoods in three boroughs reported not having a personal doctor at rates in excess of 25 percent, including Fordham/Bronx Park in the Bronx, Williamsburg/Bushwick and Sunset Park in Brooklyn, and West Queens (**Exhibit 116**).

Brooklyn (10.8%) and Manhattan (11.9%) were the boroughs where the greatest proportion of residents reported not having had a routine check-up in one to two years. Several of the neighborhood-level figures, especially in the Bronx and Queens, should be interpreted with caution due to small sample sizes.

Appointment wait times of four or more days were not uncommon across the community, ranging from 15 percent to almost 22 percent on a borough level. Greater than 20 percent of survey respondents in the Bronx and Manhattan reported waits of at least four days. East Harlem and Washington Heights/Inwood in Manhattan reported by far the most difficulty getting appointments, with 46.5 and 36.5 percent, respectively, but these figures should be interpreted with caution due to small sample sizes. There was not much variation by borough or neighborhood in the percentage of people reporting that they did not get needed medical care. The figure hovered between 11 and 12 percent on a borough-wide level.

According to the NYSDOH, Medicaid managed care patients in New York City lagged the state somewhat on two access to care measures. Statewide and New York City figures for the percentages of those "getting care quickly" usually or always were 78 percent and 72.5 percent, respectively. Those reporting "getting needed care" were 78.3 percent for all of New York State, and 74.1 percent for the city.[119]

[118] Community Health Care Association of New York State, "A Plan for Expanding Sustainable Community Health Centers in New York." 2013

[119] New York State Department of Health, Medicaid Managed Care Program, CAHPS© 5.0 Adult Medicaid Survey, "Continuous Quality Improvement Report," February 2014

This needs assessment's interviews, focus groups, and survey also addressed access questions, and those findings are described in the corresponding sections.

Exhibit 116: Access to Care Indicators, 2012

Borough and UHF Neighborhood	No Personal Doctor	Last Routine Check Up (1 to <2 years ago)	Appt. Wait Time (% 4 or more days)	Did Not Get Needed Medical Care
Bronx	**21.3%**	**7.1%**	**20.7%**	**11.6%**
Kingsbridge and Riverdale	13.0%*	9.7%*	16.8%	9.8%*
The Northeast Bronx	17.7%	4.3%*	11.4%	12.5%
Fordham/Bronx Park	25.9%	6.0%*	21.2%	9.6%
Pelham/Throgs Neck	23.0%	8.5%*	22.4%*	11.3%
The South Bronx	19.6%	6.4%	24.9%	12.1%
Brooklyn	**18.6%**	**10.8%**	**16.3%**	**11.4%**
Greenpoint	16.7%	9.4%	8.3%	8.7%
Downtown	21.0%	15.1%	19.8%	12.7%
Bedford Stuyvesant/Crown	13.0%	5.9%*	18.9%	13.2%
East New York/New Lots	13.5%	6.3%	18.9%	13.2%
Sunset Park	25.8%*	14.4%	16.4%*	5.7%*
Borough Park	13.9%	14.1%	9.5%*	11.5%
Flatbush	23.6%	10.1%	19.8%	11.8%
Canarsie and Flatlands	18.6%	4.4%*	22.1%	10.3%
Bay Ridge/Bensonhurst	19.2%	11.0%*	12.8%	-
Coney Island	14.4%	14.7%	15.8%*	13.0%*
Williamsburg/Bushwick	26.5%	10.9%	18.4%	13.2%
Manhattan	**17.6%**	**11.9%**	**21.8%**	**10.9%**
Washington Heights/Inwood	23.2%	11.0%	36.5%*	14.6%
Central Harlem	17.0%	6.8%*	22.2%*	14.8%*
East Harlem	20.5%*	17.7%*	46.5%*	13.5%*
Upper West Side	8.1%*	13.3%	14.4%	6.5%*
Upper East Side/Gramercy	17.1%	10.5%	14.9%	7.0%
Chelsea/Greenwich Village	18.4%	12.1%	18.5%	9.0%
Union Square/Lower Manhattan	16.8%	14.0%	19.5%	12.9%
Queens	**18.0%**	**8.7%**	**14.6%**	**11.4%**
Long Island City/Astoria	14.3%	11.2%*	21.6%	12.4%*
West Queens	27.8%	10.8%	20.3%	11.1%
Flushing/Clearview	17.1%	8.9%	11.9%*	10.6%*
Bayside/Little Neck/Fresh	9.3%*	10.6%*	6.2%*	9.8%*
Ridgewood/Forest Hills	10.1%	9.2%	11.9%	12.2%
Southwest Queens	11.3%	7.2%*	9.7%*	7.8%
Jamaica	23.4%	5.3%*	14.1%	15.7%
Southeast Queens	14.8%	5.4%*	16.9%	11.8%
The Rockaways	13.2%*	8.9%*	-	9.3%
New York City	**18.3%**	**9.9%**	**17.6%**	**11.1%**

* Note: Estimate should be interpreted with caution due to small sample size.
Source: New York City Department of Health and Mental Hygiene, Community Health Survey 2012

Key to Exhibit 116	
Up to 10% worse than NYC	

10-50% worse than NYC	
50-75% worse than NYC	
Greater than 75% worse than NYC	

Quality of Healthcare

A number of available metrics signal opportunities for improvement in the quality of care delivered to Medicaid members, and others set baselines from which to assess future progress. Some measures included in this community needs assessment relate to quality of care, and also are influenced by other factors. For instance, Potentially Preventable Emergency Rooms Visits (PPVs) may be driven in part by the adequacy and perceived quality of the supply of primary care resources, but also by individual resident choices and by knowledge of alternative care (or self- care) options. Nonetheless, the measures below offer some indications of quality of care and the quality with which the delivery system functions.

Data tables on these and related measures can be found in the Domain 2 "system transformation" and Domain 3 "clinical improvement" metrics in **Appendices 6** and **7**. For primary data collected through a survey, focus groups, and interviews, highlights related to quality are summarized briefly here, with complete detail in the "Health and Health Service Issues: Primary Data (Section B.ii.)" portion of this report.

Prevention Quality Indicators

Prevention Quality Indicators (PQIs) are hospital discharge-based data on ambulatory care sensitive conditions "for which outpatient care can potentially prevent the need for hospitalization."[120] As such, they are proxy indicators of primary care access, quality, and utilization. The risk-adjusted PQI "composite" measures for Brooklyn (1,724.4 per 100,000 population), Manhattan (1,716.2), and Queens (1,481.7) are somewhat favorable to the New York City rate (1,858.9) and slightly better than the statewide rate (1,784.1). The PQI composite measure for the Bronx (2,343.9), however, is 26 percent unfavorable to the city rate (**Exhibit 48**).

Examining the Bronx PQIs at the diagnosis level, the discharge rate for "asthma in younger adults" was the most unfavorable to the state, by 62 percent (**Exhibit 49**). Rates in the Bronx for all other PQIs were between 10 and 51 percent unfavorable to the state. PQIs in Queens were favorable to the state for every diagnosis.

Pediatric Quality Indicators

Pediatric Quality Indicators (PDIs) offer a similar perspective on the hospitalization of children, with a focus on potentially preventable events and complications.[121] As with the PQIs above, the

[120] Agency for Healthcare Research and Quality. 2001. *AHRQ Quality Indicators—Guide to Prevention Quality Indicators: Hospital Admission for Ambulatory Care Sensitive Conditions.* AHRQ Pub. No. 02-R0203.

[121] Agency for Healthcare Research and Quality, Pediatric Quality Indicators Overview, accessed 2014 at http://www.qualityindicators.ahrq.gov/modules/pdi_overview.aspx.

risk-adjusted PDI rate in the Bronx was unfavorable to the other three boroughs and to the city and statewide averages. At 508.8 per 100,000 people, it was nearly 24 percent worse than in Manhattan (411.6), and 117 percent worse than in Queens (**Exhibit 54**). The observed New York State rate was 322.8.

Potentially Preventable Emergency Room Visits

Manhattan had the highest risk-adjusted rate of Potentially Preventable Emergency Room Visits (PPVs) for Medicaid recipients (42.1 per 100 people), followed by the Bronx (38.2). Brooklyn and Queens were approximately equal to each other and substantially lower than the other two boroughs (**Exhibit 44**).

There were some marked differences in PPV rates within neighborhoods. In Manhattan, five neighborhoods had rates of 47 or higher (Central Harlem, Chelsea and Clinton, East Harlem, Gramercy Park and Murray Hill, Lower Manhattan, and the Upper West Side (**Exhibit 45** and **Exhibit 46**). This is a blend of high-need and relatively affluent communities, indicating that ER use is not driven solely by poverty and related socio-demographic factors.

Most neighborhoods in the Bronx were close to the borough average, but Kingsbridge and Riverdale (30.9) performed substantially better. The highest PPV rates in Brooklyn were in Bushwick and Williamsburg, Central Brooklyn, East New York and New Lots, and Northwest Brooklyn. And in Queens, Jamaica, West Queens, and the Rockaways were the highest (**Exhibit 45** and **Exhibit 46**).

Comparing the rates for Medicaid members with rate for people with any payment source (Medicaid, Medicare, private insurance, self-pay, etc.) shows that potentially preventable ER visits are between 25 percent (Bronx) and 74 percent (Manhattan) more frequent for Medicaid members than for all community residents overall. This demonstrates clear disparities in the nature of ER use by Medicaid members, which may be due in part to insufficiencies in the primary care system (**Exhibit 44**).

Potentially Preventable Readmissions

Potentially Preventable Readmissions (PPRs) can be an indicator of quality problem in several different parts of the care delivery system, including quality of care inside the hospital, the quality of discharge instructions and follow-up to support self-care, and care transitions to rehabilitation, specialists and/or primary care physicians in the community. **Exhibit 47** presents PPRs by hospital in each borough. Seventy-seven percent of the hospitals had risk-adjusted PPR rates per 100 at-risk admissions of between 5.5 and 7.5. Four of the 10 hospitals outside of that range had fewer than 100 at-risk admissions, and their rates should be interpreted with caution due to the small sample sizes.

Domain 3 Metrics

The Domain 3 clinical improvement metrics (**Appendix 6**) offer a wealth of data on numerous specific clinical care indicators for behavioral health, substance abuse, cardiovascular diseases, diabetes, asthma, and other categories of health conditions. In general, comparisons of system

performance in the boroughs to New York City or New York State do not reveal strong, generalizable patterns of care quality. Data for specific conditions or specific clinical care practices should be examined in the context of project planning and implementation. Depending on final project selection and design, current Healthcare Effectiveness Data and Information Set (HEDIS) and PQI performance indicators can be used to establish baselines for future improvement targets.

In addition to HEDIS measures and select PQIs, the CAHPS survey measures can provide valuable information on how well the delivery system is functioning from the Medicaid members' perspective. For example, questions about whether the doctor gave "easy to understand instructions" or explained "what to do if this illness of health condition got worse" address provider communication and patent health literacy.

The CAHPS survey question in the Domain 2 section of this report (**Exhibit 55**) about whether one's "personal doctor usually or always seemed informed about care received from other doctors or providers" can help to understand and track improvements in care coordination. The most recent data show that 76.2 percent of New York City Medicaid managed care patients reported this was the case "usually or always," compared to 77.7 percent for the state overall. The survey also asks how often someone from the doctor's office followed up with the patient to give them test results. Nearly 75 percent in New York City reported "usually or always," as did just over 76 percent statewide.[122]

Finally, the H-CAHPS survey for hospital care includes a metric about whether discharge information was provided (83 percent said "yes" in New York State, compared to 85 percent for the U.S.[123]), and it will incorporate a new, more robust measure of care transitions in 2015.[124]

Survey, Focus Group, and Interview Data on Quality of Healthcare

Primary data collection from health care providers, community service organization leaders, other community stakeholders, and Medicaid members identified a number of healthcare quality themes. Principal among these were deficits in care coordination that contribute to gaps, duplications, and delays in service, create inefficiencies for providers and patients (e.g., more time-consuming than necessary), and can result in poorer outcomes.

In interviews, care coordination was the most frequently cited health care delivery system issue facing Medicaid members and providers; it was raised not only by primary care practitioners, but also by mental health professionals and to a lesser degree by Medicaid members in focus groups. It was described most frequently as a lack of communication and a lack of follow-up among

[122] New York State Department of Health, Medicaid Managed Care Program, CAHPS© 5.0 Adult Medicaid Survey, "Continuous Quality Improvement Report," February 2014

[123] Hospital Consumer Assessment of Healthcare Providers and Systems, "*Summary of HCAHPS Survey Results: October 2012 to September 2013 Discharges*," accessed 2014 from http://www.hcahpsonline.org/files/Report_July_2014_States.pdf

[124] The National Quality Forum, "*Specifications for the Three-Item Care Transition Measure – CTM-3*," accessed 2014 from http://www.caretransitions.org/documents/CTMspecs.pdf

providers, missed or incomplete referrals and care "hand-offs," and a general lack of consistent and timely information-sharing. In the provider survey, delivery system integration and care coordination – both among providers of physical health services and between health care and other (e.g., mental health) service providers – were among the top three issues.

In addition to care coordination deficits in the delivery system, other healthcare quality-related issues raised in primary data collection included:

- a lack of care integration that could reduce fragmentation and help address "coordination" problems;
- strong perceptions of mental and behavioral health provider supply limitations;
- moderate concerns about primary care provider supply;
- a range of issues for patients and providers navigating and working with Medicaid managed care;
- general "quality of available services;" and
- a perceived under-utilization of preventive care.

Health and Health Service Issues: Primary Data (Section B.ii.)

Key Informant Interviews and Medicaid Recipient Focus Groups

Key informant interviews and Medicaid member focus groups were conducted to obtain important information and perspectives from health care providers, community and social service providers, community representatives and stakeholders, and Medicaid recipients. Verité created interview discussion and focus group guides in consultation with ACP that addressed topics vital to Medicaid DSRIP project selection and planning. The interviews and the focus group conversations both focused on four main questions:

- What are the biggest or most significant health status and health behaviors needs for Medicaid members and uninsured individuals?
- What are the biggest or most significant, health care delivery system issues affecting these populations?
- What other major factors, including social determinants of heath, contribute to poor health status, access barriers, and gaps in delivery system performance?
- What resources and specific initiatives or approaches are or could be employed to help address the most significant health status and delivery system issues?

Interview and Focus Group Process, Participants, and Analysis

ACP identified and invited individuals to participate in the interview process, based on guidelines created by Verité and ACP to reach individuals that collectively had a wide range of knowledge and diverse perspectives. Selected interview participants had direct experience with or knowledge of one or more aspects of Medicaid members' health and social support needs, characteristics and limitations of the health and social services delivery system for Medicaid members, and community and behavioral factors that influence health. Interview participants included community service and advocacy agency leaders, elected public representatives and

their staff, public health officials, safety net physicians, mental health and substance abuse service professionals, health plan staff, a pharmacist, and a hospital representative.

Twenty-nine individuals participated in 26 interview sessions. Most sessions were held in person between October 6 and 10, with a few conducted by telephone between October 13 and 17. Interviews were conducted throughout the four boroughs, with a focus on several higher-need areas that included: southern Bronx; Washington Heights/Inwood, East and Central Harlem, and the Chinatown area in Manhattan; Sunset Park and Bedford-Stuyvesant in Brooklyn; and Corona, East Elmhurst, and Flushing in Queens. Seven interview participants represented organizations with a community-wide presence (e.g. health plans, Hispanic Federation, God's Love We Deliver), while the majority addressed needs in one or two specific boroughs or groups of neighborhoods within a borough.

Five focus group conversations were held in Washington Heights/Inwood, the Bronx, East Harlem, and Sunset Park. ACP hosted and recruited participants for two groups, and others were held at Harlem East Life Plan, Narco Freedom, and the Social Daycare Center of the Chinese American IPA. The groups included people of different races/ethnicities (African American, Latino, and Chinese) and of different ages (mothers with young children, other adults, and seniors).

Analysis was done by tabulating the frequency with which issues were raised and noting perceptions of the severity (how serious or significant) and scope (how widespread) of those issues. There were clear clusters of top issues across the community, with some variation by borough or by population. A summary of the major themes and findings from the interviews and focus groups follows.

Health Status Issues

Chronic Diseases: Diabetes, Cardiovascular Diseases, and Asthma

Diabetes was the single most frequently mentioned health issue, with cardiovascular conditions and asthma also clustered at the top in terms of both frequency and significance. Diabetes and cardiovascular health were raised by interviewees and focus group participants representing all parts of the community, while asthma was mentioned as being a serious concern somewhat more frequently for the Bronx, East and Central Harlem, and Chinatown in Manhattan than for other areas.

Cardiovascular conditions (e.g., heart disease, hypertension, heart failure) and related risk factors (e.g., obesity, lack of physical activity, diet and nutrition, high cholesterol, smoking) frequently were mentioned together. The same was true for diabetes and its risk factors, some of which are the same as for cardiovascular conditions.

For asthma, there was a strong awareness of the role of environmental factors (e.g., air quality) and of patient education and access to primary care. Many interview and focus group participants specifically mentioned asthma among children, while some also stated it was of concern among adults, and others did not make a distinction between youth and adults.

Mental Health

Mental health needs were viewed as a priority almost to the same extent as diabetes, and equivalent to cardiovascular diseases and asthma. Mental and behavioral health was discussed in several different ways. Depression, stress associated with managing difficult living circumstances (e.g., balancing multiple jobs with family responsibilities, housing instability), and challenges brought about by or resulting in domestic violence all were mentioned. Specific clinical conditions with a major impact on day-to-day living, including bi-polar disorder and schizophrenia, were raised multiple times.

Mental health needs were viewed as significant on their own and as co-occurring or aggravating factors with respect to other health needs. First, people with mental health challenges – whether in treatment or not – were seen as less likely and able to recognize or address their physical health needs. Second, a number of interviewees pointed to the prevalence of co-morbid substance abuse and addiction problems in those with mental health conditions. Mental health and substance abuse problems both were stated to have negative consequences for the ability of individuals to take care of other basic needs that can be prerequisites for health and health care seeking, for instance maintaining stable housing and employment. Substance abuse as a separate health issue was mentioned approximately half as frequently as mental health.

Finally, several interview and focus group participants discussed the role of stigma about mental health and illness as a barrier to treatment. While this was seen to be a factor to some extent in the population at large, some participants stated that cultural assumptions and attitudes regarding mental health among recent immigrants were contributing factors to either poor mental health or a barrier to seeking care.

Other Health Issues

A few health issues were mentioned approximately one-half to one-quarter as frequently as those above. These included cancer, hepatitis B and C, and HIV/AIDS. In addition, disparities in birth outcomes, concerns about teen pregnancy, osteoporosis and other aging-related needs, and disabilities each were raised at least once.

Contributing Factors to Poor Health, Access, and Utilization

Health Behaviors

A number of unhealthy behaviors were reported by many participants, in close relation to the chronic disease needs that were among the most significant health issues identified. As noted above, a lack of physical activity, poor diet and nutrition and frequent fast food consumption, and smoking all were reported as primary behavioral contributors to poor health status. With a lower frequency, health behaviors related to HIV/AIDS, hepatitis, and substance abuse were mentioned. Health behaviors were, in turn, viewed as being influenced by health literacy, language and cultural barriers, poverty that limits practical choices, and community environments that are not supportive of healthier behaviors.

Health Literacy, Health Education, and General Educational Attainment

Health literacy, knowledge and education were viewed, together with language and cultural barriers (below), as among the most significant contributing factors to poor health. They were described most frequently, but not exclusively, by health care and other service providers.

Members of two focus groups described health literacy in the context of a desire for more health education by provides and the health care system, so that they can better understand how to maintain their health and to care for themselves once diagnosed with a condition.

Low health literacy was reported to impact health status in at least two ways. First, lower educational attainment overall and a lesser degree of health knowledge specifically were reported to hinder consistently healthy choices (e.g., about diet and exercise), and to limit knowledge about the health impacts or long-term consequences of conditions such as diabetes. Second, lower health literacy was felt to impede the ability to seek and obtain care, and to follow health care providers' treatment instructions or self-care advice.

Language and Cultural Barriers

Language and cultural barriers were mentioned at least as frequently as health literacy as a contributor to poor health and as a barrier to access. This subject was manifest differently in different parts of the community, largely correlated with the locations, habits and preferences, and languages of different recent-immigrant groups.

In all cases, issues embedded in language and cultural barriers included: access to providers who speak (or have staff who speak) the language(s) of community residents; differing cultural expectations about both when to seek care for physical mental health conditions and what constitutes healthy behavior (e.g. differences in diet); and a lack of familiarity with and in some cases trust of the "Western Medicine" approach or institutions.

In interviews and focus groups, most Spanish-speaking providers and patients felt there was an adequate supply of primary care providers who speak with language and who are culturally competent in serving the various Spanish-speaking nationalities within the community. This was particularly true at the local neighborhood level. It also was generally true of limited English speaking Chinese populations, but Chinese participants also reported being likely to travel some distance within or among boroughs to see the providers with whom they are most comfortable. There was a related issue of the existence of multiple Chinese dialects that was not present among Spanish speaking community members. Finally, Chinese participants stated an expectation and preference for after-hours and walk-in access to primary care providers.

For all limited English speaking populations, interview and focus group participants reported better language skills and cultural competence at primary care providers than at hospitals, where such issues were almost universally seen as a significant barrier to care.

Delivery System Issues and Barriers to Care

Care Coordination and Navigation

Care coordination was the most frequently cited health care delivery system issue facing Medicaid members and care providers; it was raised not only by primary care practitioners, but also by mental health professionals and to a lesser degree by Medicaid members in focus groups. For Medicaid members, care coordination was represented as "appointment reminders," "medication reminders," and assistance obtaining appointments with specialist physicians. For providers, a lack of coordination was seen contributing to duplication of service, excess cost, and less-than-optimal outcomes.

Care coordination shortcomings in the current delivery system were described most frequently as a lack of communication and a lack of follow-up among providers, missed or incomplete referrals and care "hand-offs," and a general lack of consistent and timely information-sharing about patient test results, treatments, and outcomes. This was expressed as being an issue particularly, but not exclusively, with respect to the transition from hospital discharge to primary care providers.

System inefficiencies and underperformance in care coordination were seen to be in part a result of poor human communication systems and practices between separate care delivery organizations, and in part a failure or lack of maturity and compatibility in health information technology (HIT). Providers saw the positive value of HIT and electronic medical records for managing care, but said incompatibilities between systems at hospitals, primary care settings, and elsewhere sharply limited its utility, especially for care coordination. There also were views shared that Medicaid should reimburse the activities of care coordination, which require a not-insignificant amount of time.

These experiences of care coordination were closely linked to observations about "care navigation." Improved coordination was viewed as one essential ingredient to helping patients better navigate a complex health care delivery system of multiple providers and provider institutions. Care navigation is addressed below under "Resources, Initiatives, and Approaches."

Care Integration

Care integration was sometimes mentioned in the same sentence as care coordination, and a distinction was not always made between the two. Nonetheless, a "lack of integrated services" was viewed as a delivery system shortcoming, and care integration (or the lack thereof) was discussed in a number of ways. References were made to adopting or expanding the "patient-centered medical home" model, to FQHCs as sources of integrated care, and especially to the potential value of integrating physical health care and mental health care. Some felt that integrating mental health with physical health services will prove to be a challenge unless and until reimbursement levels for mental health services are increased, making the services more feasible to offer. Specific proposals for achieving greater integration typically were not stated, but it was deemed by many providers an important goal of delivery system transformation.

Manage Care Plan Issues

Approximately one-third of interview participants discussed one or more aspects of Medicaid managed care and health plans as a health care delivery system issue of some importance. Some emphasized potential improvements in the ways health plans and providers work together, including: pre-authorization requirements; data entry and documentation time for quality reporting, which varies by plan; and both staff turnover and perceived training deficits at health plans that can impact efficiency and continuity in working with providers.

Other interview and focus group participants discussed aspects of managed care that they believe impact patients more directly. These included: difficulty with understanding the features of and choosing among plans; assigned primary care providers whose locations may not be convenient to the Medicaid member (and the process needed to change providers); the importance of Medicaid members understanding and acting within enrollment periods; and drug formulary

limitations. Limitations on covered prescription medications was the chief "barrier to care" that providers raised in relation to Medicaid managed care, and several felt it affected their ability to help control or improve their patients' medical conditions.

Inadequate Supply of and Reimbursement for Mental Health Providers

Significant concern was frequently expressed about the supply and accessibility of mental health providers, across the entire community. This was represented in several ways, including: a perception of an inadequate number of providers relative to need; poor reimbursements that have the effect of limiting supply for Medicaid members; managed care plan limits on the number of visits per year; and a lack of coverage of some medications.

Concerns about the supply of mental health providers were expressed mostly in terms of outpatient capacity of those who accept Medicaid, when distinctions between inpatient and outpatient settings were made. Medical providers reported not having or knowing of enough mental health service provider to which to refer patients. Both providers and patients reported that it could take up to 30 days to get an appointment, and patients stated that waits of this length were a significant barrier to care. And, similar to the mental health issues described above, perceived mental health services limitations sometimes extended to substance abuse and addiction services.

Access to Primary Care and Primary Care Capacity

While most participants felt that it is generally possible for Medicaid members to see a doctor when needed, and some specifically stated that supply is not a problem, overall primary care access was reported to be a moderate problem by Medicaid members and providers.

A number of providers and patients spoke about long scheduling wait times for appointments (although more for specialists than for primary care), and providers related working long hours to help meet the demand. Some providers also stated that the pace at which they need to work limits time available for delivering health education. A few interview participants felt that an increased supply of private practice Medicaid physicians and FQHCs would alleviate symptoms of undersupply, including use of hospital ERs as a primary care source.

Among Chinese physicians serving Chinese patients, there was a particular emphasis on maintaining extended evening and weekend hours, and a frequent practice of favoring walk-ins over keeping an appointment-based schedule. Those reporting this approach said that it serves the needs and meets an expectation of their patients.

Resources, Initiatives, and Approaches to Improve Health and the Health System

The resources, initiatives, and approaches that interview and focus group participants most frequently stated could or should be employed to address the highest-priority health status and delivery system needs were well-aligned with those needs. The ideas and recommendations shared most frequently are summarized below.

Community and Social Support

In recognition that many contributing factors to health reside in the community and outside of medical encounters or the health care system, expanded community and social support/outreach programs (or better connections between them and providers) was the most frequently-stated category of approaches for improving health. It was mentioned as frequently as health education, below.

Community and social support was described in a few different ways, including an emphasis on culturally and linguistically appropriate services and providers and the use of grassroots and faith-based organizations. While the "support" services envisioned overlapped in part with the health education, care navigation, and mental health services below, they also included housing support, employment training and placement, family and youth education and development, and basic needs support. One example shared by focus group participants was the use of elder day care centers with structured social activities, exercise opportunities, and health education; this was felt to be of great preventive health value. Informants in interviews and focus groups felt that Medicaid members would be better able to address their health needs when other life skills and life management needs are met. Medicaid recipients also mentioned the issue of a lack of housing for non-HIV/AIDS populations, and stated that additional affordable housing would solve many issues.

Health Education and Care Navigators

More widespread, accessible, and culturally appropriate health education (to raise health literacy) was strongly thought by many to be an essential component for improving health among Medicaid members. One specific priority was enhancing preventive health education at all ages, but especially for young people to aid in the development of healthy habits early in life. Another recommendation by many participants was to augment physicians' ability to deliver health education by using other resources, such as other health professionals (e.g., nurses, PAs) in the care delivery setting and also community health workers. Community health workers were seen as valuable, but lacking in numbers.

A suggestion that spans health education and care coordination was to invest in care navigators to help patients utilize all of the services available to and appropriate for them. It was felt by some interview participants that, given the complexity of the delivery system, care navigators have high value, would improve the patient experience as well as enhance quality and reduce cost, and that payers should reimburse the services commensurate with their value.

Care Coordination Improvements

Improvements to and additional resources for care coordination and care management were a high-priority system improvement suggestion made by many interview participants. Improved relationships among providers, streamlined and more reliable systems of communication, compatible HIT/medical record systems across provider organizations, and patient forms that are consistent across health plans and computer systems all were discussed within this topic.

Primary Care Capacity and Supply

Reflecting on the pressures on existing primary care supply, working toward increased primary care capacity and the expanded use of Health Homes and patient-centered medical homes was in

the top tier of recommended actions to improve the delivery system. Another manifestation of increased supply and access was the suggestion made by some that more primary care providers be open for extended hours and on weekends.

In addition, some participants felt that given current limitations on primary care provider supply, use of urgent care centers could help fill a gap between office visits and hospital ERs. Interview participants who raised this idea also acknowledged that urgent care centers are not necessarily consistent with the goals of improved care coordination and integrated primary care.

Mental and Behavioral Health Provider Supply

Consistent with participants' experience with and perceptions of an undersupply of mental health services assessable to Medicaid members, increasing the supply of (and reimbursement for) these services was in the top five recommendations.

Key Informant Interview Participants

Name	Title or Role	Organization or Affiliation
Josefina Aquino	Consultant, Utilization and Case Management	Amerigroup New York
Delores Bowman	Vice President, Client Services	PSI Medica, a divisions of BioReference Laboratories, Inc.
Christian Cassagnol	District Manager	Queens Community Board No. 4
Wellington Chen, MD	Executive Director	Chinatown Partnership Local Development Corp.
Ann Marie Coore	Senior Program Manager	Healthfirst
Danny Fong, MD	President	Chinese American Medical Society
Jason Furhman	Senior Advisor	Office of State Senator Jose Peralta
Eliescer Guzman, MD	Cardiologist	Physician medical practice
Linda Hackett	Community Relations	Mount Sinai Hospital
Ellen Harnett	Vice President of Quality & Compliance Officer	Isabella Geriatric Center
Roger Hayes	Assistant Commissioner	East and Central Harlem District Public Health Office, NYC Department of Health and Mental Hygiene
Soledad Hiciano	Executive Director	Community Association of Progressive Dominicans (ACDP)
Elizabeth Jean-Jacques	Assistant Director, Clinical Partnerships	Healthfirst
Malynda Jordan	Director	Narco Freedom / Hope Care Management
Joanne King	Administrative Director	East Harlem East Life Plan (HELP)
Peter Koo	District 20 Council Member	New York City Council
Hong Shing Lee	Executive Director	Chinatown Manpower Project
Lianna Lee	Director of Drug Rehabilitation	Elmcor Youth and Adult Activities
Joseph Lormel	Policy and Planning Coordinator	Brooklyn District Public Health Office, NYC Department of Health and Mental Hygiene
Bing Lu, MD	Physician	Universal Medical Service
Miriam Mejia	Health Advocate	Camilla's Yellow House
Samantha Paz	Director of Health Advocacy	Hispanic Federation
Edwin Perez	CEO	Broadway Pharmacy
Perry Pong, MD	Chief Medical Officer	Charles B. Wang Community Health Center
Fernando Taveras, MD	Psychiatrist	OASAS provider
Darrin O. Taylor	Deputy Director	Brooklyn District Public Health Office, NYC Department of Health and Mental Hygiene
Alissa Wassung	Director of Policy & Planning	God's Love We Deliver
Judy Wessler	Founder & Former Director	Commission on the Public Health System
Justin Yu	Chairman	Chinese Chamber of Commerce of New York

Provider Survey of Needs and Resources

ACP conducted survey of its provider network members to obtain important information about health needs, health care and community resources, and initiatives most likely to contribute to improving health and achieving DSRIP goals. An online questionnaire open from October 1 through October 10 was disseminated to 864 members and partners of the emerging PPS network with verified e-mail addresses. A reminder message was sent mid-way through the data collection period. The survey received 267 completions for a response rate of 31 percent.

Respondent Characteristics

Two–thirds of respondents were physicians in individual or group practice. A wide range of other types of health care, behavioral health, and social support services providers also were represented. Respondents have service locations or otherwise deliver services across the four boroughs in the community. Nearly 50 percent of respondents delivered services in Queens, while only 25 percent did in Brooklyn.

Exhibit 117: Survey Respondents, by Type of Service Provider

Respondent Type	Percent
Physician (individual or group practice)	64.8%
Assisted Living, Skilled Nursing, Nursing Home, Home Health	15.7%
Behavioral Health, Substance Abuse, Disability Services	8.6%
Other Health Services Provider or Health Plan	7.9%
Social Support, incl. Housing, Employment, and Transportation	3.0%

Exhibit 118: Survey Respondents, by Location of Services

Location of Services	Percent
Bronx	38.2%
Brooklyn	25.5%
Manhattan	42.0%
Queens	49.4%

Note: Percentages add to more than 100 because respondents could report service locations in multiple boroughs.

A substantial percentage of respondents reported having service locations or delivering services in more than one borough. For example, of the 38 percent of all respondents delivering services in Brooklyn, 54 percent also were delivering services in the Bronx, 56 percent in Queens, and 60 percent in Manhattan. For those with services in Queens, 29 percent also were delivering services in Brooklyn, 30 percent in the Bronx, and 33 percent in Manhattan. Thus, many respondents were representing multiple boroughs in their responses to the survey questions.

Within boroughs, service locations and areas were evenly distributed across neighborhoods within the Bronx and in Brooklyn. Among those with service locations in Manhattan, the Washington Heights-Inwood neighborhood (20 percent) and Lower Manhattan (12 percent) were more represented than other neighborhoods. Among those with service locations in Queens, Flushing-Clearview (47 percent) and Jamaica (34 percent) were more represented than other areas.

Health Issues

Survey respondents were asked to "rate the relative priority" of thirteen health issues for the Medicaid recipients and uninsured people they serve. The top eight issues identified are presented in rank order below, with "1" being the top-ranked issue.

Exhibit 119: Relative Priority Ranking of Health Issues, by Respondent Type

Health Issue	Ranking ("1" is highest)		
	All Respondents	Physicians Only	Non-Physicians
Diabetes	1	1	1
Cardiovascular diseases	2	3	2
Obesity and overweight	3	2	5
Senior and aging health issues	4	4	4
Pulmonary and respiratory diseases	4	4	4
Mental and behavioral health	5	6	3
Cancer	6	5	6
Substance abuse and chemical dependency	7	11	5

Note: Duplicate numbers in the same column reflect ties in the rankings for those issues.

There is a high degree of consistency across physicians and non-physicians, with diabetes, cardiovascular diseases, obesity and overweight, pulmonary and respiratory diseases, and aging-related health issues in the top tier. Mental health and substance abuse issues ranked somewhat higher for non-physicians than for physicians.

Respondents also were asked to rate the relative priority of "contributing factors to health" for this population, including community and demographic characteristics. There was strong agreement among physicians and non-physicians about the top factors, as depicted in the table below.

Exhibit 120: Relative Priority Ranking of Contributing Factors to Health, by Respondent Type

Contributing Factor	Ranking ("1" is highest)		
	All Respondents	Physicians Only	Non-Physicians
Awareness of / knowledge about available services	1	2	2
Health literacy	2	2	3
Housing insecurity and quality	2	3	1
Access to healthy, affordable food	3	1	4
Employment security, low-income, and unemployment	4	1	5
Language and cultural barriers	5	2	4
Safety, crime, and violence	6	4	5
Lifestyle choices	7	5	6
Transportation barriers	8	6	7
Environmental quality	9	6	8
Access to outdoor recreational spaces	10	7	9

Note: Duplicate numbers in the same column reflect ties in the rankings for those issues.

Overall, awareness of and knowledge about services, health literacy, housing issues, and access to healthy and affordable food were viewed as the most important contributing factors to health. Physicians placed somewhat more emphasis on food access, employment and income, and language and cultural barriers, than did non-physician respondents.

Health Care and other Service System Delivery Issues

The questionnaire asked several questions about the performance of the service delivery system for Medicaid recipients and uninsured people.

Respondents were asked to rate the relative priority of several potential delivery system issues or concerns. The table below presents a rank-ordering of those issues.

Exhibit 121: Relative Priority Ranking of Delivery System Issues, by Respondent Type

Delivery System Issue	Ranking ("1" is highest)		
	All Respondents	Physicians Only	Non-Physicians
Supply of health care	1	3	3
Delivery system integration and care coordination (within health care)	2	5	2
System integration and coordination (between health care and other services)	2	6	1
Access to health coverage	3	2	7
Preventive care and health education	3	1	8
Quality of available services	3	4	5
Access to services (service hours, transportation, language or cultural barriers)	4	6	4
Supply of social services	5	7	8
Supply of behavioral health and substance abuse services	6	8	6

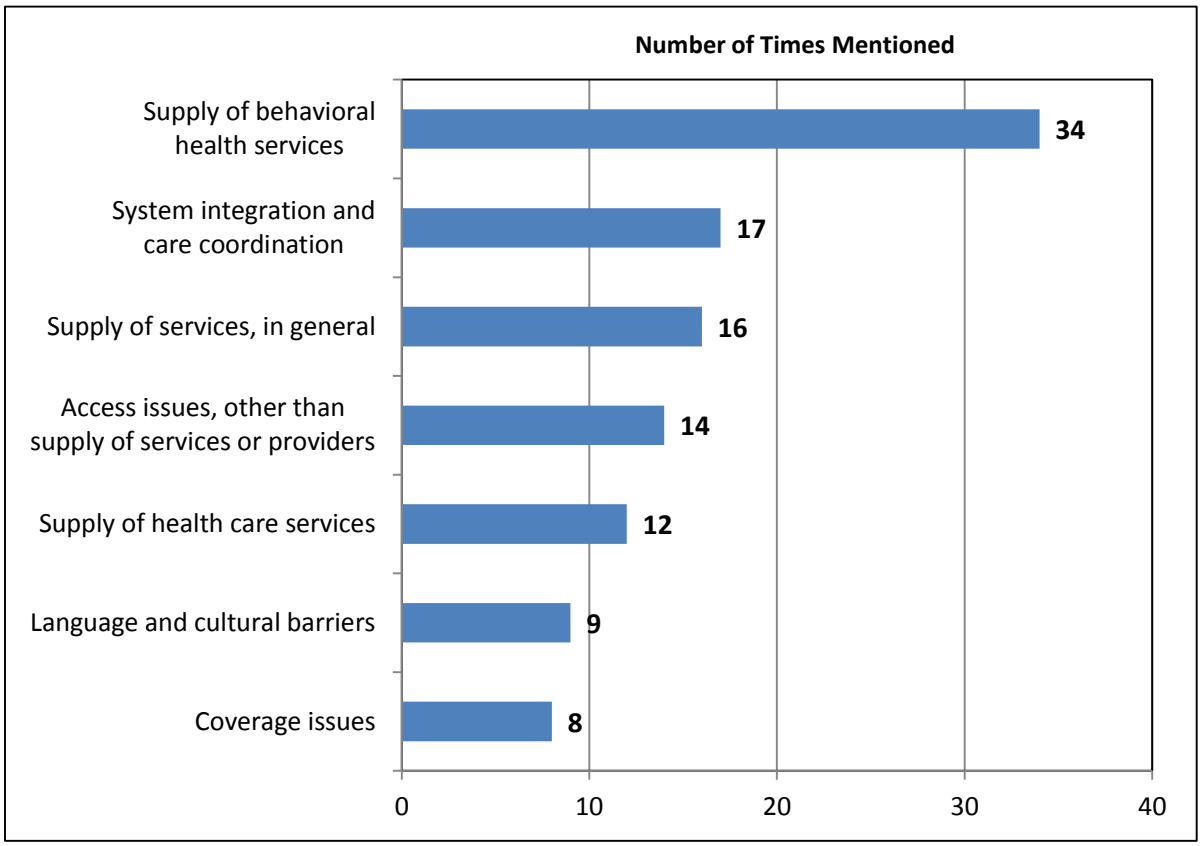
Note: Duplicate numbers in the same column reflect ties in the rankings for those issues.

Respondents ranked a number of the delivery system issues very close to each other in priority, as can be seen by the presence of "tied" issues overall and among the physician and non-physician groups. All of the issues averaged between 2.8 and 3.3 on a 4.0 scale, with "4" being the highest priority and "1" being lowest.

That said, the top issues overall was adequate supply of health care – including primary, specialty, inpatient, home health, and long term care. Delivery system integration and care coordination, both within health care and between health care and other services, were second-ranked. These were followed by access to coverage, preventive care and health education, and the concerns about the quality of available services. Non-physicians placed greater emphasis on delivery system integration and care coordination, while physicians ranked preventive care, health education, and access to coverage more highly.

Responding to an open-ended question about the "biggest gap in available health care and behavioral health services," the supply of behavioral health and substance abuse services was by far the single most frequent response. The top several responses are below in **Exhibit 122**.

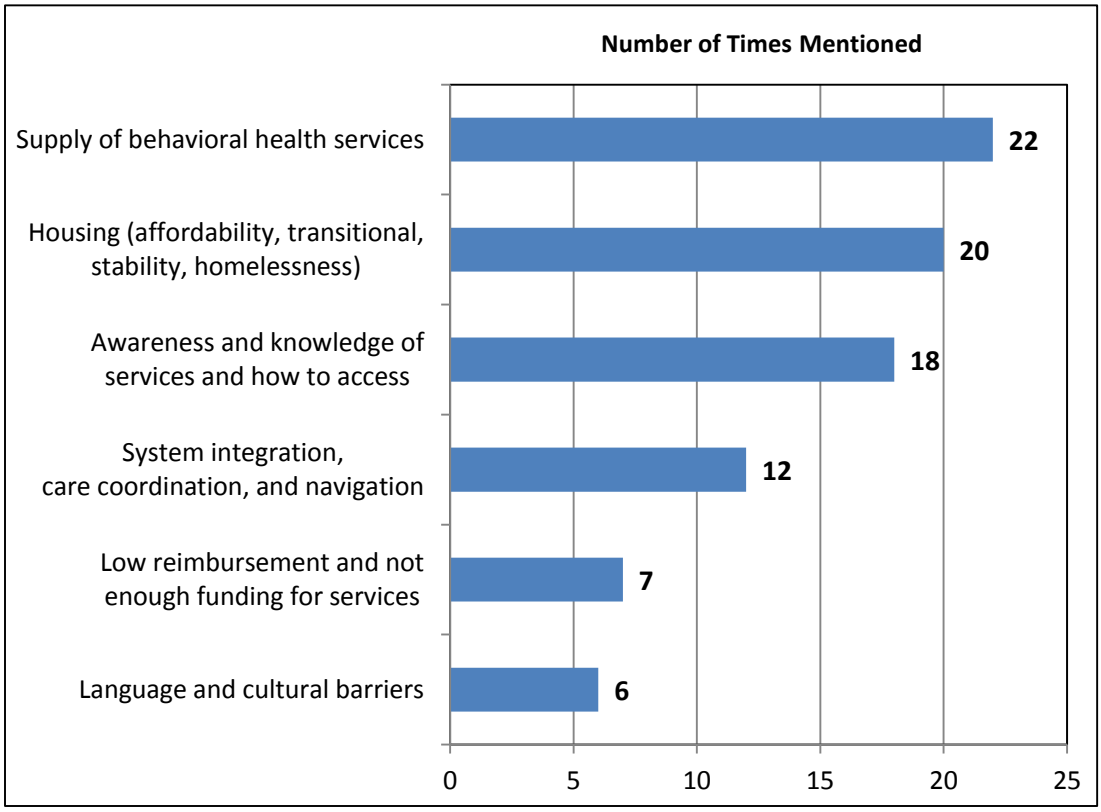
Exhibit 122: Biggest Gaps in Available Health Care and Behavioral Health Services



Note: The top seven responses are in the chart. Respondents could make more than one selection. (N = 132)

Responding to an open-ended question about the "biggest gap in available social and other non-health services," the supply of behavioral health and substance abuse services again was by far the most frequent response. The top several responses are shown in the table below (**Exhibit 123**):

Exhibit 123: Biggest Gaps in Available Social and other Non-Health Services

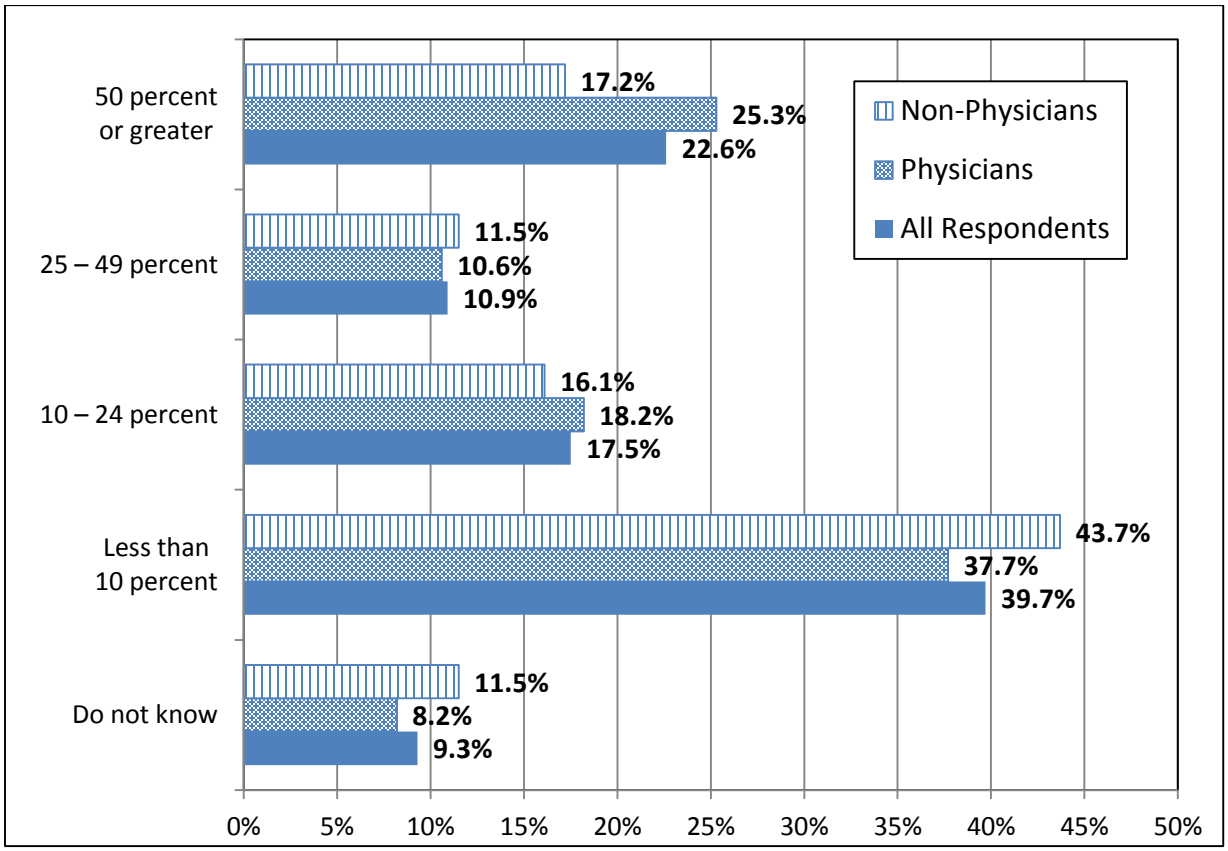


Note: The top six responses are in the chart. Respondents could make more than one selection (N = 122)

To help understand access issues related to the geographic location of service providers and those of their patients and clients, the survey asked "approximately what percentage of the Medicaid recipients and uninsured persons you serve live in a different borough than where your services are located?"

The most frequent response (40 percent) was that that less than 10 percent of the people served live in a different borough from where they provide service. However, nearly one-quarter of respondents reported that fifty percent or more of the people they serve travel from outside the borough. The percentage of Medicaid and uninsured service recipients traveling from another borough for service was slightly higher among physicians than among non-physician respondents.

Exhibit 124: Percentage of Medicaid Recipients and Uninsured Persons Who Live Outside of the Borough Where the Service Provider is Located



Resources and Initiatives to Address the Issues and Reduce Hospitalizations

Finally, the survey solicited input on two topics to help inform future action to address the issues raised. First, it asked respondents about the types of resources available to address health and delivery system issues among Medicaid recipients and uninsured persons. And second, it asked about specific initiatives and system changes that would have the greatest impact on reducing avoidable hospital use among this population.

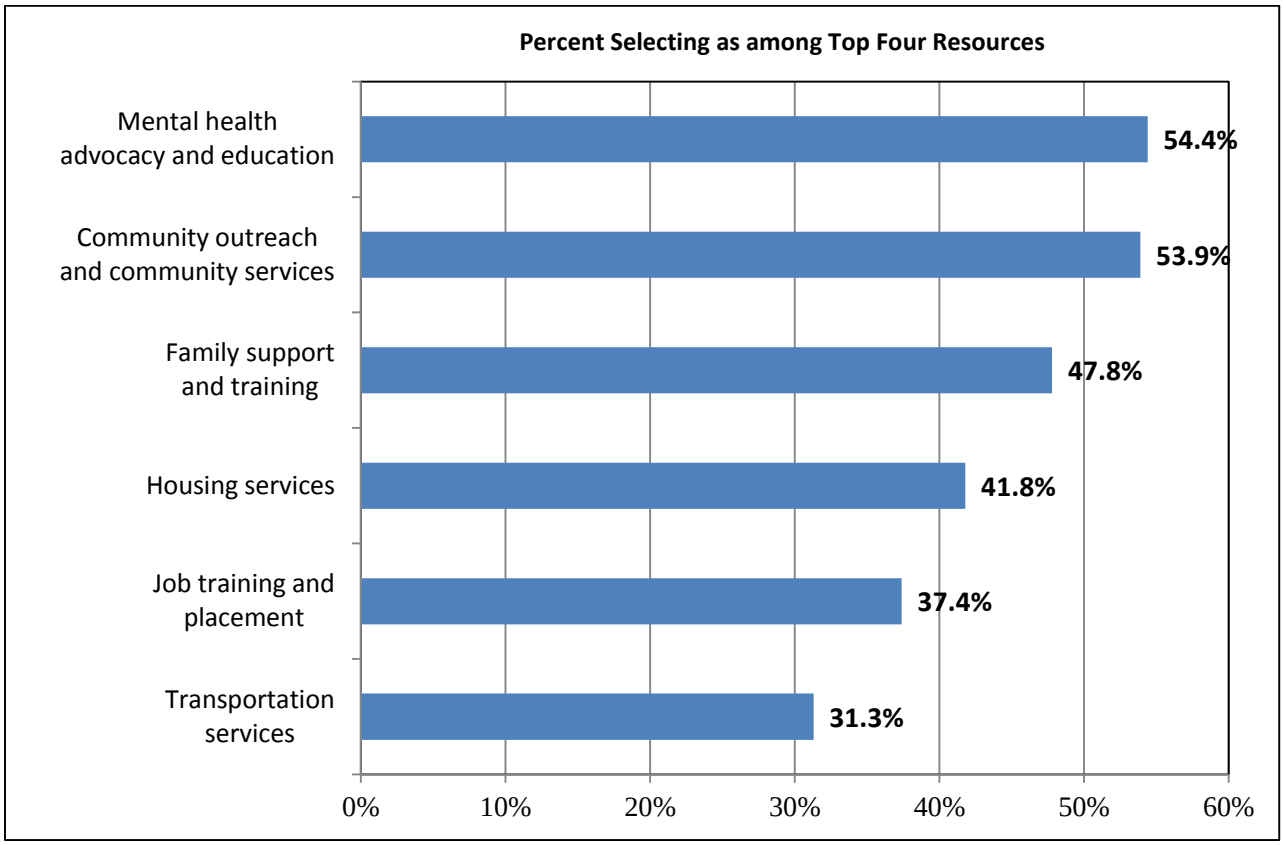
Respondents were asked to rank the relative importance of engaging 17 different types of health care and other service providers to help address the highest priority issues they had identified. The top eight for all respondents are listed below:

1. Physicians (individual or group practice)
2. Health plans
3. Behavioral health providers
4. Hospitals
5. Care coordinators and managers
6. Social support, including employment and transportation
7. Housing services (tied with #8)
8. Community health centers and FQHCs (tied with #7)

There is wide agreement between the physician and non-physician respondents about the most critical service sectors to engage. The only significant variation is that physicians included community health centers and FQHCs among their top selections, while non-physicians included housing services.

When asked to select the top four community-based resources that can assist in addressing the highest priority issues, mental health and community outreach and services topped the list, each being selected by more than 50 percent of respondents. Family support and training, housing services, employment and transportation services each were selected by more than 30 percent of respondents.

Exhibit 125: Community-based Resources that Can Assist in Addressing Highest Priority Health Issues



To obtain information about specific proposed initiatives and actions, respondents were asked to rank-order a number of possible initiatives based on those they think would have the greatest impact on improving care and reducing avoidable hospitalizations. Many of the potential initiatives were closely ranked, with a few that garnered the most support. The top five initiatives are listed in rank order below:

1. Expansion of primary care capacity
2. Improved care coordination and care transitions among providers
3. Integration of primary care and behavioral health services
4. Expansion of mental and behavioral health capacity
5. Expansion of health care services capacity (other than primary care)

Physician respondents placed greater emphasis on expansion of capacity across health care, behavioral health and social services, as well as integration of primary care and behavior health services. Non-physicians ranked care coordination, integration of primary care and behavioral health, and expansion of behavioral health capacity among their top proposed initiatives.

Finally, respondents were asked to describe in their own words "the project, initiative, or change (they) think would have the greatest impact on reducing avoidable hospital use." The responses in aggregate demonstrate a high degree of consistency with the most frequently cited needs, resources, and initiatives in other parts of the survey. Three clusters of "initiatives" were mentioned by far the most frequently and in nearly equal numbers:

1. Care coordination, care transitions, patient navigation, and case management
2. Access to and utilization of utilization of primary and preventive care
3. Patient education about health, health behaviors, available services, and appropriate use of the health care system

Ensuring or providing better care coordination and transitions was raised as an important system improvement across primary care, specialty, hospital, diagnostic, nursing home, home health, and other care settings. It was mentioned in terms of provider-to-provider communication, reducing care fragmentation, improving health information systems, and providing patient navigation and case management services. Integration between primary care and behavioral or mental health services is a related theme that was specifically mentioned by several respondents.

Primary and preventive care access was discussed most frequently in terms of primary care physicians, but urgent care centers and the use of nurse practitioners and physician assistants also were raised by some as parts of the accessibility picture. The meaning of "access" was not specified in many cases, but a few respondents cited extended-hours appointments and after-hours consultation as having a beneficial impact on reducing avoidable ED visits and hospitalizations. A related point made by some respondents was specific to increasing the supply or capacity of primary care, as one component of access.

Respondents who suggested that patient education initiatives would have a big impact on reducing hospitalizations discussed this in multiple contexts. Some used the terms "education" or "patient education" without being more specific. Others focused on health education and health literacy about disease states, the impact of health behaviors and choices, and patient participation in disease management. A few specifically mentioned improved patient compliance as a desired outcome of this type of education. Finally, a number of respondents focused on education about available services and effective use of the health care system (e.g., options instead of the hospital ED, when appropriate).

A few other types of initiatives were mentioned by respondents about one-quarter as frequently as each of the three major ones above. These include: increased capacity of and access to mental and behavioral health services; increased social support services, including housing; improvements in Medicaid coverage (e.g., expansions, covered services, and coordinated re-enrollment); and increased provider reimbursement.

Domain 3: Clinical Improvement Metrics (Section B.iii.)

The Domain 3 "Clinical Improvement Metrics" are located in **Appendix 6**. Descriptions of key findings from these tables are integrated throughout the report.[125]

Domain 4: Population-wide Prevention Agenda Metrics (Section B.iii.)

The Domain 4 "Population-wide Prevention Agenda Metrics" are located in **Appendix 7**. Descriptions of key findings from these tables are integrated throughout the report.

Summary of Assets and Resources to Help Address DSRIP Strategies and Projects (Section D)

This succinct summary of assets and resources that are potentially available (or are potential gaps) to assist with DSRIP project implementation is based on a review of the Health Care Resources and Community-Based Resources described above, as well as observations form the survey and interviews. It focuses on identified main health and health service challenges for which ACP has proposed DSRIP projects.

The resource information and discussions above and in this summary are starting points for planning and implementation. Detailed project planning, implementation, and management may require additional research into the services, capacity, and willingness or ability of specific organizations or sectors to participate in DSRIP projects. And, as with any community-based or cooperative action, it will require relationship building, agreements, and systems development.

Cardiovascular Diseases (including smoking as a risk factor)

There are several resources available related to the prevention and treatment of cardiovascular diseases and conditions. The healthcare resources already in the ACP PPS network include PCPs and non-PCPs, in addition to other care providers (**Exhibits 36** and **37**). The use of FQHCs and Health Homes (**Exhibits 6** and **7**), and the development of patient-centered medical homes would be beneficial due to the complexity of many cardiovascular conditions and their complications. Tapping into dieticians and nutritionists in health care provider organizations can be particularly important for cardiovascular conditions (**p. 31**).

Strong relationships with hospitals (**Exhibit 3** and **Appendix 1**) and with area home care agencies (**Exhibits 29** and **30**) are important, as well, for continuity of care.

In addition to health care resources, there are community assets that specialize in preventing known cardiovascular disease risk factors, including smoking and tobacco use. There are at least four community health coalitions that focus on smoking prevention: Bronx Smoke-Free Partnership, Brooklyn Smoke-Free Partnership, Manhattan Smoke-Free Partnership, and the Queens Smoke-Free Partnership. In addition, there is a Healthy Eating Active Living by Design

[125] Data on some Domain 3 metrics in the Guidance document, including select indicators of behavioral health and the palliative care group, were not available from the state or other identified publicly available sources at the time this report was produced.

coalition located in Manhattan that aims to prevent obesity, another risk factor for cardiovascular disease (**Exhibit 38**). The American Heart Association in New York City holds education and awareness campaigns, and would be a potentially strong partner. The NYC DOHMH also provides health support services through its District Public Health Offices (DPHOs) that focus on obesity prevention and smoking cessation in the Bronx, Brooklyn, and Manhattan (**p. 45**).

Food banks and community gardens can be a partner resource for healthy diet, and these are well-distributed across the community (**p. 54, Exhibit 39**). Transportation services may be useful to facilitate access to medical appointments (**p. 55**), and schools and libraries can potentially be engaged as a part of educational campaigns (see Health Literacy discussion, below). More broadly, there exist community outreach organizations across the community that generally have strong community relationships and can be effective as parts of an educational and outreach campaign targeted at prevention and healthy lifestyles (**p. 59**).

Health needs with respect to cardiovascular diseases were greatest in the Bronx, according to multiple indicators. This included the highest discharge rates of both heart failure and hypertension in all neighborhoods, except for hypertension in Kingsbridge/Riverdale. However, Manhattan also had high rates of discharges for heart failure, especially in Central and East Harlem and Washington Heights/Inwood. Despite the lower discharge rates for both heart failure and hypertension in Queens, the Southwest Queens and Jamaica neighborhoods had very high rates. Brooklyn has a relatively high discharge rate for heart failure, especially in Bushwick/Williamsburg, Central Brooklyn, Northwest Brooklyn, and Southern Brooklyn (**Appendix 3 – Exhibit 3A**).

This suggests that all of the Bronx would benefit from additional targeted resources to prevent, clinically manage, and help residents manage cardiovascular diseases, as would the identified neighborhoods above in Brooklyn, Manhattan, and Queens.

<u>Diabetes</u>

There are multiple resources available related to the prevention and treatment of diabetes and diabetes-related conditions. The healthcare resources already in the ACP PPS network include PCPs and non-PCPs, in addition to other care providers (**Exhibits 36** and **37**). The use of FQHCs and Health Homes (**Exhibits 6** and **7**), and the development of patient-centered medical homes would be beneficial due to the complexity and multiple effects of diabetes. Tapping into dieticians and nutritionists in health care provider organizations could be a particularly valuable connection (**p. 31**).

Strong relationships with hospitals (**Exhibit 3** and **Appendix 1**) and with area home care agencies (**Exhibits 29** and **30**) are important, as well, for continuity of care.

The NYC DOHMH - through the DPHOs in the Bronx, Brooklyn, and Manhattan - offers services targeting healthier lifestyle choices to prevent risk factors for diabetes. These include physical activity programs, education, and the development of school wellness programs (**p.45**).

Healthy Eating Active Living by Design in Manhattan is the community health coalition working to prevent diabetes-related risk factors such as obesity and a sedentary lifestyle (**Exhibit 38**). One gap may be that there did not appear to be many community coalitions or partnerships

specifically for diabetes, as there are for asthma and smoking cessation, for example. This raises a question of how "mobilized" the community-at-large is around this health need.

Food banks and community gardens can be a partner resource for healthy diet, and these are well-distributed across the community (**p. 54, Exhibit 39**). Transportation services may be useful to facilitate access to medical appointments (**p. 55**), and schools and libraries can potentially be engaged as a part of educational campaigns (see Health Literacy discussion, below). More broadly, there exist community outreach organizations across the community that generally have strong community relationships and can be effective as parts of an educational and outreach campaign targeted at prevention and healthy lifestyles (**p. 59**).

The Bronx has the highest PQI discharge rates for the All Diabetes Composite, diabetes short- and long-term complications, and uncontrolled diabetes compared to all the boroughs and New York State. Brooklyn has a similar high rate of uncontrolled diabetes (**Exhibit 49**).The Bronx also compared unfavorably to New York State for all diabetes indicators (**Exhibit 105**).

All neighborhoods in the Bronx have high rates of diabetes long-term complications and short-term complications (except Kingsbridge/Riverdale which has a much lower rate of short-term complications). The neighborhoods with the highest discharge rates for uncontrolled diabetes are Central Bronx and High Bridge/Morrisania. In Brooklyn, the following neighborhoods have high rates: Bushwick/Williamsburg, Canarsie/Flatlands, Central Brooklyn, East New York/New Lots, and Northwest Brooklyn. Manhattan also has some neighborhoods with high diabetes-related discharge rates, including: Central Harlem, East Harlem, Greenwich Village/Soho, Upper East Side, and Upper West Side. Several neighborhoods in Queens also have high rates: Central Queens, Jamaica, Northwest Queens, Southwest Queens, and West Central Queens (**Appendix 3 – Exhibit 3A** and **Appendix 4 – Exhibit 4C**).

This suggests that all of the Bronx and the specific neighborhoods listed above are in need of the greatest number or level of resources for diabetes-related preventative care and disease management to reduce Medicaid morbidity, mortality, and hospitalization rates.

Asthma

A number of resources exist related to the prevention and treatment of asthma and respiratory disease for both children and adults. The healthcare resources already in the ACP PPS network include PCPs and non-PCPs, in addition to other care providers (**Exhibits 36** and **37**). The use of FQHCs and Health Homes (**Exhibits 6** and **7**), and the development of patient-centered medical homes would be beneficial for stability in the primary care sources for people with asthma. Strong relationships with both hospitals (**Exhibit 3** and **Appendix 1**) and home health agencies (**Exhibits 29** and **30**) also is important for continuity of care between the physician's office, inpatient or diagnostic care, and the home setting.

The NYC DOHMH offers asthma-related services through three District Public Health Offices (DPHOs) that work specifically in high-need areas in the Bronx, Manhattan, and Brooklyn. These offices offer childhood asthma education and management programs, and in Manhattan there is the East Harlem Center of Excellence that focuses exclusively on asthma prevention, education, and management for the high asthma rates in Harlem (**p.45**). Another potential public agency partner is the New York City Housing Authority (**p. 92**), since it manages housing for

more than 400,000 low-income residents, and because asthma "triggers" such as dust, mites, and cockroaches can exist in the home environment. Schools and libraries can potentially be engaged as a part of educational campaigns (see Health Literacy discussion, below).

There also are private community-based resources working to reduce asthma rates across the four boroughs, including several community coalitions comprised of both community health and other organizations. At least four coalitions focus specifically on asthma: Asthma Coalition of Queens, Bronx RESPIRAR Asthma Coalition, North Brooklyn Asthma Action Alliance, and Washington Heights Inwood Network, Best Asthma Care for Kids (**Exhibit 38**). A number of coalitions also address smoking cessation, which is beneficial in reducing asthma.

In addition, there community outreach organizations across the community that can be effective as parts of an educational and outreach campaign targeted at prevention and healthy lifestyles (**p. 59**).

There appear to be relatively fewer asthma-related services in Queens, where there is only one community health coalition specifically focusing on asthma and no DPHO working there. This may not be a resource gap, however, because asthma and other respiratory disease hospitalization and mortality rates in Queens are much lower than those in the other boroughs and generally equivalent to New York State (**Exhibit 100 and 101**).

Conversely, rates of asthma-related hospitalization and mortality are much higher in the Bronx than in the other boroughs and New York State benchmarks, indicating a serious need for more, more effective, or better-coordinated asthma resources. This is especially true for the Black and Hispanic populations (**Exhibit 101**). In addition, the Bronx has the highest rates of asthma in younger adults, bacterial pneumonia, and COPD/asthma in older adults compared to the other boroughs in most neighborhoods (**Exhibit 52** and **Appendix 3 – Exhibit 3A**). A number of Brooklyn neighborhoods also compare unfavorably to the state rates, including Bushwick/Williamsburg, Central Brooklyn, East New York/New Lots, and Northwest Brooklyn (**Exhibit 52** and **Appendix 3 – Exhibit 3A**).

Mental Health

Mental and behavioral health resources include a wide range of provider types. The ACP PPS network includes 24 "Article 31" New York State Office of Metal Health (OMH) providers, and 6 "Article 32" Office of Alcoholism and Substance Abuse Services (OASAS) providers (**Exhibit 37**).

Overall, there are 286 OMH service providers in the Bronx, 376 in Brooklyn, 458 in Manhattan, and 266 in Queens. These include agencies and organizations delivering services in the following categories: emergency, inpatient, outpatient, resident, and support (**Exhibits 18a** and **18b**, **Appendix 9**). In addition, there are 167 OASAS providers for prevention (47) and treatment (120) in the four boroughs.

In the Bronx, Brooklyn, and Manhattan, between 17 and 22 percent of mental health clients also had a substance abuse problem, making these resources vital to the mental health sector (**p. 38**). There were five OASAS prevention providers with 11 different programs serving the Bronx, 14 providers with 26 programs serving Brooklyn, 21 providers with 27 programs serving

Manhattan, and seven providers with 14 programs serving Queens. There were 31 treatment providers serving the Bronx, 55 serving Manhattan, and 33 for Queens. Each of those boroughs had over 40 different programs serving their communities. Brooklyn only had one OASAS provider delivering services at two locations (**pp. 38-39**).

Social workers and clinical psychologists, among other mental health professionals, are important components of the mental health system. There are between 225 to nearly 300 certified social workers per 100,000 people in the Bronx, Brooklyn, and Manhattan. There are considerably fewer psychologists practicing in the community, with Queens (18.5) and the Bronx (33.3) having the lowest rates per 100,000 (**Exhibit 21**).

Inpatient psychiatric programs appear to be over capacity, according to OMH data on capacity and average daily census. This is the case for adults in the Bronx, Brooklyn, and Queens, and for children in the Bronx, Brooklyn, and Manhattan (**Exhibits 19** and **20**), suggesting that there is a need from increased capacity at these facilities or more facilities in general.

The new Medicaid Health and Recovery Plans, estimated to begin in April 2015, will be a highly beneficial resource to help improve service delivery and coordination between physical and mental health (**p. 38**). This type of health plan could potentially help reduce the number of psychiatric readmissions (**Exhibit 93**) and the high rates of serious psychological stress, specifically in Pelham/Throgs Neck, and South Bronx in the Bronx; Greenpoint, Borough Park, Flatbush, Bay Ridge/Bensonhurst, Coney Island, and Bushwick/Williamsburg in Brooklyn; Upper East Side and Lower Manhattan in Manhattan; and in West Queens in Queens (**Exhibit 108**).

At least 165 peer and family mental health advocacy groups appear to operate in the community, with 46 in the Bronx, 43 in Brooklyn, 51 in Manhattan, and 25 in Queens. There are also city-wide mental health organizations that offer services to all four boroughs, including National Alliance on Mental Illness of New York City (NAMI) and the Mental Health Association of New York City (MHA-NYC) (**p. 56**). Finally, the NYC DOHMH provides mental and behavioral health information services, including Lifenet, a telephone help line to help link residents with appropriate services.

<u>Delivery System Coordination, Integration, and Navigation</u>

There is ample evidence that the "safety net" system of care is not adequate in all respects, with gaps or limitations in services that frequently occur in higher-need areas. The interview and survey sections of this assessment in particular documented that health care, mental health, and social service providers rank improved care coordination and advancing care integration as very high priorities to improve the system, reduce unnecessary hospitalizations, and improve outcomes.

While this was clearly determined to be a community-wide need and is one impetus for the New York State DSRIP program, early efforts or pilot projects in improved care coordination might best be designed to address highly prevalent conditions and high-need localized communities and populations. Both the public health statistics and the utilization measures of PQIs, PPVs, and

PPRs in this assessment can help to focus resources on opportunities for the greatest improvements in care, cost, and outcomes.

The principal resources for delivery system care coordination are the providers of health care and mental health services, and the health plans. These resources are enumerated and described in detail in the body of the community needs assessment, and are summarized above in the cardiovascular, diabetes, asthma, and mental health resource portions of this "Summary of Assets and Resources" section of the report. Provider resources to engage in planning and implementing care coordination systems include: private practice physicians and physician groups; FQHCs; Health Homes; patient-centered medical homes; hospitals; home health agencies; mental health and substance abuse service providers; and Medicaid managed care plans. One specific, recurring finding from the assessment research was the recommendation to develop and/or partner with patient-centered medical homes as hubs of coordinated and integrated care.

One noted gap in the current care delivery system was the relative lack of care coordinators, whether as case managers, care navigators, or other job titles (**pp. 135, 137**). A consistent theme in the survey and interviews was that effective care coordination takes time, and that direct care providers have neither the time nor the resources to staff this function. It was viewed as a potentially relatively low-cost, high-value service to augment the effectiveness of the delivery system.

Health information technology (e.g., electronic medical record) is a resource and a gap in the current system. While there was significant benefit seen in the systems that have evolved and become more widespread in recent years, the existence of multiple incompatible systems was viewed as a major care coordination and integration barrier. This was viewed as a hindrance to efficient and effective quality care whenever a patient or client is under the care of more than one provider (**p. 136**).

Another specific shortcoming with respect to care coordination and integration mentioned in interviews and by focus group participants was the lack of integration between mental and physical health providers (**p. 136**). There are currently at least 1,386 behavioral health providers in the four boroughs, including emergency, inpatient, outpatient, support, and residential services (**Exhibit 18**). Those providers located in or serving higher-need communities should be engaged to build awareness of each other's services and capacities, create or enhance referral relationships, and better coordinate information sharing about clients and patients.

One new resource to support care coordination and integration will be the Medicaid Health and Recovery Plans beginning in April 2015. These plans will aim to integrate behavioral and physical health in one health plan (**p. 38**), and they should be utilized as a cornerstone to help design more integrated relationships and information-sharing among the two provider types. Once this plan is rolled out, a next step will be to assess the short-term impacts and longer-term opportunities to plan for and implement more integrated systems of care.

<u>Health Literacy, Knowledge of the Health Care System, and Language and Cultural Barriers</u>

There is a cluster of health needs that relate to health literacy and knowledge, and to understanding of the health service delivery system. These issues were identified to be more prevalent and significant among the Medicaid population, in part because they tend to correlate with lower income and education levels, and other population characteristics more prevalent among Medicaid members.

In addition, achieving strong health literacy and knowledge of available resources and how to access them can be more difficult for people with limited English speaking abilities and/or recent immigrants or people with different cultural backgrounds and expectations with respect to health and care-seeking. Finally, health literacy is important because it directly affects a person's ability to maintain health, obtain needed care, and help to restore their own health. The relevant demographic factors are documented in U.S. Census and other data in the assessment, and were discussed by interview participants and survey respondents (**pp. 134, 143, 145**).

Resources to address this need area – which is relevant to the success of multiple DSRIP projects on specific disease and health status issues – are partly within the delivery system and partly outside of it. Resources within the system include utilization of nurse practitioners, physician assistants, and other health professionals for delivering health education and post-visit care instructions (**p. 30-31**), and care coordinators and patient care navigators to assist patients in understanding and obtain services. While there were not quantitative data on the numbers of care coordinators and patient navigators, a significant gap or deficit was perceived by the large majority of key informants who mentioned them as a resource.

Similarly, community health workers were reported to be significant potential contributors for improving health literacy and residents' ability to navigate care delivery. And, similarly, they also were seen as a gap in the system.

Connecting with the Area Health Education Centers could prove beneficial in helping to recruit and develop future health care service professionals and workers who possess needed language skills and cultural competence to help raise health literacy levels and reduce cultural barriers (**p. 46**).

Community health coalitions (**p. 53**) could be deployed to aid in health education in alignment with DSRIP projects, as could food banks (**p. 54**), and some community outreach, welfare, and faith-based service organizations (**p. 59**).

The implementation of health educational programs within the school context (**p. 57**) or during after-school programs could help shape positive health attitudes and behaviors early in life. There are approximately 291 youth development programs that could serve as providers of these education programs and include services from tutoring to summer programs to youth groups (**p. 57**). These programs, which are already integrated into local communities, could help provide health and health services education in culturally tailored ways and familiar settings.

<u>NYC DOHMH Initiatives Applicable to all Health Needs</u>

There are two items worthy of note as potential resources to any or all of the health priorities and DSRIP projects. First, key informant interviews with senior staff at the Brooklyn and Harlem DPHOs indicated that the DOHMH is working to adopt a "Collective Impact" approach to community and partner engagement for addressing health needs. Collective Impact is a model that engages community resources and stakeholders form multiple sectors, aligns them toward a common goal, and measures/monitors progress, among other core activities. It is relevant to many of the health priorities because they typically cannot be resolved solely by the health care delivery system. A Collective Impact approach, independently or by partnering with the DOHMH, could be a valuable strategy for working with PPS partners and others.

The second item is that the DOHMH is implementing a strengthened focus on disparities through a new Center for Health Equity. Because all many of the priority health issues have some degree of disparity embedded in them, by race/ethnicity, neighborhood, income, language/culture and other factors, engaging specifically with the Center for Health Equity has the potential to strengthen the PPS's projects targeting high-need populations.

Significant Asset and Resource Gaps

Overall, a few significant asset and resource gaps appear most prevalent and important to the success of the DSRIP projects. These include:

- Care coordination among providers both within physical health care settings and between physical and mental health care providers;
- Care navigators to aid Medicaid members in accessing services, following through on referrals, and taking full advantage of available services;
- Health education and health literacy services (including via community health workers and in settings outside the medical office) to increase the capacity of Medicaid members to understand and manage their own health and health care, and enable them to advocate effectively for themselves in the health care system;
- Integrated care delivery models, including between physical and mental health and the use of patient-centered medical homes, to gain efficiencies and minimize service gaps;
- Additional mental health services capacity, especially for inpatient services;
- Health information technology compatibility and interoperability to enable efficiencies and quality improvements, without unnecessary additional work; and
- A focus on the Bronx as the highest need borough, and on the documented high-need neighborhoods in all four boroughs.

Summary Chart of Projects to be Implemented (Section E)

The Summary Chart of Projects to be Implemented accompanies this assessment report in a separate Excel document.

Appendices

Appendix 1: Hospitals by Borough

Appendix 1: Hospitals by Borough

Exhibit 1A: Hospitals by Borough

Acute Care General Hospitals

Bronx

- Bronx-Lebanon Hospital Center – Concourse Division
- Jacobi Medical Center
- Lincoln Medical & Mental Health Center
- Montefiore Medical Center – Henry & Lucy Moses Div
- Montefiore Medical Center – Jack D Weiler Hospital of A. Einstein College Div
- Montefiore Medical Center – North Division
- North Central Bronx
- St. Barnabas Hospital

Brooklyn

- Brookdale Hospital and Medical Center
- Brooklyn Hospital Center – Downtown Center
- Coney Island Hospital
- Interfaith Medical Center
- Kings County Hospital Center
- Kingsbrook Jewish Medical Center
- Lutheran Medical Center
- Maimonides Medical Center
- Mount Sinai Beth Israel Brooklyn
- New York Community Hospital
- New York Methodist Hospital
- University Hospital of Brooklyn (SUNY Downstate)
- Woodhull Medical and Mental Health Center
- Wyckoff Heights Medical Center

Manhattan

- Bellevue Hospital Center
- Harlem Hospital Center
- Lenox Hill Hospital
- Metropolitan Hospital Center
- Mount Sinai Beth Israel
- Mount Sinai Hospital
- Mount Sinai Roosevelt
- Mount Sinai St. Luke's
- New York Eye and Ear Infirmary of Mount Sinai
- NewYork-Presbyterian Hospital - Allen Hospital
- NewYork-Presbyterian Hospital - Columbia Presbyterian Center
- NewYork-Presbyterian Hospital - Lower Manhattan Hospital
- NewYork-Presbyterian Hospital - New York Weill Cornell Center
- NYU Langone Medical Center - Tisch Hospital

Queens

- Elmhurst Hospital Center
- Flushing Hospital Medical Center
- Forest Hills Hospital
- Jamaica Hospital Medical Center
- Long Island Jewish Medical Center
- Mount Sinai Hospital of Queens
- New York Hospital Medical Center of Queens
- Queens Hospital Center
- St. John’s Episcopal Hospitals South Shore

Specialty Hospitals

Bronx

- Bronx Children's Hospital
- Bronx Psychiatric Center
- Bronx-Lebanon Hospital Center – Fulton Division
- Calvary Hospital
- Veterans Affairs Medical Center

Brooklyn

- Brooklyn Children's Psychiatric Center
- VA New York Harbor Healthcare

Manhattan

- Coler-Goldwater Specialty Hospital & Nursing Facility - Coler Hospital
- Cornerstone of Med. Arts Hospital
- Gracie Square Hospital
- Henry J. Carter Specialty Hospital and Nursing Facility
- Hospital for Special Surgery
- Manhattan Eye Ear
- Manhattan Psychiatric Center
- Memorial Sloan-Kettering Cancer Center
- NYU Langone Medical Center's Hospital for Joint Diseases
- New York State Psychiatric Institute
- Rockefeller University Hospital
- Rusk Rehabilitation at NYU Langone Medical Center

Queens

- Creedmoor Psychiatric Center
- Queens Children's Psychiatric Center

Sources: NYSDOH, NYS Health Profiles (http://profiles.health.ny.gov/hospital/county_or_region), CMS Official Hospital Compare Data (https://data.medicare.gov/Hospital-Compare/Hospital-General-Information/xubh-q36u), and primary research by Verité.

Exhibit 1B: Top Five Hospital Providers of Acute Care to Medicaid Members, by Borough, 2013

Borough and Hospital	Unique Members with ER Visits	Unique Members with Inpatient Admissions	Unique Members with Primary Care Visits
Bronx			
Montefiore Medical Center	69,775	32,124	73,244
Lincoln Medical & Mental Health Center	41,048	13,104	24,370
Bronx-Lebanon Hospital Center	39,304	15,067	28,085
Jacobi Medical Center	27,056	11,186	25,788
St. Barnabas Hospital	24,492	9,027	15,448
Brooklyn			
Maimonides Medical Center	34,107	23,303	18,123
Kings County Hospital Center	28,085	13,259	25,478
Brookdale Hospital Medical Center	25,672	7,707	10,178
Woodhull Medical & Mental Health Center	24,806	7,467	21,138
Wyckoff Heights Medical Center	18,291	5,373	6,483
Manhattan			
New York Presbyterian Hospital	29,752	10,595	24,827
St. Luke's Roosevelt Hospital Center	28,499	8,982	12,575
Mount Sinai Hospital	15,325	5,926	8,161
Harlem Hospital Center	13,590	4,767	10,582
Beth Israel Medical Center	12,193	7,134	10,819
Queens			
Elmhurst Hospital Center	35,468	12,934	32,465
New York Hospital Medical Center of Queens	28,037	11,901	10,647
Jamaica Hospital Medical Center	26,393	8,946	23,020
Queens Hospital Center	21,908	7,187	21,513
Flushing Hospital Medical Center	12,416	8,565	6,281

Source: Salient NYS Medicaid DSRIP Dashboard System Version 1.0

Exhibit 1C: Map of Acute Care General Hospitals

Sources: NYSDOH, NYS Health Profiles; CMS Official Hospital Compare Data; primary research by Verité; and Microsoft MapPoint 2010

Exhibit 1D: Map of Specialty Hospitals

Sources: NYSDOH, NYS Health Profiles; CMS Official Hospital Compare Data; primary research by Verité; and Microsoft MapPoint 2010

Appendix 2: New York City Housing Authority Programs

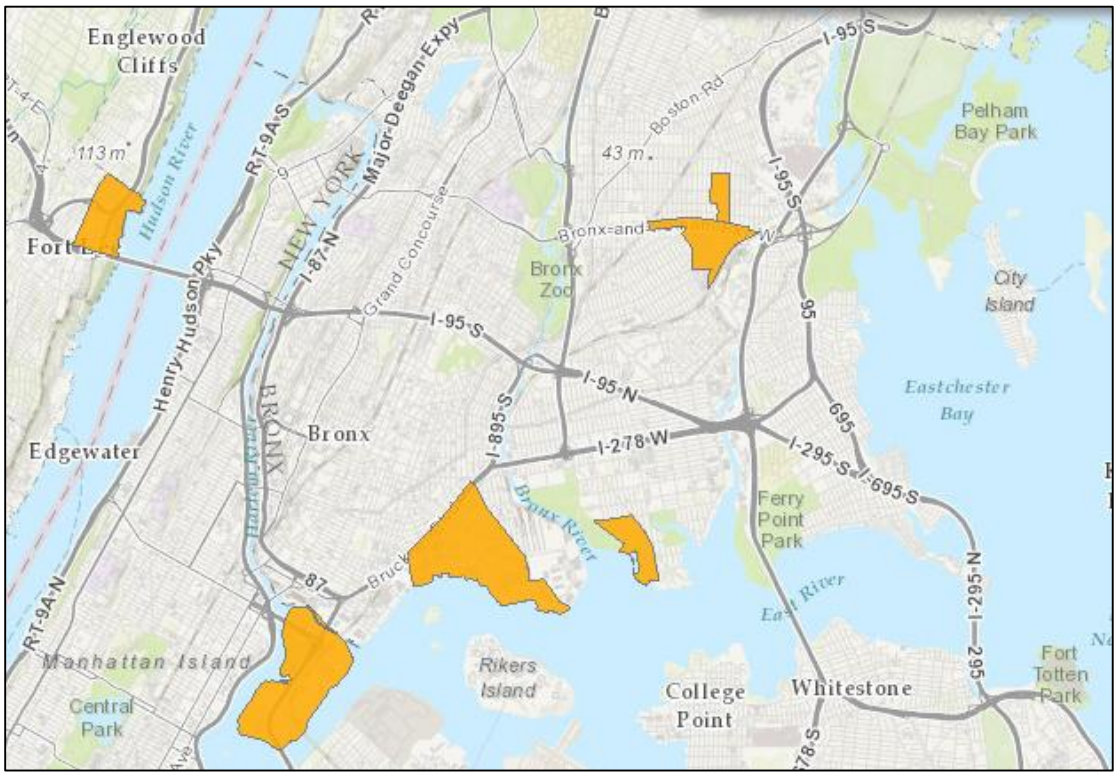
Exhibit 2A: Number and Type of New York City Housing Authority Community Programs, by Borough, 2013

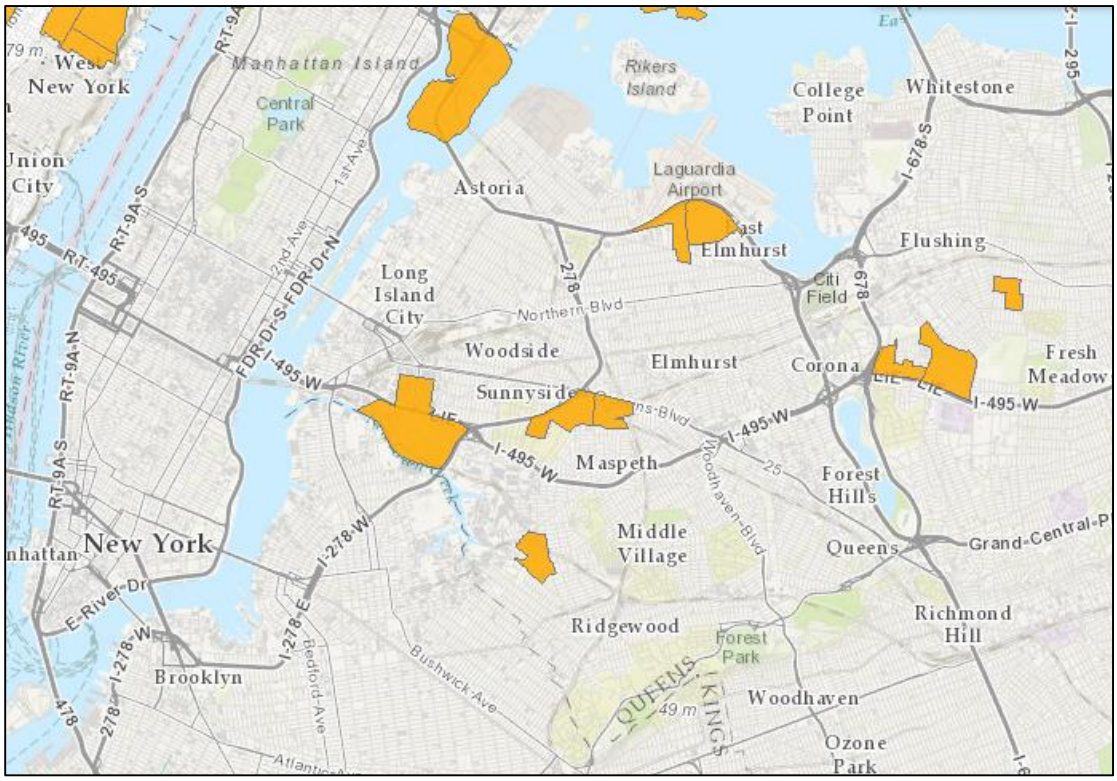
Borough	Adult Counseling Program/ Referral Center	Literacy Program	Art/ Theater /Performing Arts Center	Assafa Islamic Center	ATTAIN LAB	Care Program (Congregate)	Case Management	Community Center	Day Care/Children's Center	Family Assistance Program
Bronx	0	1	0	0	0	0	0	31	24	1
Brooklyn	0	0	0	0	2	0	0	43	23	0
Manhattan	2	2	3	1	2	1	1	39	40	1
Queens	1	3	0	0	0	0	0	12	9	0
Total	**3**	**6**	**3**	**1**	**4**	**1**	**1**	**125**	**96**	**2**

Borough	Head Start Center	Health Clinic (incl. Mental)	Job Training Program	Library/ Computer Room	NORC	Office Space/ Storage	School/ GED	Senior Program/ Center	Social Services/ Child Welfare	Youth+ Teen/ Afterschool Program	Family Programs	Vocational Training
Bronx	8	2	0	0	1	2	1	33	0	0	0	0
Brooklyn	9	4	0	0	2	1	1	39	0	1	0	0
Manhattan	13	15	1	1	6	4	1	36	2	5	2	1
Queens	0	2	0	1	3	3	0	13	0	0	0	0
Total	**30**	**23**	**1**	**2**	**12**	**10**	**3**	**121**	**2**	**6**	**2**	**1**

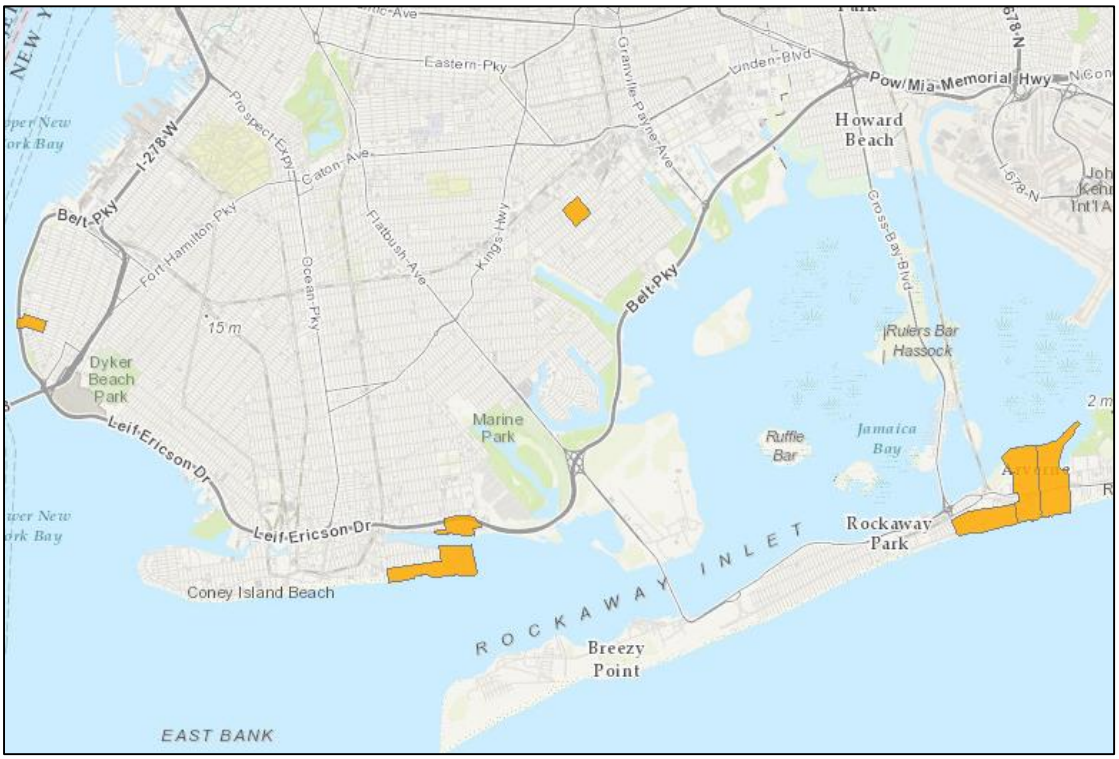
Source: New York City Open Data, Directory of Community Facilities, 2013.
See https://data.cityofnewyork.us/Social-Services/Directory-of-NYCHA-Community-Facilities/crns-fw6u.

Appendix 3: USDA Food Desert Maps





Source: USDA Economic Research Service, Food Access Research Atlas, 2014.
See http://www.ers.usda.gov/data/fooddesert



Source: USDA Economic Research Service, Food Access Research Atlas, 2014.
See http://www.ers.usda.gov/data/fooddesert

Appendix 4: Medicaid Inpatient PQI Discharge Rates (Detail)

Exhibit 4A: Medicaid Inpatient PQI Discharge Rate per 100,000 Population, by Borough and Neighborhood, 2012

Borough and Neighborhood	Angina Without Proce-dure	Asthma in Younger Adults	Bacterial Pneu-monia	COPD or Asthma in Older Adults	Dehy-dration	Diabetes Long-term Complica-tions	Diabetes Short-term Complica-tions	Heart Failure	Hyper-tension	Lower-Extremity Amputation among Patients with Diabetes	Uncon-trolled Diabetes	Urinary Tract Infect-ion
Bronx	**36.5**	**292.4**	**271.9**	**1,239.0**	**131.9**	**302.6**	**151.2**	**384.4**	**185.0**	**26.0**	**62.4**	**242.3**
Bronx Park and Fordham	27.5	221.3	298.5	1,137.2	120.7	225.4	118.2	359.7	163.4	25.3	45.1	279.2
Central Bronx	28.8	165.0	310.3	1,086.5	117.9	248.2	113.5	386.4	172.9	19.2	72.3	250.6
High Bridge and Morrisania	41.9	245.6	292.2	1,066.9	151.2	254.0	134.3	341.1	178.9	14.9	53.9	223.4
Hunts Point and Mott Haven	28.2	295.7	320.8	1,367.4	165.3	257.2	122.3	378.4	138.3	25.6	42.6	208.6
Kingsbridge and Riverdale	6.9	93.7	259.8	958.2	124.0	287.8	95.3	258.0	76.5	28.7	42.8	207.6
Northeast Bronx	18.3	218.8	244.9	726.1	129.8	304.8	204.4	344.7	171.8	48.2	33.4	275.3
Southeast Bronx	26.9	195.3	250.0	1,470.5	161.6	246.0	114.6	448.7	121.3	16.1	35.5	154.5

Exhibit 4A continues on the following pages for Brooklyn, Manhattan, and Queens.

Borough and Neighborhood	Angina Without Proce-dure	Asthma in Younger Adults	Bacterial Pneu-monia	COPD or Asthma in Older Adults	Dehy-dration	Diabetes Long-term Complica-tions	Diabetes Short-term Complica-tions	Heart Failure	Hyper-tension	Lower-Extremity Amputation among Patients with Diabetes	Uncon-trolled Diabetes	Urinary Tract Infec-tion
Brooklyn	**28.8**	**118.4**	**199.4**	**748.1**	**90.1**	**213.1**	**103.1**	**319.7**	**106.1**	**18.2**	**52.7**	**169.2**
Borough Park	17.3	55.7	148.3	488.4	69.1	133.3	45.2	287.6	104.7	7.1	20.9	166.4
Bushwick and Williamsburg	45.0	242.7	258.5	1,074.6	94.3	231.4	136.8	365.4	117.7	23.1	37.4	181.5
Canarsie and Flatlands	9.8	41.8	172.0	615.3	91.0	223.3	51.2	289.3	99.3	17.1	45.8	164.4
Central Brooklyn	38.9	148.4	294.6	1,072.4	127.1	272.1	157.4	359.6	94.1	25.9	62.5	205.9
East New York and New Lots	34.1	116.5	289.3	857.6	114.0	221.5	127.5	294.6	84.8	17.6	52.3	225.9
Flatbush	28.0	85.2	192.5	560.7	71.6	184.0	72.3	241.5	78.8	19.1	45.0	174.8
Greenpoint	20.7	19.5	145.6	362.0	63.8	104.6	74.0	291.0	62.8	4.6	18.4	92.7
Northwest Brooklyn	42.5	147.3	324.7	1,272.9	111.3	287.3	116.9	365.7	111.9	18.0	115.7	283.1
Southern Brooklyn	19.2	87.5	172.2	661.9	89.4	190.6	91.4	304.7	173.5	13.4	51.4	157.6
Southwest Brooklyn	5.0	29.7	112.7	339.0	61.4	92.4	37.3	180.6	38.1	5.2	14.4	156.1
Sunset Park	8.1	47.2	141.9	386.4	43.3	165.3	61.0	204.9	30.1	3.9	50.2	94.6

Exhibit 4A continues on the following pages for Manhattan and Queens.

Borough and Neighborhood	Angina Without Proce-dure	Asthma in Younger Adults	Bacterial Pneu-monia	COPD or Asthma in Older Adults	Dehy-dration	Diabetes Long-term Complica-tions	Diabetes Short-term Complica-tions	Heart Failure	Hyper-tension	Lower-Extremity Amputation among Patients with Diabetes	Uncon-trolled Diabetes	Urinary Tract Infec-tion
Manhattan	**25.9**	**190.4**	**250.7**	**768.3**	**131.0**	**238.5**	**116.7**	**328.2**	**131.0**	**15.2**	**47.7**	**208.5**
Central Harlem	26.6	206.3	254.0	907.0	174.8	219.1	122.3	311.1	120.3	13.1	39.5	181.2
Chelsea and Clinton	17.1	111.4	214.2	539.5	95.3	164.1	80.3	157.4	81.1	3.8	630.5	211.5
East Harlem	35.9	278.5	252.8	1,204.3	150.8	295.5	159.8	359.1	112.0	14.0	53.9	214.4
Gramercy Park and Murray Hill	18.2	45.8	384.4	618.9	69.3	65.1	41.4	128.6	88.1	0.0	7.8	120.2
Greenwich Village and Soho	9.4	0.0	287.2	652.9	71.6	184.4	122.7	50.0	25.8	11.9	18.6	181.7
Inwood and Washington Heights	15.3	100.8	146.9	478.1	91.9	162.4	65.9	254.0	92.1	13.4	26.5	170.3
Lower East Side	14.1	47.8	143.3	502.6	55.7	128.1	77.0	140.0	75.7	18.3	24.4	95.3
Lower Manhattan	4.8	553.4	386.8	907.6	119.2	90.1	91.9	107.8	139.5	2.7	30.8	248.3
Upper East Side	18.6	66.0	354.1	1,124.5	85.7	253.1	204.8	204.2	110.5	24.9	30.4	221.0
Upper West Side	21.0	292.4	279.5	625.2	130.9	169.4	182.6	280.5	109.4	28.0	26.6	215.0

Exhibit 4A continues on the following page for Queens.

Borough and Neighborhood	Angina Without Proce-dure	Asthma in Younger Adults	Bacterial Pneu-monia	COPD or Asthma in Older Adults	Dehy-dration	Diabetes Long-term Complica-tions	Diabetes Short-term Complica-tions	Heart Failure	Hyper-tension	Lower-Extremity Amputation among Patients with Diabetes	Uncon-trolled Diabetes	Urinary Tract Infec-tion
Queens	**25.3**	**77.2**	**194.7**	**468.2**	**65.1**	**150.8**	**66.9**	**231.6**	**88.7**	**11.9**	**32.3**	**160.6**
Central Queens	28.5	116.2	122.2	480.7	70.6	130.3	189.6	142.5	69.6	9.0	38.2	123.9
Jamaica	26.1	125.7	227.8	619.3	88.6	214.0	103.5	340.7	100.8	18.5	40.7	199.2
North Queens	12.1	47.7	214.2	518.3	48.4	106.3	61.6	190.8	85.9	15.8	14.8	141.7
Northeast Queens	8.9	134.7	127.3	220.8	104.8	79.0	46.3	137.6	85.7	13.2	12.0	84.9
Northwest Queens	32.9	91.7	226.9	845.6	77.2	194.8	65.2	250.0	88.2	10.1	39.2	178.7
Rockaways	21.7	21.5	263.6	412.7	62.5	119.8	57.8	245.3	203.2	7.2	35.2	262.5
Southeast Queens	17.7	56.3	177.8	521.4	70.1	89.7	61.2	274.6	111.1	5.6	43.6	136.3
Southwest Queens	32.1	128.8	230.5	550.7	88.3	172.1	100.1	415.6	105.9	17.4	25.6	187.9
West Central Queens	37.8	44.3	245.4	560.6	67.5	188.0	45.8	229.7	110.1	16.6	40.3	204.1
West Queens	18.1	54.7	246.0	560.7	57.0	151.8	65.6	191.3	107.6	8.2	35.4	210.2

Appendix 5: Selected Other Health Indicators

Exhibit 5A: Selected Other Health Indicators, by Race and Ethnicity, 2009-2011

Borough and Race/ Ethnicity	Mortality Rate and Premature Deaths		Birth-Related		Cancer (2008-2010)			Substance Abuse and Mental Health	
	Total Mortality**	Premature Deaths (% < 75 years)	Low-birth weight births (% <2.5 Kg)	Infant Mortality per 1,000 Live Births	Lung Cancer Mortality**	Colorectal Cancer Mortality**	Female Breast Cancer Mortality**	Drug-related Hospitalizations *	Suicide Mortality Rate**
Bronx	**706.0**	**52.3%**	**9.6%**	**5.7**	**51.7**	**18.3**	**23.8**	**60.4**	**5.6**
White	766.8	29.3%	6.7%	6.6	72.6	23.0	30.8	52.0	10.6
Black	782.1	62.1%	12.2%	7.8	56.0	21.4	28.4	61.0	3.7
Asian/Pacific	319.9	59.7%	10.7%	3.3*	31.0	9.9	n/a	4.7	7.8
Hispanic	606.2	61.6%	8.5%	4.6	37.8	14.1	17.4	52.2	5.1
Brooklyn	**624.5**	**46.6%**	**8.4%**	**4.4**	**49.1**	**17.4**	**22.3**	**27.3**	**4.6**
White	595.2	32.0%	5.9%	2.6	54.7	17.9	23.5	20.3	6.7
Black	701.8	60.7%	13.1%	8.0	46.4	18.1	27.1	33.9	3.2
Asian/Pacific	368.7	50.2%	7.0%	3.2	48.4	10.6	7.9	2.5	4.3
Hispanic	590.4	60.7%	7.4%	3.8	36.8	15.5	16.7	20.2	3.6
Manhattan	**553.7**	**41.2%**	**8.8%**	**3.9**	**51.1**	**14.2**	**21.8**	**42.4**	**5.9**
White	491.9	32.6%	8.2%	2.3	52.2	11.8	22.1	16.7	7.6
Black	901.6	53.6%	12.9%	10.7	70.4	23.1	36.9	139.4	3.8
Asian/Pacific	379.7	30.7%	7.4%	0.9*	54.9	14.8	6.9	1.9	4.5
Hispanic	524.2	49.2%	8.7%	4.7	33.5	13.2	17.1	41.9	4.1
Queens	**555.2**	**40.7%**	**8.1%**	**4.3**	**50.3**	**14.7**	**18.0**	**13.2**	**5.6**
White	621.1	30.0%	6.5%	3.7	64.6	16.1	21.1	19.5	7.5
Black	659.3	53.8%	12.3%	9.3	47.9	16.9	22.3	18.8	3.4
Asian/Pacific	366.5	51.6%	8.3%	2.5	37.9	10.2	9.2	2.4	5.5
Hispanic	399.6	56.4%	6.8%	3.2	31.8	11.8	14.4	7.1	4.3

Exhibit 5A continues with New York City and New York State data on the following page.

Borough and Race/ Ethnicity	Mortality Rate and Premature Deaths		Birth-Related		Cancer (2008-2010)			Substance Abuse and Mental Health	
	Total Mortality**	Premature Deaths (% < 75 years)	Low-birth weight births (% <2.5 Kg)	Infant Mortality per 1,000 Live Births	Lung Cancer Mortality**	Colorectal Cancer Mortality**	Female Breast Cancer Mortality**	Drug-related Hospitalizations *	Suicide Mortality Rate**
New York City	**604.0**	**44.8%**	**8.6%**	**4.6**	**51.6**	**16.1**	**21.4**	**32.5**	**5.3**
White	592.9	31.9%	6.7%	2.9	60.3	16.3	23.2	23.8	7.2
Black	736.5	58.6%	12.7%	8.6	52.3	19.2	27.5	48.7	3.4
Asian/Pacific	367.6	47.3%	7.8%	2.5	43.3	11.5	8.1	2.4	5.1
Hispanic	532.2	57.7%	7.8%	4.1	35.3	13.7	16.6	30.2	4.3
New York	**658.1**	**39.9%**	**8.2%**	**5.1**	**63.6**	**15.4**	**21.6**	**26.1**	**7.2**
White	669.2	33.9%	6.9%	4.1	70.7	15.3	22.1	21.4	8.9
Black	749.4	59.5%	12.9%	10.3	56.7	18.6	27.9	43.5	3.9
Asian/Pacific	345.7	48.7%	8.1%	2.4	39.6	10.9	8.7	2.3	4.9
Hispanics	514.9	58.6%	7.7%	4.5	34.7	13.4	15.6	25.1	4.3

* Rate per 10,000 population. ** Rate per 100,000 population.

Source: New York State Department of Health, Health Indicators by Race/Ethnicity 2009-2012

Exhibit 5B: Health Behavior Indicators, by Neighborhood, 2012

Borough and UHF Neighborhood	Binge Drinker (% Yes)	Current Smoker (% Yes)	Exercise in the Past 30 Days (% No)	More than One Sugary Beverage (% Yes)	0 Servings Fruit and/or Vegetables Yesterday
Bronx	**18.5%**	**15.8%**	**24.7%**	**38.6%**	**20.5%**
Kingsbridge and Riverdale	18.8%	7.3%*	21.1%	19.3%	17.3%
The Northeast Bronx	18.5%	15.7%	19.5%	39.8%	20.8%
Fordham/Bronx Park	19.4%	7.5%*	18.0%	37.1%	23.0%
Pelham/Throgs Neck	17.2%	21.2%	25.5%	37.6%	23.7%
The South Bronx	18.8%	18.2%	28.8%	41.4%	18.0%
Brooklyn	**16.4%**	**16.0%**	**24.3%**	**27.2%**	**13.9%**
Greenpoint	21.3%	18.4%	31.6%	18.3%	7.5%*
Downtown Brooklyn/Heights/Slope	17.0%	15.9%	15.9%	17.1%	11.7%
Bedford Stuyvesant/Crown Heights	13.5%	16.1%	20.5%	39.5%	19.2%
East New York/New Lots	17.6%	16.3%	25.5%	37.6%	22.8%
Sunset Park	16.5%	11.8%*	29.8%*	29.9%*	17.5%*
Borough Park	9.6%	12.1%	18.4%	14.9%	9.1%
Flatbush	13.0%	12.2%	24.5%	28.1%	21.9%
Canarsie and Flatlands	18.4%	14.8%	19.8%	27.5%	12.8%
Bay Ridge/Bensonhurst	16.4%	17.6%	33.5%	26.6%	8.4%*
Coney Island	21.2%	23.0%	28.1%	28.5%	9.5%
Williamsburg/Bushwick	20.2%	18.9%	26.5%	35.7%	15.7%
Manhattan	**26.2%**	**15.3%**	**16.5%**	**21.3%**	**8.6%**
Washington Heights/Inwood	21.4%	12.8%	21.0%	26.7%	12.4%
Central Harlem	21.6%*	17.1%	21.7%	37.9%*	14.1%
East Harlem	27.1%*	18.9%*	22.0%*	38.3%*	11.2%
Upper West Side	21.2%	12.6%	12.1%	12.1%	5.3%*
Upper East Side/Gramercy	29.5%	13.4%	14.3%	11.6%	7.4%*
Chelsea/Greenwich Village	32.3%	16.9%	14.1%	17.4%	6.8%
Union Square/Lower Manhattan	32.4%	21.4%	15.0%	18.9%	5.6%
Queens	**18.0%**	**14.9%**	**23.6%**	**28.2%**	**9.9%**
Long Island City/Astoria	23.1%	15.8%	20.3%	20.1%	8.0%
West Queens	22.9%	15.3%	24.3%	26.7%	10.1%
Flushing/Clearview	19.9%	17.7%	29.4%	19.2%	12.4%*
Bayside/Little Neck/Fresh Meadows	8.1%*	15.3%	21.8%	17.8%	2.9%*
Ridgewood/Forest Hills	14.9%	17.7%	26.9%	30.7%	12.2%
Southwest Queens	21.6%	11.5%	22.5%	32.6%	8.6%
Jamaica	13.7%	14.2%	20.6%	35.2%	12.3%*
Southeast Queens	15.6%	9.3%*	21.5%	33.1%	9.3%*
The Rockaways	16.5%*	20.4%*	15.7%	32.8%*	15.0%*
New York City	**19.6%**	**15.5%**	**22.2%**	**28.2%**	**12.5%**

*Note: Estimate should be interpreted with caution. Estimate's Relative Standard Error (a measure of estimate precision) is greater than 30% or the sample size is less than 50, or the 95% Confidence Interval half width is greater than ten, making the estimate potentially unreliable.

Source: New York City Department of Health and Mental Hygiene, Community Health Survey, 2012

Key	
Up to 10% worse than NYC	
10-50% worse than NYC	
50-75% worse than NYC	
> 75% worse than NYC	

Exhibit 5C: Selected Self-Reported Chronic Disease Indicators, 2012

Borough and UHF Neighborhood	Ever been told Had Asthma (% Yes)	Ever Had High Blood Pressure (% Yes)	Ever Had High Cholesterol (% Yes)	Ever Told Had Diabetes (% Yes)	Obese (% Yes)
Bronx	**18.1%**	**32.9%**	**32.0%**	**15.2%**	**32.0%**
Kingsbridge and Riverdale	14.1%	26.1%	23.4%	*3.1%	19.0%
The Northeast Bronx	20.8%	39.7%	33.5%	15.6%	35.2%
Fordham/Bronx Park	13.7%	29.0%	27.3%	14.6%	36.3%
Pelham/Throgs Neck	17.7%	29.0%	37.2%	17.4%	31.6%
The South Bronx	20.6%	35.7%	20.8%	15.8%	30.6%
Brooklyn	**11.8%**	**29.1%**	**29.0%**	**11.8%**	**27.0%**
Greenpoint	15.0%	26.8%	32.4%	11.7%	26.7%
Downtown Brooklyn/Heights/Slope	13.1%	21.5%	24.5%	10.3%	16.2%
Bedford Stuyvesant/Crown Heights	10.1%	35.4%	25.7%	14.0%	27.4%
East New York/New Lots	15.2%	34.8%	26.3%	20.1%	37.6%
Sunset Park	* 4.9%	25.9%	27.8%	* 19.0%	23.5%
Borough Park	* 5.5%	23.6%	27.0%	5.5%	24.5%
Flatbush	10.0%	35.4%	29.6%	12.3%	28.4%
Canarsie and Flatlands	17.9%	31.4%	31.2%	17.1%	30.1%
Bay Ridge/Bensonhurst	* 13.0%	25.8%	30.5%	* 5.7%	21.3%
Coney Island	10.3%	26.4%	35.8%	11.8%	30.5%
Williamsburg/Bushwick	18.0%	33.0%	27.4%	12.4%	29.5%
Manhattan	**11.6%**	**23.1%**	**28.0%**	**6.5%**	**14.7%**
Washington Heights/Inwood	10.5%	29.5%	26.9%	10.5%	22.2%
Central Harlem	* 18.6%	33.2%	* 29.2%	14.6%	*30.3%
East Harlem	* 20.5%	*41.3%	* 26.8%	* 16.2%	*25.3%
Upper West Side	8.9%	15.5%	25.4%	4.0%	16.8%
Upper East Side/Gramercy	9.6%	19.6%	27.2%	*2.4%	8.8%
Chelsea/Greenwich Village	9.5%	23.4%	32.6%	2.6%	7.9%
Union Square/Lower Manhattan	12.7%	22.3%	28.0%	7.6%	8.1%
Queens	**10.5%**	**27.3%**	**27.9%**	**10.5%**	**22.3%**
Long Island City/Astoria	17.6%	24.0%	28.9%	*4.1%	27.3%
West Queens	9.9%	26.6%	29.1%	12.8%	24.2%
Flushing/Clearview	* 6.6%	22.8%	27.0%	6.9%	16.3%
Bayside/Little Neck/Fresh Meadows	9.3%	19.6%	26.3%	10.3%	14.3%
Ridgewood/Forest Hills	12.2%	26.5%	27.3%	6.8%	16.6%
Southwest Queens	* 10.7%	28.0%	27.1%	13.1%	25.4%
Jamaica	11.7%	32.3%	29.0%	14.1%	27.1%
Southeast Queens	6.8%	35.3%	31.6%	12.0%	26.0%
The Rockaways	12.8%	* 37.6%	31.0%	13.6%	*37.5%
New York City	**12.5%**	**27.8%**	**29.1%**	**10.7%**	**24.2%**

Source: New York City Department of Health and Mental Hygiene, Community Health Survey, 2012
* Estimate should be interpreted with caution due to small sample size.

Key	
Up to 10% worse than NYC	
10-50% worse than NYC	
50-75% worse than NYC	
>75% worse than NYC	

Exhibit 5D: Selected Cardiovascular and Diabetes Indicators, by Borough and Race/Ethnicity, 2009-2011

Borough and Race/Ethnicity	Diseases of the Heart Mortality Rate**	Diseases of the Heart Hospitalization Rate*	Diabetes Mortality Rate**	Diabetes Hospitalization Rate* (primary diag.)	Diabetes Hospitalization Rate* (any diag.)
Bronx	**225.8**	**131.5**	**27.3**	**41.9**	**399.1**
White	264.5	106.0	18.7	16.5	214.5
Black	240.1	123.4	36.9	46.6	398.5
Asian/Pacific Islander	101.8	60.0	15.2	9.6	157.6
Hispanic	177.4	102.8	27.2	35.4	355.0
Brooklyn	**229.0**	**130.6**	**23.4**	**30.0**	**36.6**
White	238.6	112.4	12.9	14.1	15.3
Black	232.5	139.1	40.8	48.8	56.8
Asian/Pacific Islander	108.3	42.2	9.3	7.8	6.3
Hispanic	199.3	100.9	29.7	29.0	28.3
Manhattan	**165.1**	**90.2**	**15.9**	**18.1**	**202.1**
White	155.2	62.6	6.8	5.5	77.6
Black	265.5	126.5	38.5	41.5	398.4
Asian/Pacific Islander	88.9	33.4	12.5	5.4	86.2
Hispanic	146.8	82.1	23.2	24.3	255.1
Queens	**209.7**	**108.5**	**15.8**	**18.6**	**227.8**
White	237.9	103.9	13.5	12.2	179.3
Black	239.3	123.1	28.5	36.9	324.7
Asian/Pacific Islander	122.3	64.2	13.6	8.2	138.2
Hispanic	140.7	66.9	12.7	14.5	172.2
New York City	**212.2**	**114.9**	**20.1**	**25.6**	**270.5**
White	224.5	96.6	12.4	11.6	163.1
Black	240.3	130.1	36.8	44.8	378.9
Asian/Pacific Islander	110.6	52.6	12.8	7.5	122.8
Hispanic	166.0	88.0	23.3	26.1	272.5
New York State	**198.6**	**107.9**	**17.0**	**18.8**	**226.0**
White	199.9	94.9	13.9	11.2	165.6
Black	233.0	128.6	34.2	43.2	378.1
Asian/Pacific Islander	103.8	48.4	11.4	6.5	112.4
Hispanic	157.1	95.5	21.2	24.5	275.1

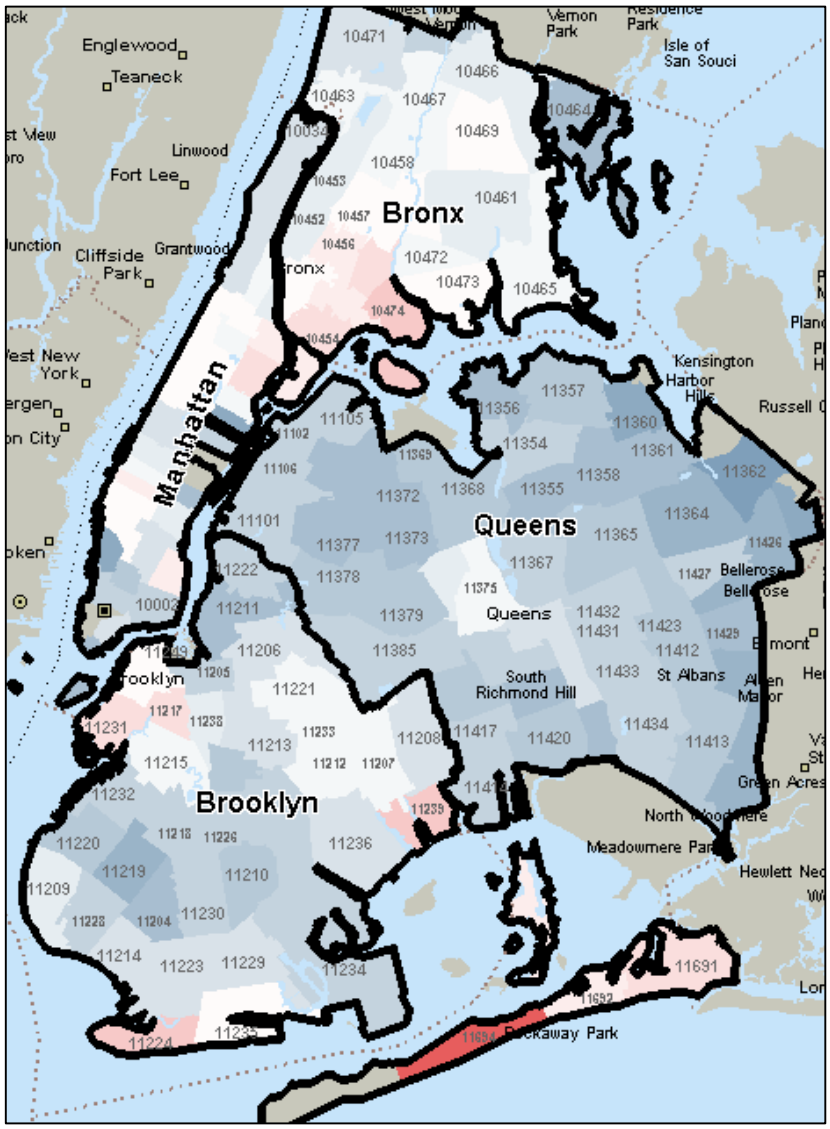
*Rate per 10,000, age-adjusted. **Rate per 100,000, age-adjusted.
Source: New York State Department of Health – Health Indicators by Race/Ethnicity 2009-2012

Exhibit 5E: Medicaid Beneficiaries with Respiratory Conditions, by Neighborhood, 2012

Borough and Neighborhood	Total Beneficiaries	Beneficiaries with Condition	Percent with Condition
Bronx	**821,337**	**97,778**	**11.9%**
Bronx Park and Fordham	159,182	18,199	11.4%
Central Bronx	158,601	18,567	11.7%
High Bridge and Morrisania	157,071	18,991	12.1%
Hunts Point and Mott Haven	102,165	14,428	14.1%
Kingsbridge and Riverdale	29,957	3,288	11.0%
Northeast Bronx	75,167	8,302	11.0%
Southeast Bronx	139,194	16,003	11.5%
Brooklyn	**1,232,464**	**111,833**	**9.1%**
Borough Park	195,830	12,667	6.5%
Bushwick and Williamsburg	124,100	12,570	10.1%
Canarsie and Flatlands	68,906	6,522	9.5%
Central Brooklyn	167,161	18,093	10.8%
East New York and New Lots	117,543	12,321	10.5%
Flatbush	135,688	10,103	7.4%
Greenpoint	49,127	3,039	6.2%
Northwest Brooklyn	58,124	6,375	11.0%
Southern Brooklyn	136,160	15,646	11.5%
Southwest Brooklyn	80,271	7,180	8.9%
Sunset Park	99,554	7,317	7.3%
Manhattan	**477,826**	**50,520**	**10.5%**
Central Harlem	80,466	9,330	11.6%
Chelsea and Clinton	31,252	3,706	11.8%
East Harlem	65,008	9,251	14.2%
Gramercy Park and Murray Hill	8,782	855	8.7%
Greenwich Village and Soho	14,273	1,015	7.1%
Inwood and Washington Heights	143,590	12,745	8.9%
Lower East Side	81,093	7,747	9.6%
Lower Manhattan	10,660	957	8.1%
Upper East Side	11,322	1,141	10.1%
Upper West Side	31,380	3,773	12.0%
Queens	**912,217**	**68,271**	**7.5%**
Central Queens	34,868	2,572	7.4%
Jamaica	134,200	10,472	7.8%
North Queens	116,735	7,730	6.6%
Northeast Queens	18,816	875	4.4%
Northwest Queens	71,850	5,258	7.3%
Rockaways	52,485	8,012	15.2%
Southeast Queens	58,654	3,323	5.7%
Southwest Queens	118,100	8,220	7.0%
West Central Queens	76,645	7,034	9.2%
West Queens	229,864	14,775	6.4%

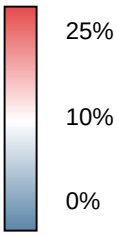
Note: Zip codes with under 20 unique beneficiaries were not included in the dataset.
Source: New York State Department of Health, Open Health Data

Exhibit 5F - Percent of Medicaid Beneficiaries with a Respiratory Condition

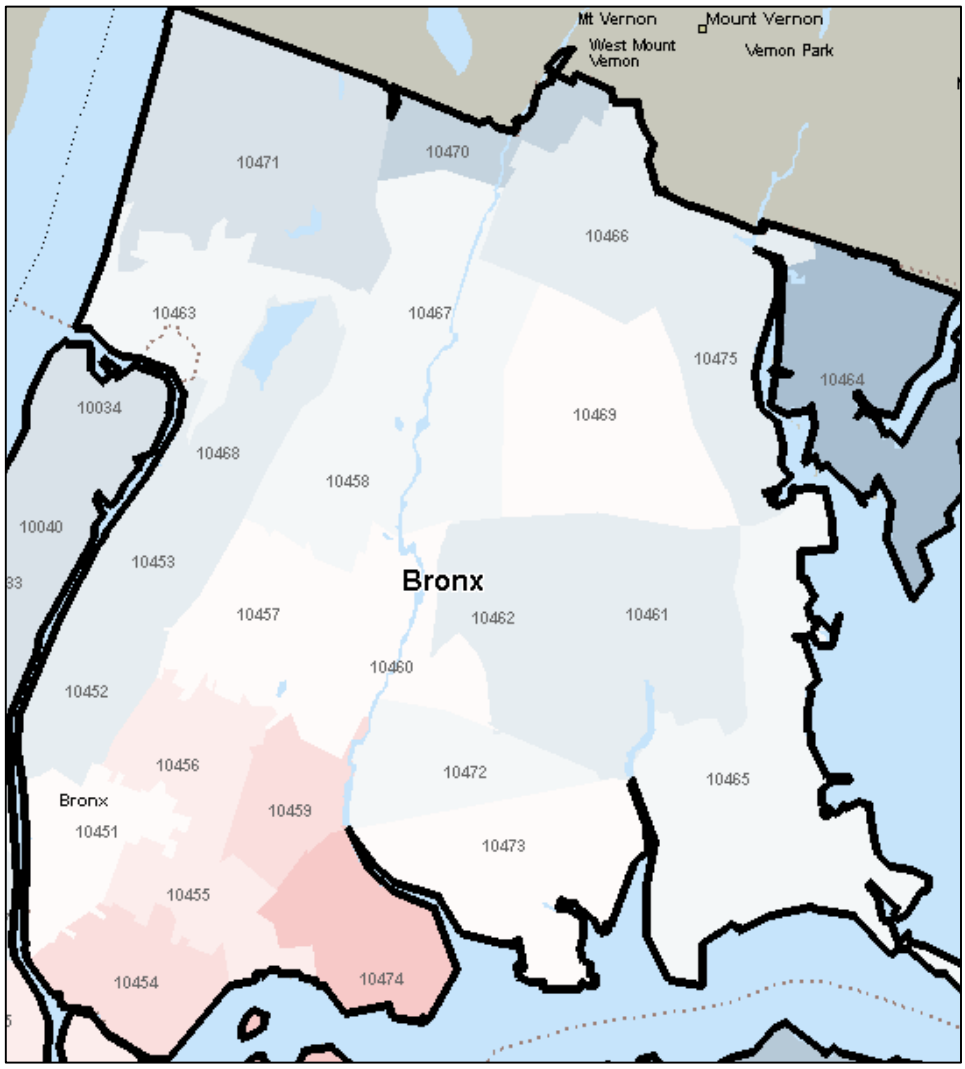


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code



Percent of Medicaid Beneficiaries with a Respiratory Condition - Bronx



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

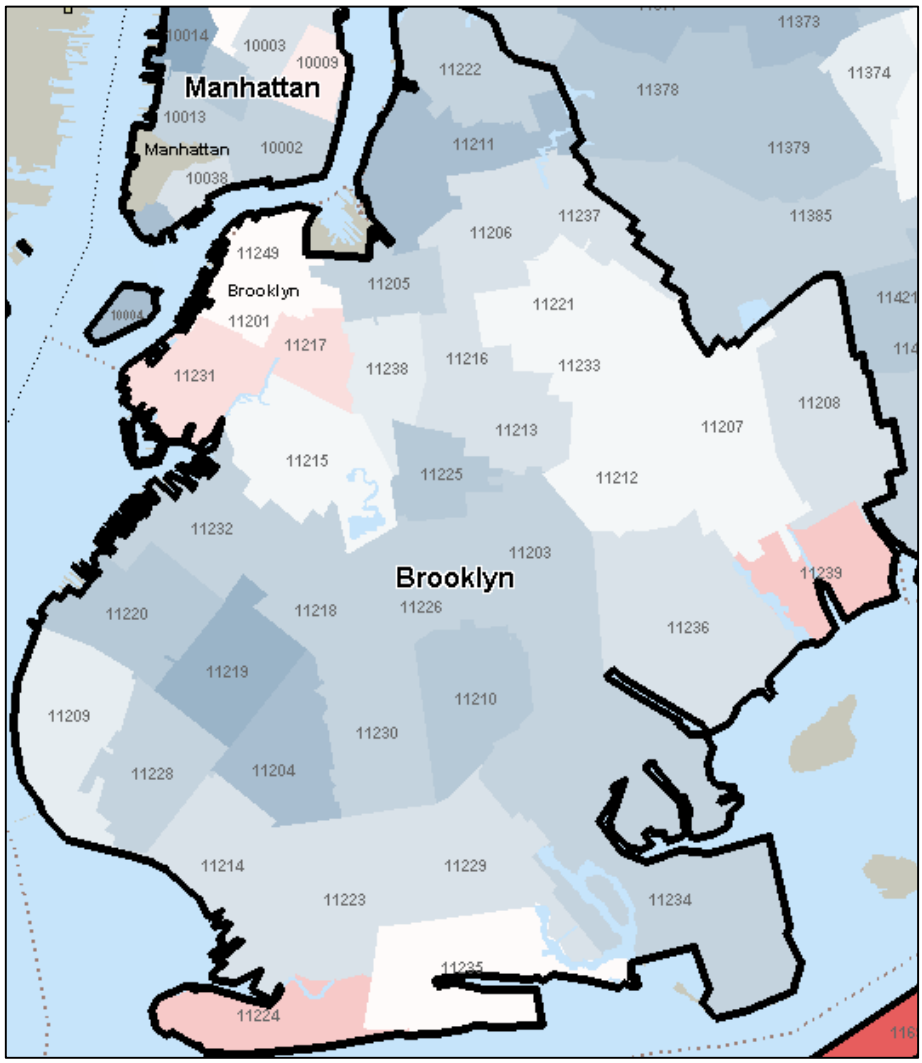
Disease Prevalence by ZIP Code

25%

10%

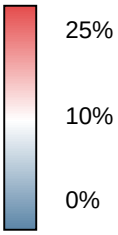
0%

Percent of Medicaid Beneficiaries with a Respiratory Condition - Brooklyn

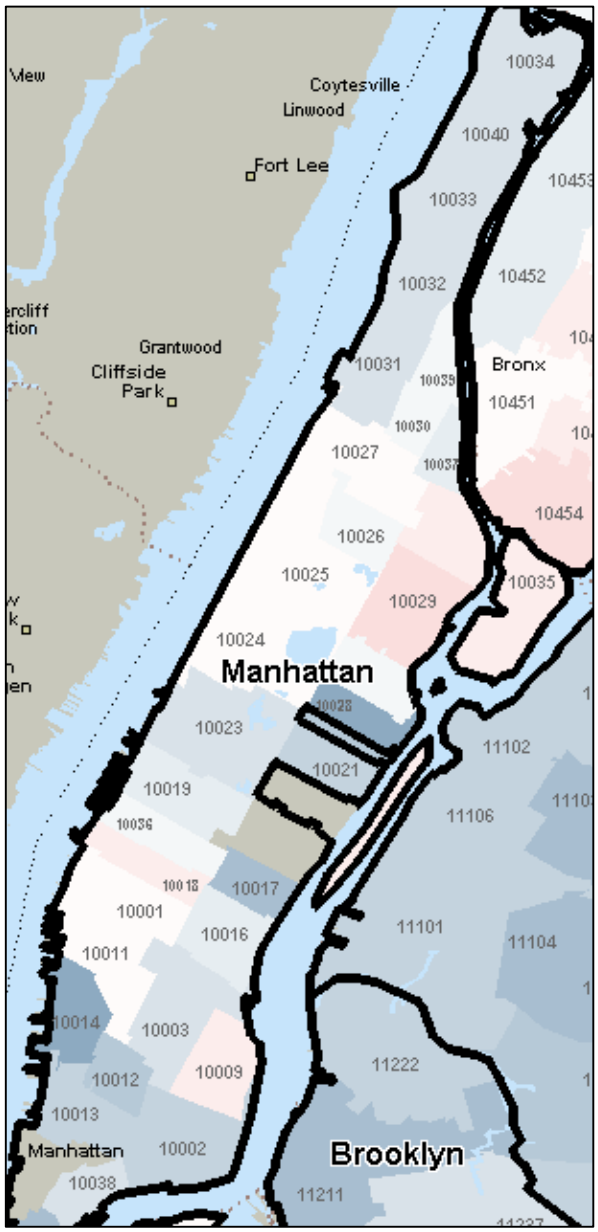


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code

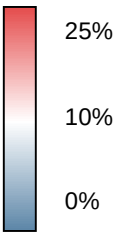


Percent of Medicaid Beneficiaries with a Respiratory Condition - Manhattan

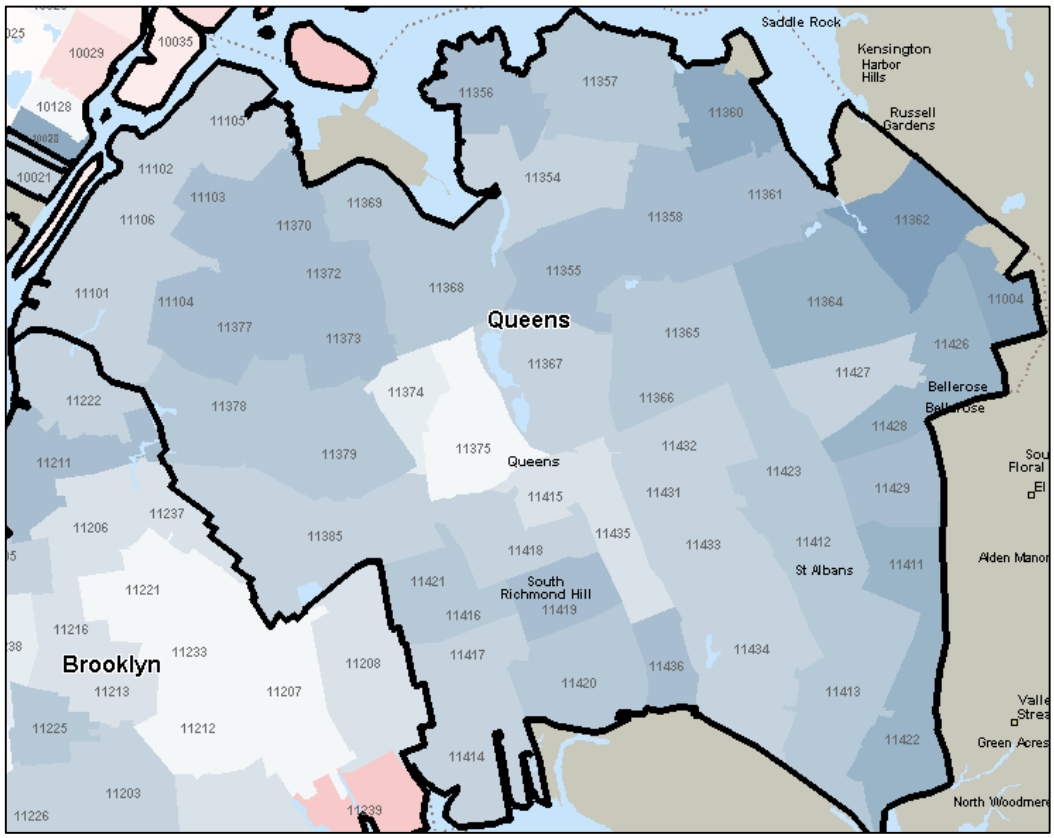


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code



Percent of Medicaid Beneficiaries with a Respiratory Condition - Queens



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code

25%

10%

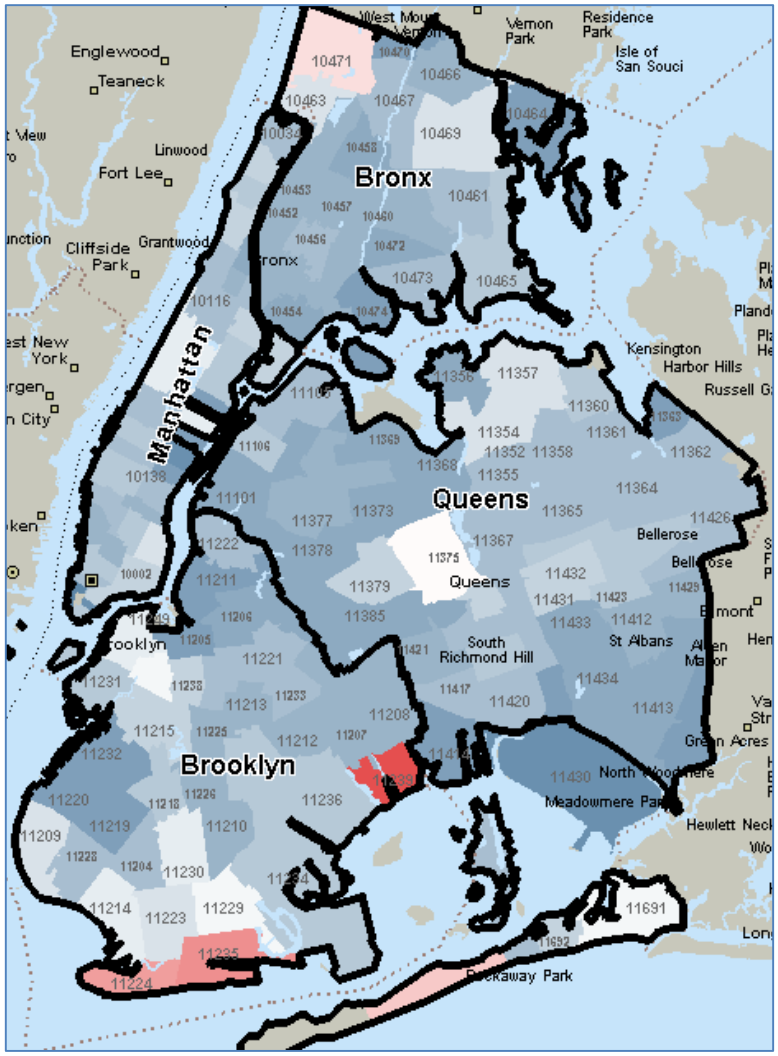
0%

Exhibit 5G: Medicaid Beneficiaries with Cardiovascular Conditions, by Neighborhood, 2012

Borough and Neighborhood	Total Beneficiaries	Beneficiaries with Condition	Percent with Condition
Bronx	**821,337**	**218,214**	**26.6%**
Bronx Park and Fordham	159,182	40,609	25.5%
Central Bronx	158,601	39,888	25.1%
High Bridge and Morrisania	157,071	40,419	25.7%
Hunts Point and Mott Haven	102,165	24,092	23.6%
Kingsbridge and Riverdale	29,957	12,239	40.9%
Northeast Bronx	75,167	24,088	32.0%
Southeast Bronx	139,194	36,879	26.5%
Brooklyn	**1,232,464**	**387,426**	**31.4%**
Borough Park	195,830	56,903	29.1%
Bushwick and Williamsburg	124,100	31,144	25.1%
Canarsie and Flatlands	68,906	26,580	38.6%
Central Brooklyn	167,161	46,988	28.1%
East New York and New Lots	117,543	30,870	26.3%
Flatbush	135,688	37,157	27.4%
Greenpoint	49,127	10,540	21.5%
Northwest Brooklyn	58,124	18,653	32.1%
Southern Brooklyn	136,160	77,676	57.0%
Southwest Brooklyn	80,271	30,877	38.5%
Sunset Park	99,554	20,038	20.1%
Manhattan	**480,026**	**155,354**	**32.4%**
Central Harlem	80,466	21,383	26.6%
Chelsea and Clinton	31,285	10,018	32.0%
East Harlem	65,008	21,245	32.7%
Gramercy Park and Murray Hill	9,833	2,534	25.8%
Greenwich Village and Soho	14,273	4,375	30.7%
Inwood and Washington Heights	143,590	46,702	32.5%
Lower East Side	81,093	28,442	35.1%
Lower Manhattan	11,776	3,723	31.6%
Upper East Side	11,322	4,152	36.7%
Upper West Side	31,380	12,780	40.7%
Queens	**913,581**	**261,993**	**28.7%**
Central Queens	34,868	10,191	29.2%
Jamaica	134,200	37,488	27.9%
North Queens	116,769	36,661	31.4%
Northeast Queens	19,922	5,668	28.5%
Northwest Queens	71,850	19,209	26.7%
Rockaways	52,664	23,412	44.5%
Southeast Queens	58,699	14,801	25.2%
Southwest Queens	118,100	33,517	28.4%
West Central Queens	76,645	27,135	35.4%
West Queens	229,864	53,911	23.5%

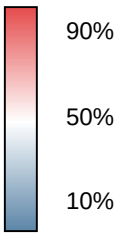
Note: Zip codes with under 20 unique beneficiaries were not included in the dataset.
Source: New York State Department of Health, Open Health Data

Exhibit 5H: Percent of Medicaid Beneficiaries with Cardiovascular Conditions

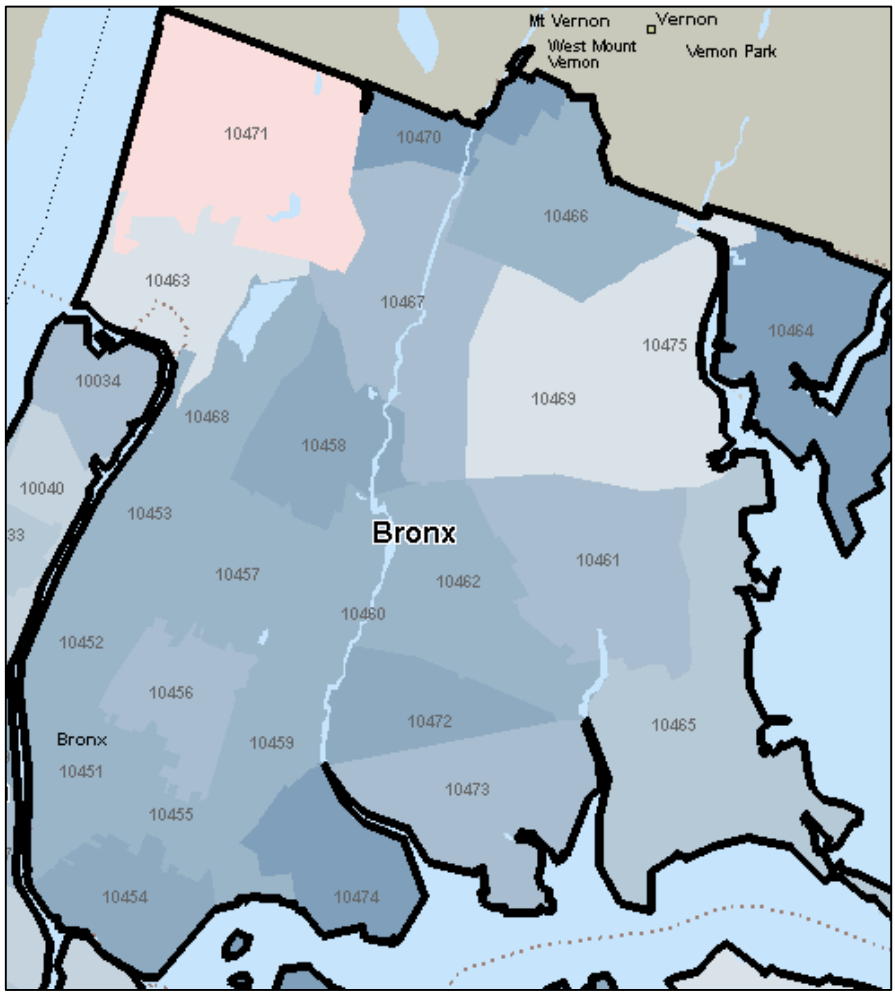


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code



Percent of Medicaid Beneficiaries with Cardiovascular Conditions - Bronx



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

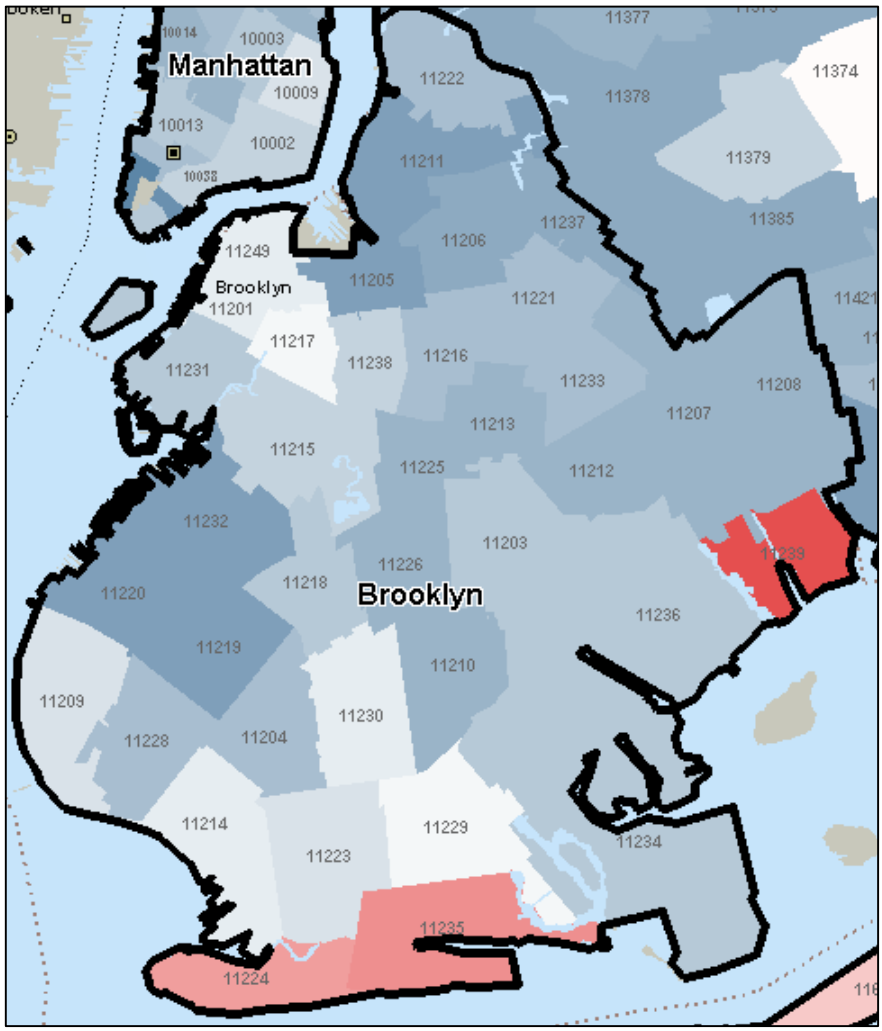
Disease Prevalence by ZIP Code

90%

50%

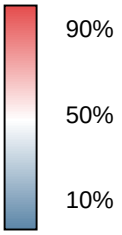
10%

Percent of Medicaid Beneficiaries with Cardiovascular Conditions - Brooklyn

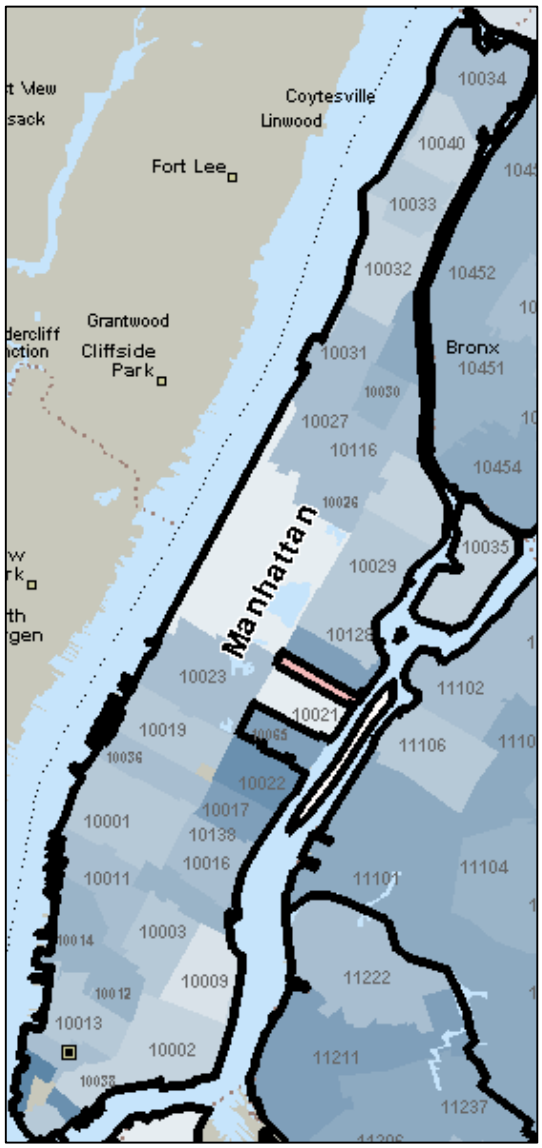


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code



Percent of Medicaid Beneficiaries with Cardiovascular Conditions - Manhattan



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

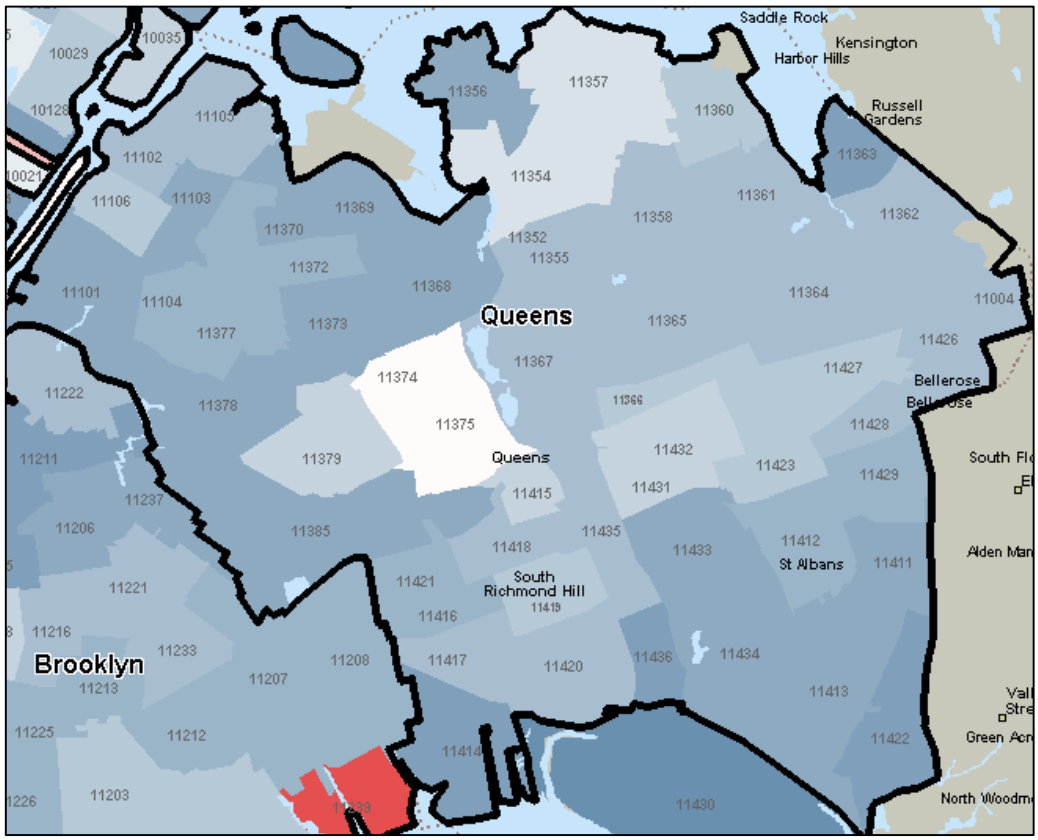
Disease Prevalence by ZIP Code

90%

50%

10%

Percent of Medicaid Beneficiaries with Cardiovascular Conditions - Queens



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code

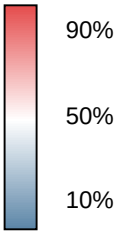
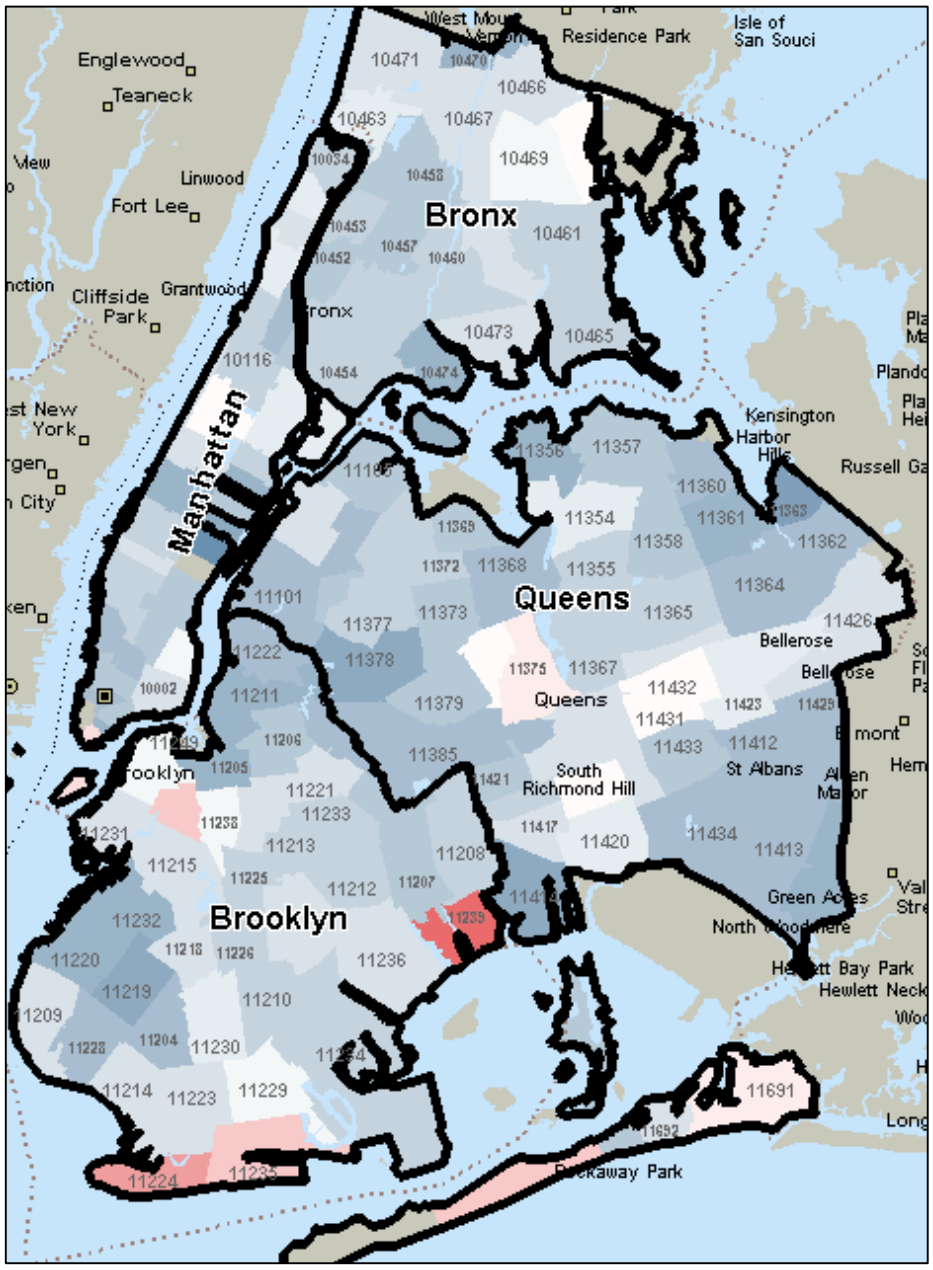


Exhibit 5I: Medicaid Beneficiaries with Diabetes Conditions, by Neighborhood, 2012

Borough and Neighborhood	Total Beneficiaries	Beneficiaries with Condition	Percent of Beneficiaries with Condition
Bronx	**821,337**	**90,449**	**11.0%**
Bronx Park and Fordham	159,182	17,052	10.7%
Central Bronx	158,601	16,283	10.3%
High Bridge and Morrisania	157,071	16,728	10.6%
Hunts Point and Mott Haven	102,165	10,818	10.6%
Kingsbridge and Riverdale	29,957	3,932	13.1%
Northeast Bronx	75,167	9,702	12.9%
Southeast Bronx	139,194	15,934	11.4%
Brooklyn	**1,232,464**	**137,859**	**11.2%**
Borough Park	195,830	18,944	9.7%
Bushwick and Williamsburg	124,100	12,719	10.2%
Canarsie and Flatlands	68,906	9,614	14.0%
Central Brooklyn	167,161	18,648	11.2%
East New York and New Lots	117,543	12,558	10.7%
Flatbush	135,688	15,271	11.3%
Greenpoint	49,127	3,541	7.2%
Northwest Brooklyn	58,124	6,995	12.0%
Southern Brooklyn	136,160	23,523	17.3%
Southwest Brooklyn	80,271	9,096	11.3%
Sunset Park	99,554	6,950	7.0%
Manhattan	**480,026**	**57,930**	**12.1%**
Central Harlem	80,466	8,120	10.1%
Chelsea and Clinton	31,285	3,524	11.3%
East Harlem	65,008	8,937	13.7%
Gramercy Park and Murray Hill	9,833	808	8.2%
Greenwich Village and Soho	14,273	1,361	9.5%
Inwood and Washington Heights	143,590	18,156	12.6%
Lower East Side	81,093	10,343	12.8%
Lower Manhattan	11,776	1,125	9.6%
Upper East Side	11,322	1,245	11.0%
Upper West Side	31,380	4,311	13.7%
Queens	**913,581**	**101,396**	**11.1%**
Central Queens	34,868	3,709	10.6%
Jamaica	134,200	15,963	11.9%
North Queens	116,769	12,702	10.9%
Northeast Queens	19,922	1,643	8.2%
Northwest Queens	71,850	7,411	10.3%
Rockaways	52,664	8,156	15.5%
Southeast Queens	58,699	5,866	10.0%
Southwest Queens	118,100	14,529	12.3%
West Central Queens	76,645	8,991	11.7%
West Queens	229,864	22,426	9.8%

Note: Zip codes with under 20 unique beneficiaries were not included in the dataset.
Source: New York State Department of Health, Open Health Data

Exhibit 5J: Percent of Medicaid Beneficiaries with a Diabetes Condition



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

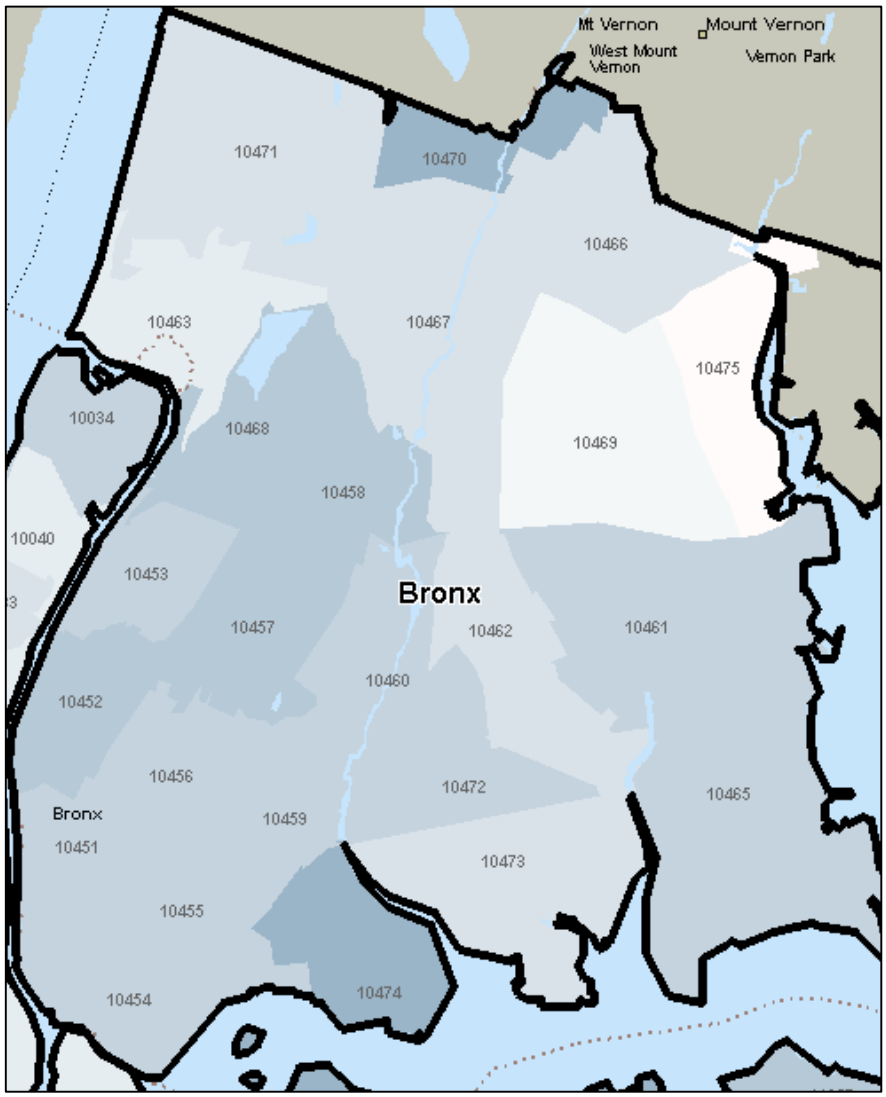
Disease Prevalence by ZIP Code

30%

16%

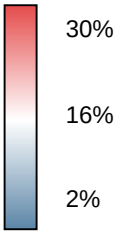
2%

Percent of Medicaid Beneficiaries with a Diabetes Condition – Brooklyn

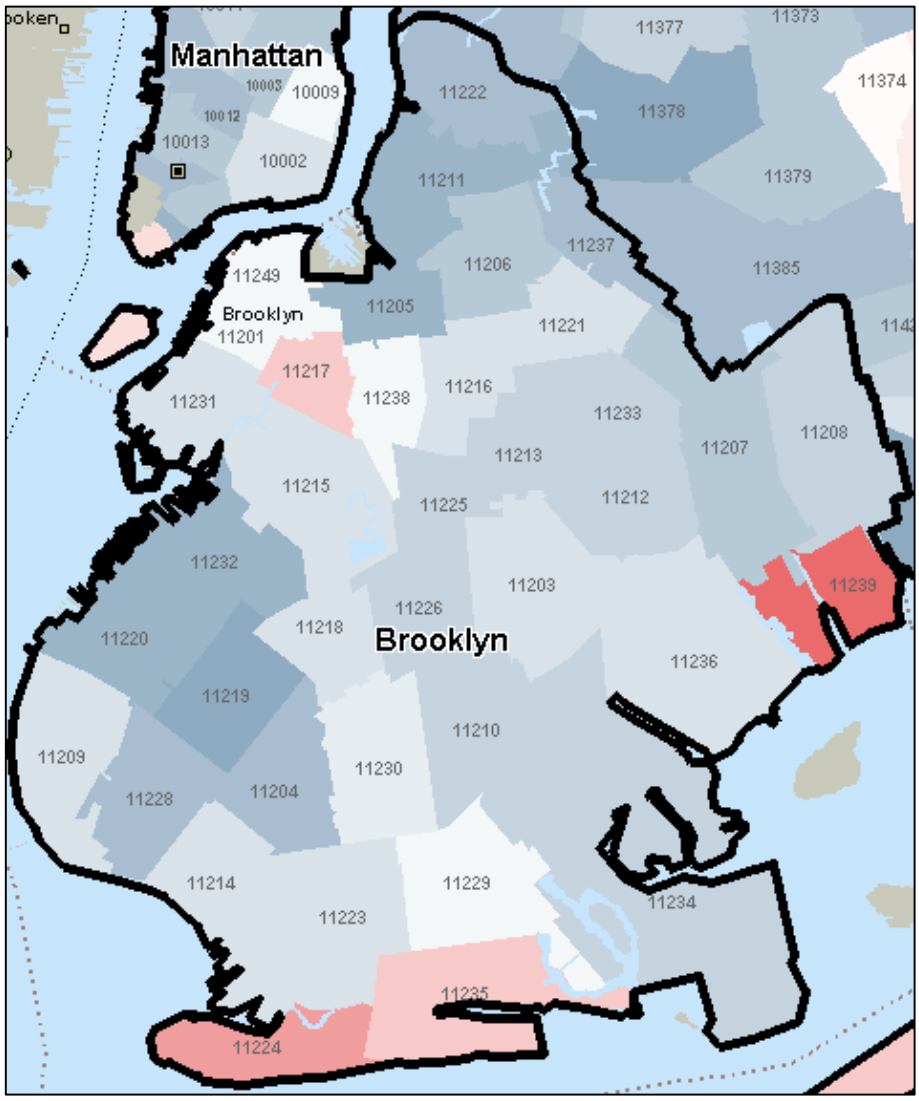


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code



Percent of Medicaid Beneficiaries with a Diabetes Condition - Brooklyn



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

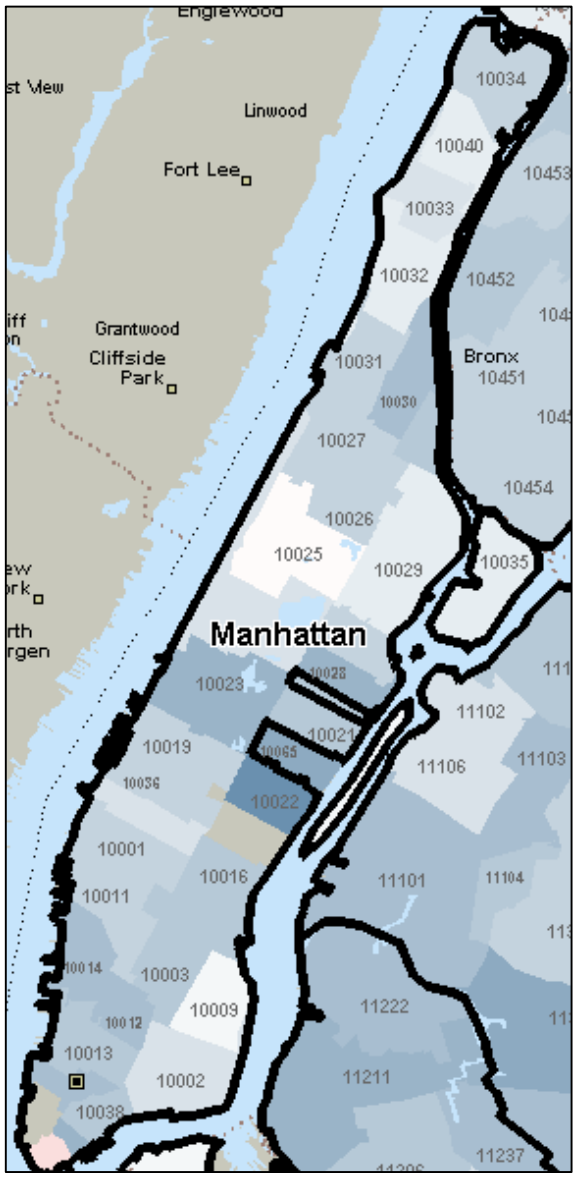
Disease Prevalence by ZIP Code

30%

16%

2%

Percent of Medicaid Beneficiaries with a Diabetes Condition - Manhattan



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

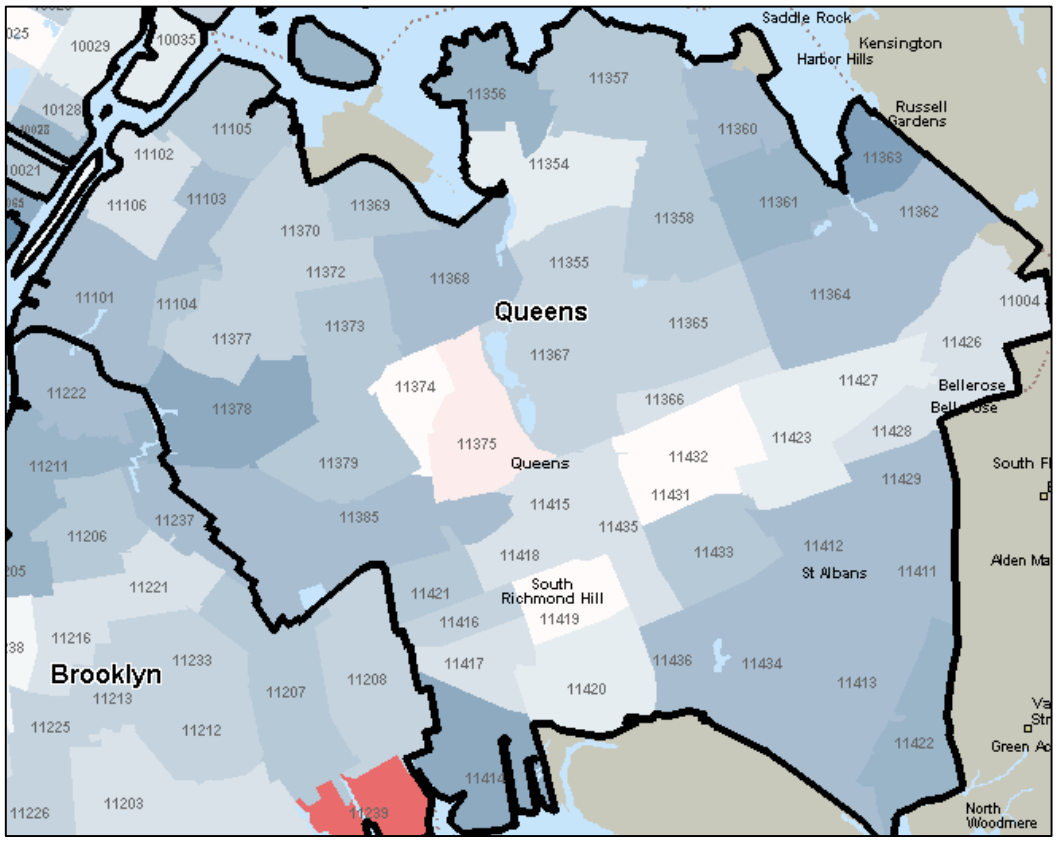
Disease Prevalence by ZIP Code

30%

16%

2%

Percent of Medicaid Beneficiaries with a Diabetes Condition - Queens



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code

30%

16%

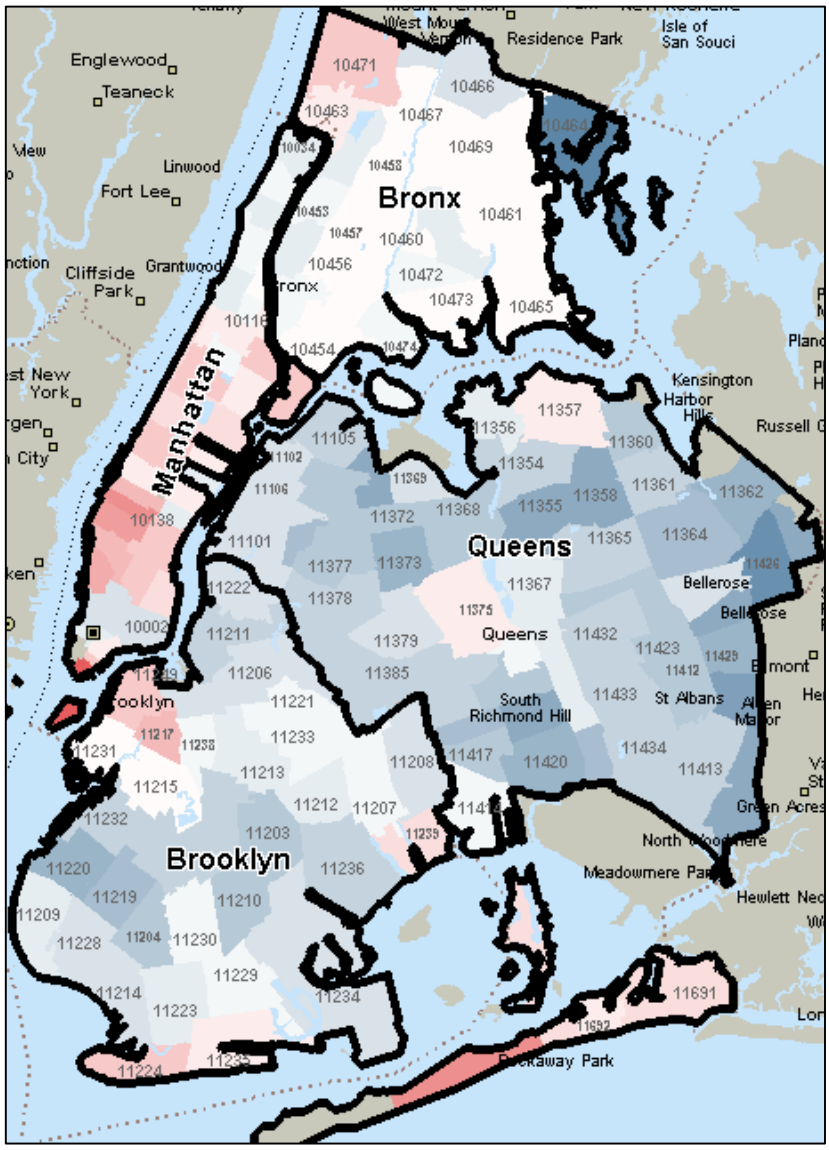
2%

Exhibit 5K: Medicaid Beneficiaries with Mental Health Conditions, by Neighborhood, 2012

Borough and Neighborhood	Total Beneficiaries	Beneficiaries with Condition	Percent with Condition
Bronx	**821,337**	**186,422**	**22.7%**
Bronx Park and Fordham	159,182	35,391	22.2%
Central Bronx	158,601	36,261	22.9%
High Bridge and Morrisania	157,071	34,554	22.0%
Hunts Point and Mott Haven	102,165	25,468	24.9%
Kingsbridge and Riverdale	29,957	8,773	29.3%
Northeast Bronx	75,167	15,606	20.8%
Southeast Bronx	139,194	30,369	21.8%
Brooklyn	**1,232,464**	**215,285**	**17.5%**
Borough Park	195,830	26,636	13.6%
Bushwick and Williamsburg	124,100	23,500	18.9%
Canarsie and Flatlands	68,906	11,517	16.7%
Central Brooklyn	167,161	32,489	19.4%
East New York and New Lots	117,543	22,781	19.4%
Flatbush	135,688	17,345	12.8%
Greenpoint	49,127	7,198	14.7%
Northwest Brooklyn	58,124	15,449	26.6%
Southern Brooklyn	136,160	34,413	25.3%
Southwest Brooklyn	80,271	13,848	17.3%
Sunset Park	99,554	10,109	10.2%
Manhattan	**480,026**	**124,656**	**26.0%**
Central Harlem	80,466	19,766	24.6%
Chelsea and Clinton	31,285	14,682	46.9%
East Harlem	65,008	20,213	31.1%
Gramercy Park and Murray Hill	9,833	3,374	34.3%
Greenwich Village and Soho	14,273	2,986	20.9%
Inwood and Washington Heights	143,590	29,275	20.4%
Lower East Side	81,093	16,692	20.6%
Lower Manhattan	11,776	3,686	31.3%
Upper East Side	11,322	3,225	28.5%
Upper West Side	31,380	10,757	34.3%
Queens	**913,581**	**128,682**	**14.1%**
Central Queens	34,868	5,391	15.5%
Jamaica	134,200	19,275	14.4%
North Queens	116,769	13,916	11.9%
Northeast Queens	19,922	2,069	10.4%
Northwest Queens	71,850	9,996	13.9%
Rockaways	52,664	17,134	32.5%
Southeast Queens	58,699	6,103	10.4%
Southwest Queens	118,100	13,714	11.6%
West Central Queens	76,645	15,319	20.0%
West Queens	229,864	25,765	11.2%

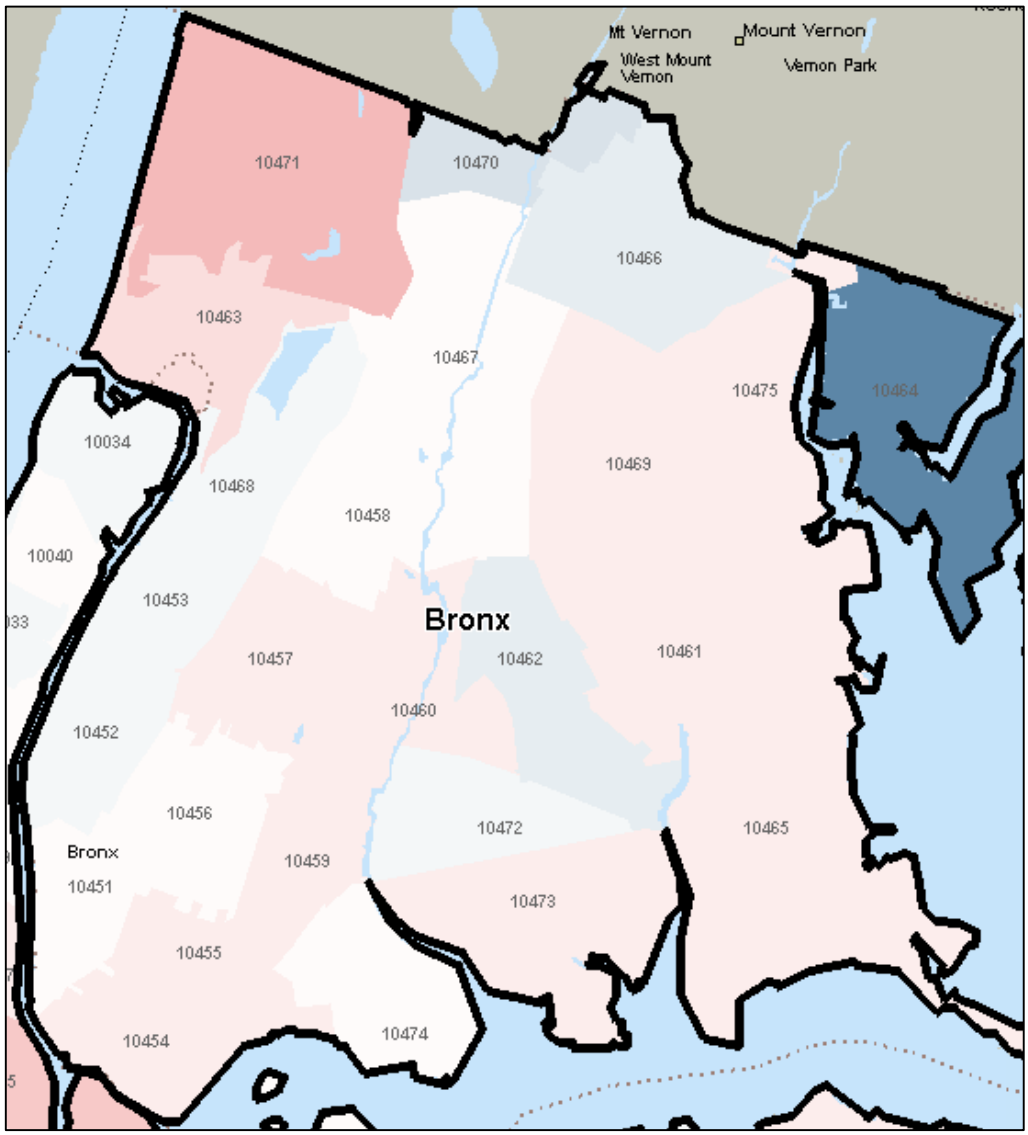
Note: Zip codes with under 20 unique beneficiaries were not included in the dataset.
Source: New York State Department of Health, Open Health Data

Exhibit 5L: Percent of Medicaid Beneficiaries with a Mental Health Condition



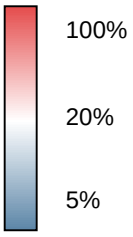
Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Percent of Medicaid Beneficiaries with a Mental Health Condition - Bronx

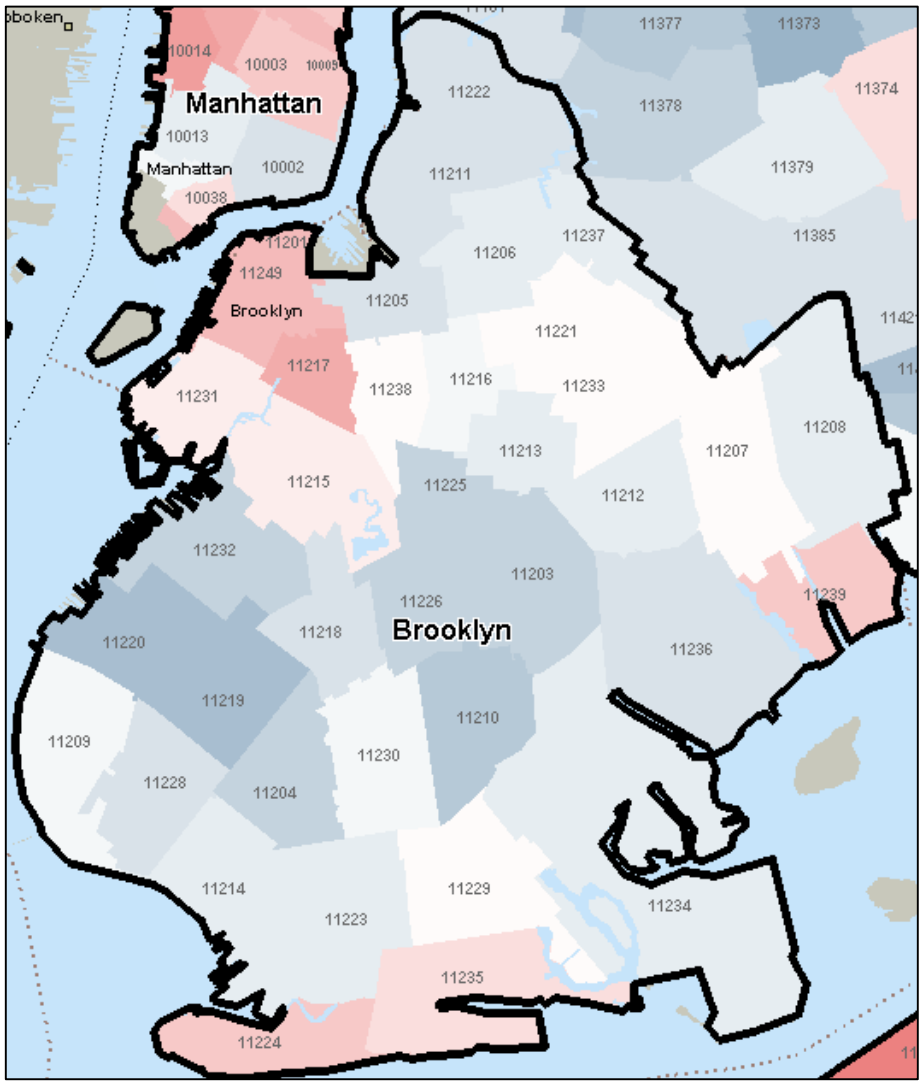


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code



Percent of Medicaid Beneficiaries with a Mental Health Condition - Brooklyn



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

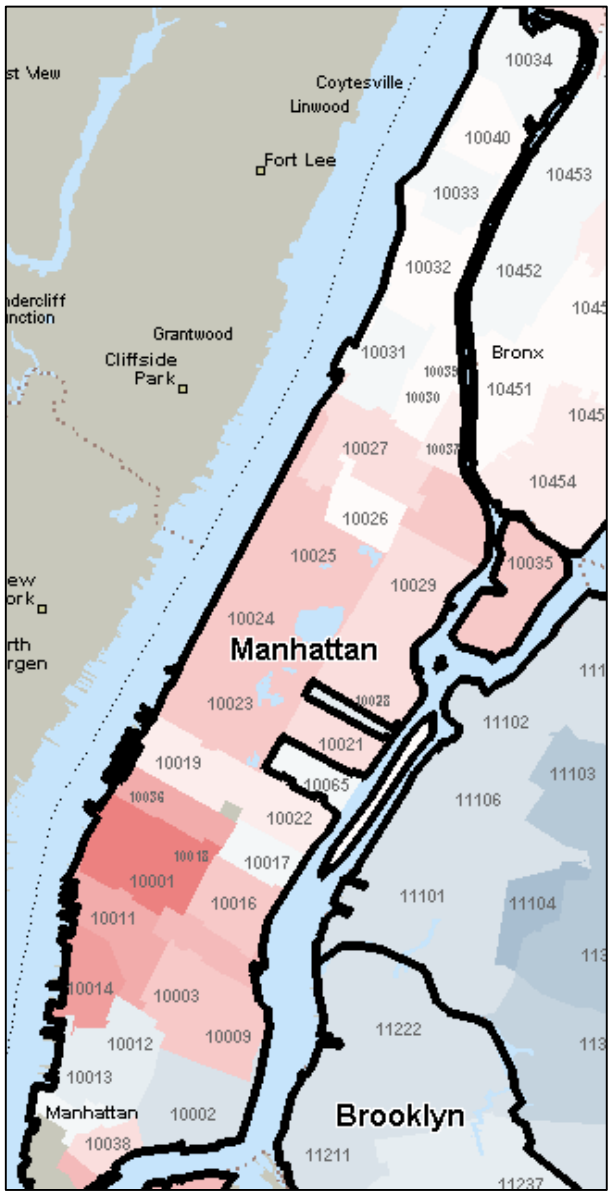
Disease Prevalence by ZIP Code

100%

20%

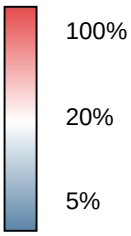
5%

Percent of Medicaid Beneficiaries with a Mental Health Condition - Manhattan

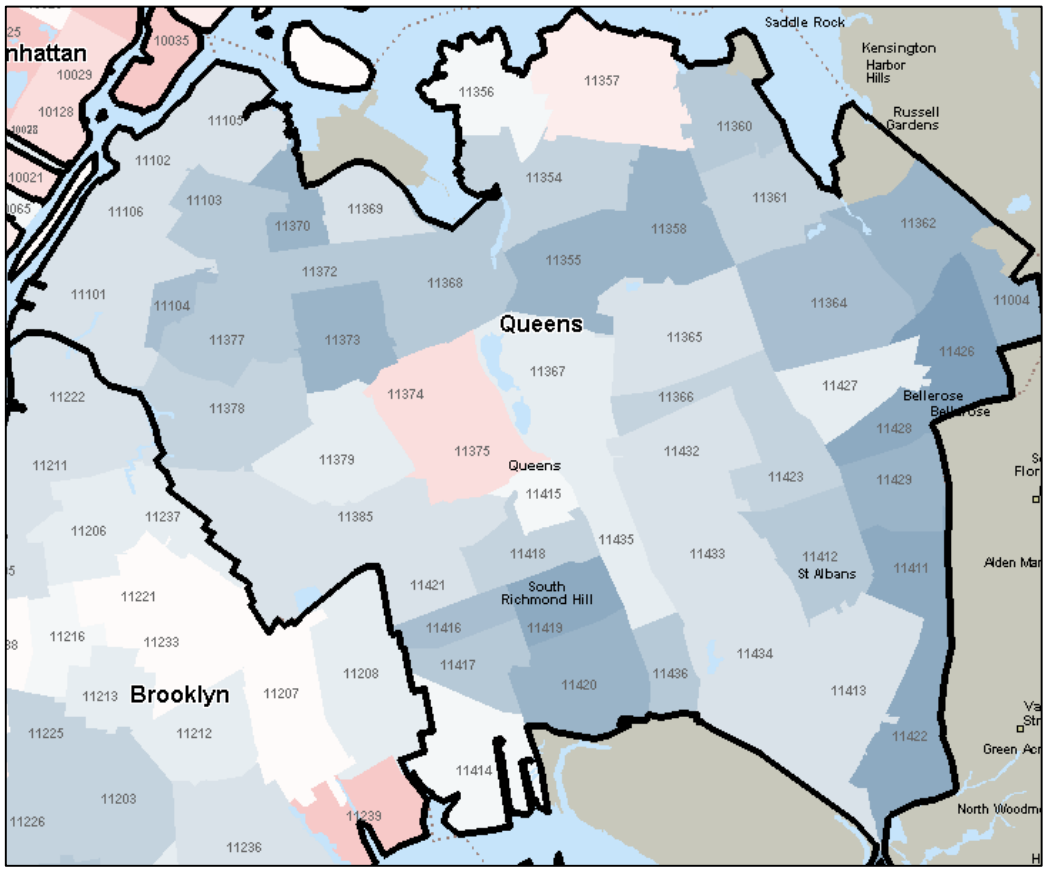


Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code



Percent of Medicaid Beneficiaries with a Mental Health Condition - Queens



Source: New York State Department of Health, Open Health Data and Microsoft MapPoint 2010

Disease Prevalence by ZIP Code

100%

20%

5%

Appendix 6: Domain 3 Metrics[126]

Exhibit 6A: Behavioral Health - Percentage of Patients with Recommended Care, 2011-2012

Metric	Bronx	Brooklyn	Manhattan	Queens	New York State
Antidepressant Medication Management	46%	47%	48%	49%	**50%**
Diabetes Monitoring for People with Diabetes and Schizophrenia	69%	71%	73%	66%	**68%**
Diabetes Screening for People with Schizophrenia/BPD Using Antipsychotic Med	83%	78%	80%	80%	**79%**
Cardiovascular Monitoring for People with CVD and Schizophrenia *	-	-	-	-	** **79%**
Follow-up care for Children Prescribed ADHD Medications	64%	66%	67%	62%	**56%**
Follow-up after hospitalization for Mental Illness	56%	50%	48%	50%	**55%**
Screening for Clinical Depression and Follow-up (CAHPS Q10d: Doctor talked about when you felt sad or depressed) ***	-	-	-	-	****41%
Adherence to Antipsychotic Medications for People with Schizophrenia	59%	60%	61%	71%	**64%**
Initiation and Engagement of Alcohol and other Drug Dependence Treatment (IET)	82%	75%	79%	74%	**78%**

** Note: National figure for Medicaid HMOs, 2013.
**** Note: Used 2013 CAHPS survey as alternate measure. The percentage for New York City was 36.5 percent in 2013.

Sources:
New York State Department of Health, Office of Quality and Patient Safety – Medicaid Redesign and Evaluation of Quality Measures and Population Indicators Report, accessed 2014;
"*" National Committee for Quality Assurance, accessed 2014 from:
http://www.ncqa.org/ReportCards/HealthPlans/StateofHealthCareQuality/2014TableofContents/Schizophrenia.aspx;
"***" New York State Department of Health, Medicaid Managed Care Program, CAHPS Adult Medicaid Survey, *Continuous Quality Improvement Report*, Feb. 2014

Exhibit 6B below displays additional detail for three metrics in Exhibit 6A, by borough and neighborhood.

[126] Data on some Domain 3 metrics in the Guidance document, including select indicators of behavioral health and the palliative care group, were not available from the state or other identified publicly available sources at the time this report was produced.

Exhibit 6B: Percentage of Patients Receiving Mental Health and Substance Abuse Care, by Neighborhood, 2012

Borough and Neighborhood	Follow-up After Hospitalization for Mental Illness within 30 Days	Follow-Up Care for Children Prescribed ADHD Medication-Initiation Phase	Initiation of Alcohol and Other Drug Dependence Treatment
Bronx	56.4%	62. 9%	81.6%
Bronx Park and Fordham	59.2%	64.8%	79.2%
Central Bronx	57.8%	63.6%	81.9%
High Bridge and Morrisania	54.4%	65.6%	83.5%
Hunts Point and Mott Haven	52.0%	60.2%	85.0%
Kingsbridge and Riverdale	62.2%	60.8%	81.1%
Northeast Bronx	60.5%	57.1%	79.8%
Southeast Bronx	52.9%	66.1%	80.9%
Brooklyn	50.4%	64.5%	75.7%
Borough Park	57.4%	61.7%	75.9%
Bushwick and Williamsburg	49.2%	69.0%	74.8%
Canarsie and Flatlands	51.9%	54.6%	76.8%
Central Brooklyn	46.4%	69.4%	76.3%
East New York and New Lots	50.5%	68.2%	73.8%
Flatbush	45.5%	59.5%	73.9%
Greenpoint	49.5%	55.0%	70.9%
Northwest Brooklyn	45.3%	51.6%	78.4%
Southern Brooklyn	53.4%	67.1%	72.9%
Southwest Brooklyn	49.5%	61.8%	75.7%
Sunset Park	64.6%	87.9%	82.5%
Manhattan	48.4%	67.2%	77.5%
Central Harlem	49.6%	67.5%	82.2%
Chelsea and Clinton	45.7%	-	79.2%
East Harlem	44.6%	71.5%	81.1%
Gramercy Park and Murray Hill	49.8%	-	68.4%
Greenwich Village and Soho	43.4%	-	76.5%
Inwood and Washington	52.3%	67.9%	75.3%
Lower East Side	52.7%	67.1%	76.4%
Lower Manhattan	46.5%	54.7%	78.3%
Upper East Side	45.2%	-	73.1%
Upper West Side	48.8%	-	81.6%
Queens	51.7%	63.0%	73.6%
Central Queens	65.8%	-	70.2%
Jamaica	45.5%	58.4%	75.9%
North Queens	59.2%	72.7%	74.2%
Northeast Queens	-	-	77.9%
Northwest Queens	50.5%	71.0%	72.1%
Rockaways	46.4%	68.8%	75.5%
Southeast Queens	39.3%	-	71.4%
Southwest Queens	58.0%	57.0%	74.9%
West Central Queens	51.4%	62.2%	76.0%
West Queens	57.0%	64.5%	70.9%

Source: New York State Department of Health, Health Data NY, accessed 2014

Exhibit 6C: Cardiovascular Disease – PQIs #7 and #13, and Percentage of Patients with Recommended Care

Metric	New York City	New York State
PQI #7 (Hypertension)	See Exhibit 49	101.7 (per 100,000)
PQI #13 (Angina without procedure)	See Exhibit 49	24.7 (per 100,000)
Cholesterol Management for Patients with CV Conditions[127]	N.A.	N.A.
Controlling High Blood Pressure (Provider responsible for medical record reporting)	-	63%
Aspirin Discussion and Use * (CAHPS Q56: Take aspirin daily or every other day)	24.8%	28.1%
Aspirin Discussion and Use * (CAHPS Q58: Doctor discussed risks and benefits of aspirin)	40.0%	39.3%
Medical Assistance with Smoking and Tobacco Use Cessation * (CAHPS Q54: Doctor discussed cessation medications)	57.2%	55.6%
Medical Assistance with Smoking and Tobacco Use Cessation * (CAHPS Q55: Doctor discussed cessation strategies)	48.6%	46.5%
Flu Shots for Adults Age 50-64 * (CAHPS Q51: Have had flu shot, age 50+)	45.6%	44.0%
Health Literacy * (CAHPS Q33: Doctor gave easy to understand instructions)	90.6%	90.8%
Health Literacy * (CAHPS Q34: Doctor explained what to do if illness got worse)	84.3%	85.4%

Sources:
New York State Department of Health, Office of Quality and Patient Safety – Medicaid Redesign and Evaluation of Quality Measures and Population Indicators Report, accessed 2014;
"*" New York State Department of Health, Medicaid Managed Care Program, CAHPS Adult Medicaid Survey, *Continuous Quality Improvement Report*, Feb. 2014

[127] "Cholesterol Management for Patients with Cardiovascular Conditions" was retired by NCQA as a measure in July 2014, "to bring HEDIS up to date with current evidence." See http://www.ncqa.org/Newsroom/NewsArchive/2014NewsArchive/NewsReleaseJuly12014.aspx.

Exhibit 6D: Diabetes Mellitus – PQI #1, and Percentage of Patients with Recommended Care

Metric	New York City	New York State
PQI #1 (DM Short term complications)	See Exhibit 49	116.4 (per 100,000)
Comprehensive Diabetes Screening (HbA1c, lipid profile, dilated eye exam, nephropathy) *	-	51%
Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8%) *	-	58%
Comprehensive Diabetes Care – LDL-c control (<100mg/dL) *	-	47%
Medical Assistance with Smoking and Tobacco Use Cessation ** (CAHPS Q54: Doctor discussed cessation medications)	57.2%	55.6%
Medical Assistance with Smoking and Tobacco Use Cessation ** (CAHPS Q55: Doctor discussed cessation strategies)	48.6%	46.5%
Flu Shots Adults 50-64 ** (CAHPS Q51: Have had flu shot, age 50+)	45.6%	44.0%
Health Literacy ** (CAHPS Q33: Doctor gave easy to understand instructions)	90.6%	90.8%
Health Literacy ** (CAHPS Q34: Doctor explained what to do if illness got worse)	84.3%	85.4%

Sources:
New York State Department of Health, Health Data NY, accessed 2014;
"*" NYSDOH, Office of Quality and Patient Safety – Medicaid Redesign and Evaluation of Quality Measures and Population Indicators Report, accessed 2014;
"**" New York State Department of Health, Medicaid Managed Care Program, CAHPS Adult Medicaid Survey, *Continuous Quality Improvement Report*, Feb. 2014

Exhibit 6E displays additional detail by borough and neighborhood for three metrics in Exhibit 6D.

Exhibit 6E: Percentage of Patients Receiving Diabetes Care, by Neighborhood 2012

Borough and Neighborhood	Comprehensive Diabetes Care	Diabetes Monitoring for People With Diabetes and Schizophrenia	Diabetes Screening, People w/ Schizophrenia or Bipolar Disorder, Using Antipsychotic Meds
Bronx	**79.7%**	**67.8%**	**82.7%**
Bronx Park and Fordham	80.3%	76.9%	83.1%
Central Bronx	80.8%	70.8%	83.3%
High Bridge and Morrisania	78.8%	62.8%	84.1%
Hunts Point and Mott Haven	81.2%	72.3%	87.5%
Kingsbridge and Riverdale	69.4%	45.7%	67.4%
Northeast Bronx	79.3%	65.2%	82.1%
Southeast Bronx	81.8%	70.9%	84.2%
Brooklyn	**81.5%**	**69.4%**	**77.5%**
Borough Park	86.0%	75.7%	80.1%
Bushwick and Williamsburg	79.7%	73.7%	78.0%
Canarsie and Flatlands	81.7%	55.8%	77.9%
Central Brooklyn	77.0%	67.3%	76.6%
East New York and New Lots	79.4%	60.9%	78.5%
Flatbush	78.3%	67.2%	77.9%
Greenpoint	82.0%	-	71.0%
Northwest Brooklyn	79.2%	81.2%	76.2%
Southern Brooklyn	84.5%	65.4%	81.5%
Southwest Brooklyn	86.1%	-	73.5%
Sunset Park	86.5%	73.5%	74.8%
Manhattan	**80.1%**	**74.2%**	**79.4%**
Central Harlem	80.4%	65.9%	79.0%
Chelsea and Clinton	79.2%	77.9%	80.9%
East Harlem	78.9%	67.0%	83.6%
Gramercy Park and Murray Hill	82.5%	-	73.3%
Greenwich Village and Soho	85.3%	-	81.7%
Inwood and Washington Heights	84.1%	72.9%	77.5%
Lower East Side	81.8%	87.8%	82.5%
Lower Manhattan	80.0%	-	74.8%
Upper East Side	66.3%	-	-
Upper West Side	83.6%	81.3%	83.7%
Queens	**84.1%**	**66.2%**	**80.2%**
Central Queens	85.7%	-	87.3%
Jamaica	84.0%	76.7%	80.3%
North Queens	86.3%	60.7%	79. 7%
Northeast Queens	88.4%	-	-
Northwest Queens	84.1%	-	73.0%
Rockaways	73.6%	46.4%	85.6%
Southeast Queens	82.3%	62.9%	74.8%
Southwest Queens	84.2%	-	83.0%
West Central Queens	85.2%	-	77.1%
West Queens	86.8%	78.9%	79.9%

Source: New York State Department of Health, Health Data NY, accessed 2014

Exhibit 6F: Asthma – PQIs and Medication Management, 2011 - 2012

Metric	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
			Admission Rate per 100,000 Recipients			
All Adult Respiratory Conditions Composite	720	464	484	346	**510**	**500**
PQI # 15 (Asthma in Younger Adults)	218	122	161	78	**148**	**135**
PQI #05 (COPD and Asthma in Older Adults)	1,147	758	767	577	**822**	**814**
PDI #14 (Pediatric Asthma)	575	349	405	215	**388**	**319**
Asthma Medication Ratio	-	-	-	-	**-**	**55**
Medication Management for People with Asthma	-	-	-	-	**-**	**59%**

Source: New York State Department of Health, Office of Quality and Patient Safety – Clinical Metric Chart books, accessed 2014

Exhibit 6G: Asthma - Number of Avoidable Visits, 2011 - 2012

Metric	Bronx	Brooklyn	Manhattan	Queens
		Number of Avoidable Visits		
All Adult Respiratory Conditions Composite	8,540	7,469	4,149	3,813
PQI #15 (Asthma in Younger Adults)	1,446	924	519	388
PQI #05 (COPD and Asthma in Older Adults)	7,094	6,545	3,630	3,425
PDI #14 (Pediatric Asthma)	3,650	2,517	965	1,044

Source: New York State Department of Health, Office of Quality and Patient Safety – Clinical Metric Chart books, accessed 2014

Exhibit 6H: HIV/AIDS – Percentage of Patients with Recommended Care, 2012

Metric	Bronx	Brooklyn	Manhattan	Queens	New York City	New York State
HIV/AIDS Comprehensive Care: Engaged in Care	91%	89%	88%	88%	89%	89%
HIV/AIDS Comprehensive Care: Viral Load Monitoring	69%	66%	64%	66%	67%	66%
HIV/AIDS Comprehensive Care: Syphilis Screening	70%	74%	69%	68%	71%	68%
Cervical Cancer Screening	67%	70%	66%	71%	69%	67%
Chlamydia Screening	71%	70%	74%	69%	70%	66%
Medical Assistance with Smoking and Tobacco Use Cessation (CAHPS Q54: Doctor discussed medications) *	-	-	-	-	57.2%	55.6%
Medical Assistance with Smoking and Tobacco Use Cessation (CAHPS Q55: Doctor discussed strategies) *	-	-	-	-	48.6%	46.5%
Viral Load Suppression (always)[128]	60%	56%	60%	69%	61.2%	62.2%

Source: New York State Department of Health, Office of Quality and Patient Safety – Clinical Metric Chart books, accessed 2014; "*" New York State Department of Health, Medicaid Managed Care Program, CAHPS Adult Medicaid Survey, *Continuous Quality Improvement Report*, Feb. 2014

Exhibit 6I: Renal Health – Percentage of Patients with Recommended Care, 2011-2012

Metric	New York State
Comprehensive Diabetes screening (HbA1c, lipid profile, dilated eye exam, nephropathy)	51%
Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)	33%
Comprehensive diabetes care - LDL-c control (<100mg/dL)	44%
Annual Monitoring for Patients on Persistent Medications - ACE/ARB	92%
Controlling High Blood Pressure	63%
Flu vaccine, age 18-64 *	37%
Medical Assistance with Smoking and Tobacco Use Cessation ** (CAHPS Q54: Doctor discussed cessation medications)	55.6%
Medical Assistance with Smoking and Tobacco Use Cessation ** (CAHPS Q55: Doctor discussed cessation strategies)	46.5%

Source:
New York State Department of Health, Office of Quality and Patient Safety – Medicaid Redesign and Evaluation of Quality Measures and Population Indicators Report, accessed 2014;
"*" Centers for Disease Control and Prevention. FluVaxView for 2012-2013 flu season, accessed 2014 at http://www.cdc.gov/flu/fluvaxview/reports/reporti1213/trends/index.htm;
"**"New York State Department of Health, Medicaid Managed Care Program, CAHPS Adult Medicaid Survey, *Continuous Quality Improvement Report*, Feb. 2014

[128] New York State Department of Health, Health Data NY. See https://health.data.ny.gov/Health/HIV-Ambulatory-Care-Quality-of-Care-Performance-Re/bbkg-kmnd

Exhibit 6J: Perinatal Care – Percentage of Patients with Recommended Care

Metric	New York City	New York State
Percent of mothers who received postpartum checkup*	89.2%	90.1%
Percent of mothers who received prenatal care starting in the 1st – 3rd month*	70.4%	71.8%
Percent of mothers who received prenatal care starting in the 4th – 6th month*	30.5%	27.9%
Percent of mothers who received late or no prenatal care**	6.9%	5.4%
Percentage of children with five or more well care visits in the first 15 months	83.0%	85.0%
Childhood immunization	-	74.0%
Lead screening in children	-	89.0%
PC-01 early elective deliveries**	32.7%	34.3%

Sources: QARR, 2012 – accessed 2014; "*" State Vital Statistics, 2012 – accessed 2014; "**" PRAMS, 2011– accessed 2014

Appendix 7: Domain 4 Metrics

Exhibit 7A: Improve Health Status and Reduce Health Disparities Metrics

Metric	Bronx	Brooklyn	Manhattan	Queens	New York State	2013-2017 PA Goals
Percentage of premature death (before age 65)	33.9%	29.5%	23.1%	24.4%	23.9%	**21.8%**
*Ratio of Black non-Hispanics to White non-Hispanics	2.5	2.1	1.9	2.1	2.0	**1.9**
*Ratio of Hispanics to White non-Hispanics	2.4	2.0	1.7	2.3	2.0	**1.9**
Age-adjusted preventable hospitalizations rate per 10,000 -Aged 18+ years	172.0	133.3	129.5	126.5	135.6	**133.3**
*Ratio of Black non-Hispanics to White non-Hispanics	1.8	2.1	4.0	1.7	2.1	**1.9**
*Ratio of Hispanics to White non-Hispanics	1.4	1.6	2.6	1.0	1.5	**1.4**
Percentage of adults with health insurance - Aged 18-64 years	78.4%	80.1%	85.9%	75.1%	83.7%	**100.0%**
Age-adjusted percentage of adults who have a regular health care provider- Aged 18+ years	81.6%	83.9%	83.5%	85.9%	83.0%	**90.8%**

*Indicates ratio/rate is associated with the previous metric.
Source: New York State Department of Health 2012, NY Prevention Agenda 2013-2017

Exhibit 7B: Prevent Chronic Disease Metrics

Metric	Bronx	Brooklyn	Manhattan	Queens	New York State	2013-2017 PA Goals
Percentage of Adults who are obese	29.3%	25.6%	16.0%	23.0%	24.0%	**23.2%**
Percentage of children and adolescents who are obese	23.5%	21.7%	20.1%	21.1%	20.7%	**19.7%**
Percentage of cigarette smoking among adults	18.1%	16.1%	13.0%	13.0%	17.0%	**15.0%**
Percentage of adults who receive a colorectal cancer screening based on the most recent guidelines- Aged 50-75	N/A	N/A	N/A	N/A	67.3%	**71.4%**
Asthma emergency department visit rate per 10,000	260.2	143.9	127.8	81.1	88.6	**75.1**
Asthma emergency department visit rate per 10,000- Aged 0-4 years	642.5	297.3	342.2	229.9	225.1	**196.5**
Age-adjusted heart attack hospitalization rate per 10,000	14.6	15.9	10.1	13.3	15.1	**14.0**
Rate of hospitalizations for short-term complications of diabetes per 10,000- Aged 6-17 years	5.0	3.7	3.0	2.3	3.0	**3.1**
Rate of hospitalizations for short-term complications of diabetes per 10,000- Aged 18+	12.0	7.7	5.2	5.1	6.1	**4.9**

Source: New York State Department of Health 2012, NY Prevention Agenda 2013-2017

Exhibit 7C: Prevent HIV/STDs Metrics

Metric	Bronx	Brooklyn	Manhattan	Queens	New York State	2013-2017 PA Goals
Newly diagnosed HIV case rate per 100,000	43.1	33.2	48.5	22.6	18.3	**14.7**
*Difference in rates (Black and White) of new HIV diagnoses	54.2	55.3	76.2	32.1	46.7	**45.7**
*Difference in rates (Hispanics and White) of new HIV diagnoses	23.8	22.9	26.4	21.0	24.2	**22.3**
Gonorrhea case rate per 100,000 women-Aged 15-44 years	513.6	314.5	208.8	174.0	235.8	**183.4**
Gonorrhea case rate per 100,000 men-Aged 15-44 years	584.7	422.0	673.3	266.9	284.1	**199.5**
Chlamydia case rate per 100,000 women-Aged 15-44 years	3,508.2	2,139.3	1,535.5	1,590.9	1,625.1	**1,458.0**
Primary and secondary syphilis case rate per 100,000 males	25.8	21.2	49.1	14.0	12.4	**10.1**
Primary and secondary syphilis case rate per 100,000 females	0.9	0.7	0.6	0.7	0.5	**0.4**

*Indicates ratio/rate is associated with the previous metric.
Source: New York State Department of Health 2012, NY Prevention Agenda 2013-2017

Exhibit 7D: Promote Health Women, Infants, and Children Metrics

Metric	Bronx	Brooklyn	Manhattan	Queens	New York State	2013-2017 PA Goals
Percentage of preterm births	12.2%	10.9%	9.9%	10.4%	10.8%	**10.2%**
*Ratio of Black non-Hispanics to White non-Hispanics	1.4	2.1	1.7	1.7	1.6	**1.4**
*Ratio of Hispanics to White non-Hispanics	1.2	1.6	1.3	1.4	1.3	**1.1**
*Ratio of Medicaid births to non-Medicaid births	1.0	1.1	1.3	1.0	1.1	**1.0**
Percentage of infants exclusively breastfed in the hospital	27.2%	33.9%	43.3%	25.0%	40.6%	**48.1%**
*Ratio of Black non-Hispanics to White non-Hispanics	0.7	0.5	0.6	0.7	0.5	**0.6**
*Ratio of Hispanics to White non-Hispanics	0.6	0.5	0.6	0.6	0.6	**0.6**
*Ratio of Medicaid births to non-Medicaid births	0.7	0.5	0.5	0.8	0.6	**0.7**
Maternal mortality rate per 100,000 births	24.5	28.6	13.7	20.8	21.7	**21.0**
Percentage of children with any kind of health insurance-Aged under 19 years	95.5%	95.7%	95.8%	94.2%	95.5%	**100.0%**
*Ratio of low-income children to non-low income children	N/A	N/A	N/A	N/A	N/A	**2.2**
Adolescent pregnancy rate per 1,000 females-Aged 15-17 years	50.8	32.2	37.6	26.4	22.6	**25.6**
*Ratio of Black non-Hispanics to White non-Hispanics	2.7	9.4	9.1	5.3	5.4	**4.9**
*Ratio of Hispanics to White non-Hispanics	2.4	8.7	5.8	4.9	4.5	**4.1**
Percentage of unintended pregnancy among live births	33.5%	22.5%	17.5%	25.9%	26.2%	**23.8%**
*Ratio of Black non-Hispanics to White non-Hispanics	2.1	4.5	4.6	2.8	2.2	**1.9**
*Ratio of Hispanics to White non-Hispanics	1.9	3.5	3.7	2.1	1.7	**1.4**
*Ratio of Medicaid births to non-Medicaid births	1.3	1.7	3.1	1.5	1.7	**1.5**
Percentage of women with health coverage-Aged 18-64 years	83.0%	84.0%	88.0%	78.8%	86.4%	**100.0%**
Percentage of live births that occur within 24 months of a previous pregnancy	15.7%	16.9%	13.7%	14.9%	18.5%	**17.0%**

*Indicates ratio/rate is associated with the previous metric.
Source: New York State Department of Health 2012, NY Prevention Agenda 2013-2017

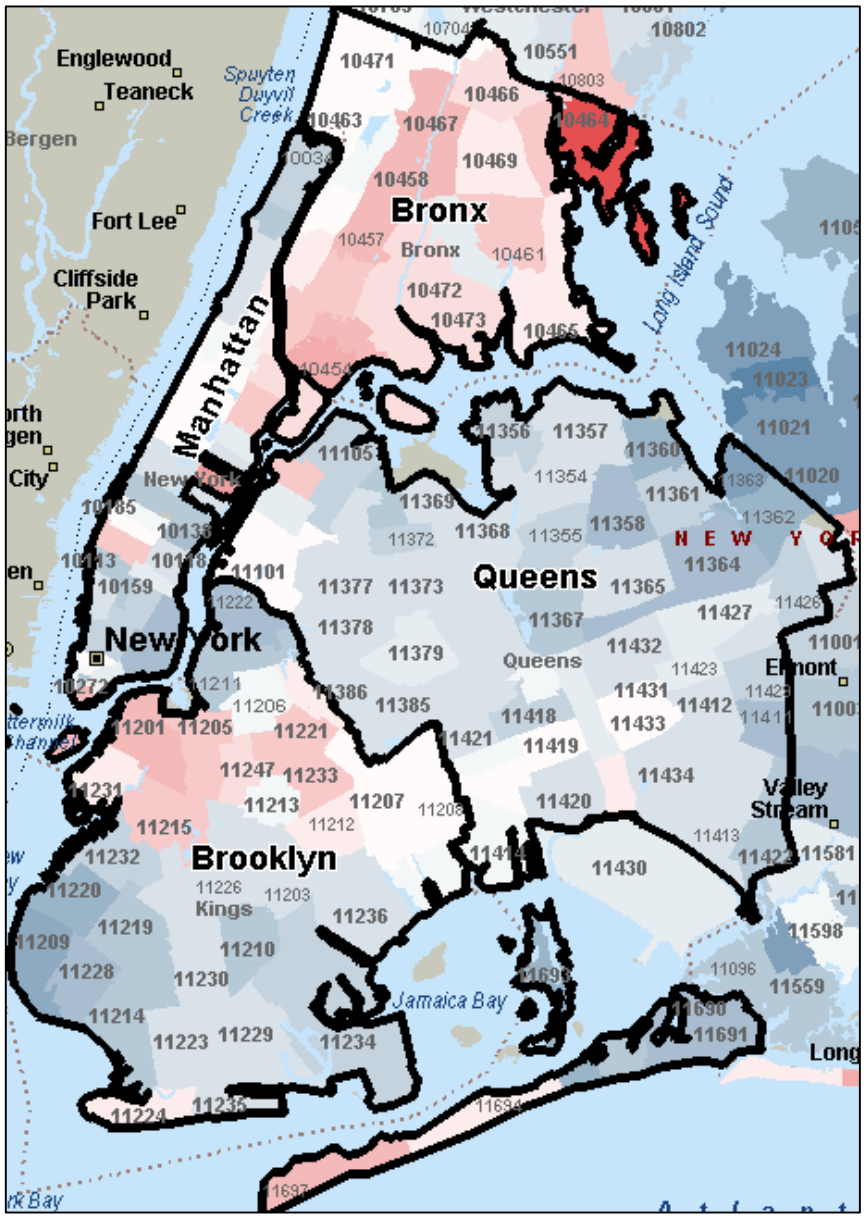
Exhibit 7E: Promote Mental Health and Prevention of Substance Abuse

Metric	Bronx	Brooklyn	Manhattan	Queens	New York State	2013-2017 PA Goals
Age-adjusted percentage of adults with poor mental health for 14 or more days in the last month	9.1%	7.4%	8.9%	7.2%	10.2%	**10.1**%
Age-adjusted percentage of adults binge drinking during the past month	11.4%	11.5%	17.3%	11.5%	18.1%	**18.4**%
Age-adjusted suicide death rate per 100,000	5.4	4.6	6.9	6.1	7.8	**5.9**

Source: New York State Department of Health 2012, NY Prevention Agenda 2013-2017

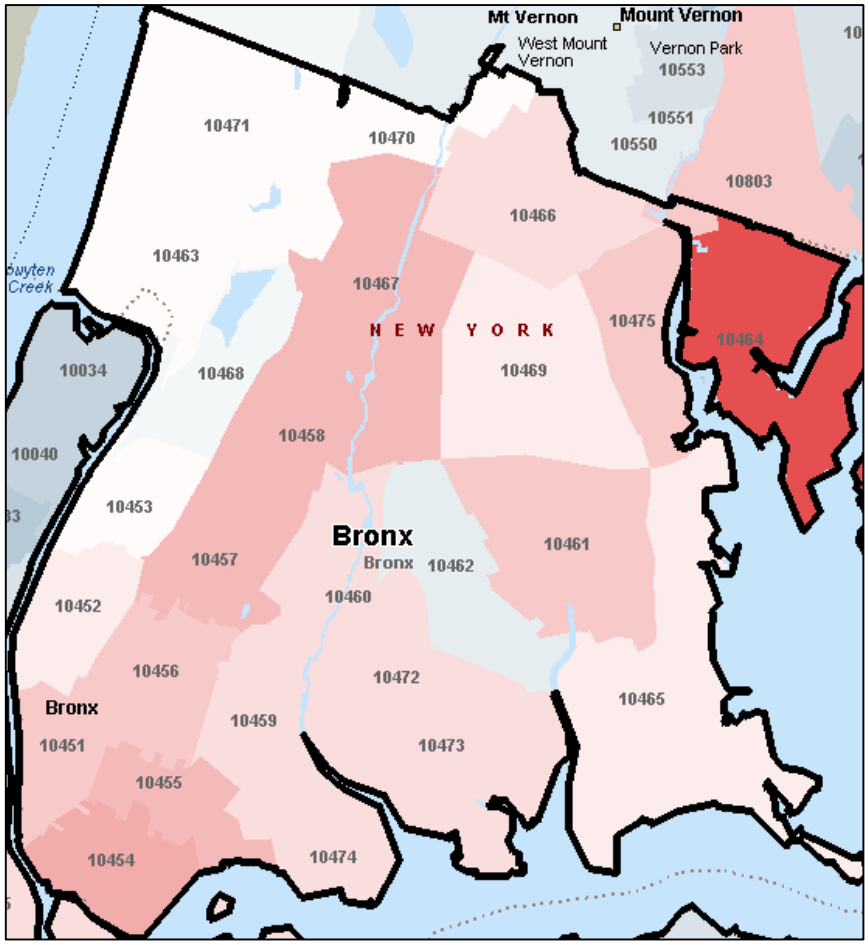
Appendix 8: Additional Prevention Quality Indicator (PQI) Maps

Exhibit 8A: PQI Overall Composite

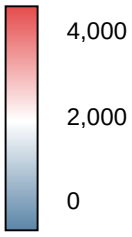


Risk Adjusted Rate per 100,000 people

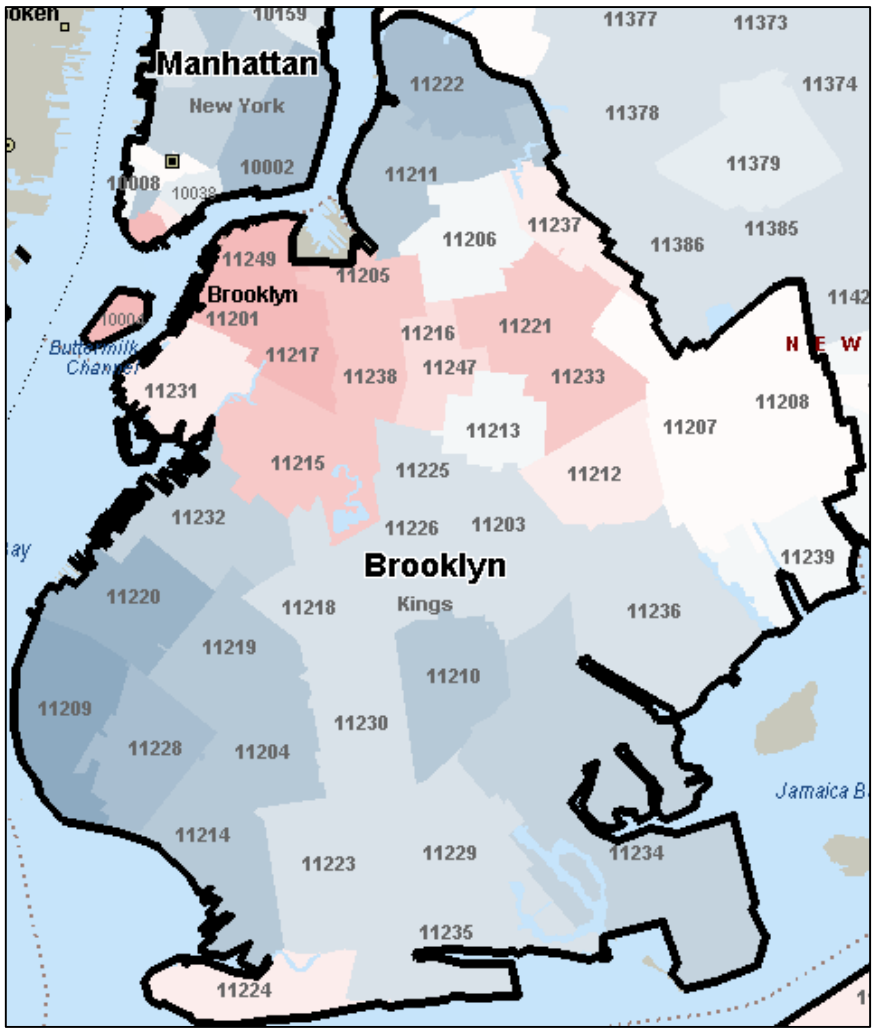
PQI Overall Composite – Bronx



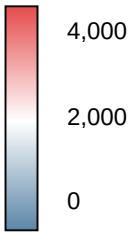
Risk Adjusted Rate per 100,000 people



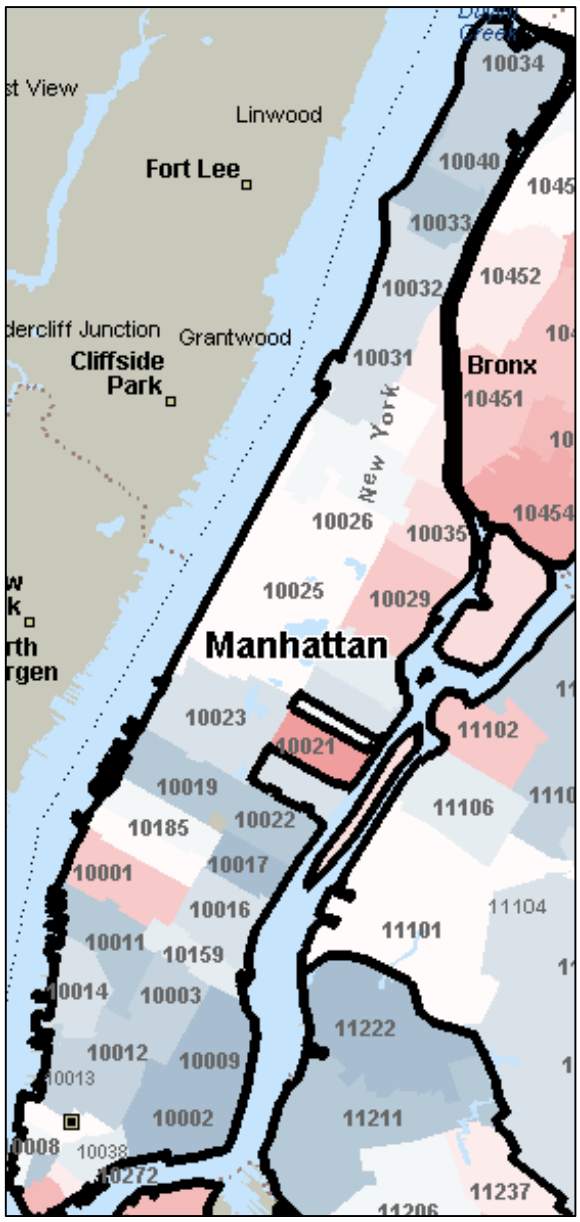
PQI Overall Composite – Brooklyn



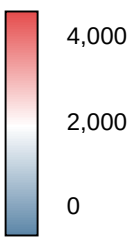
Risk Adjusted Rate per 100,000 people



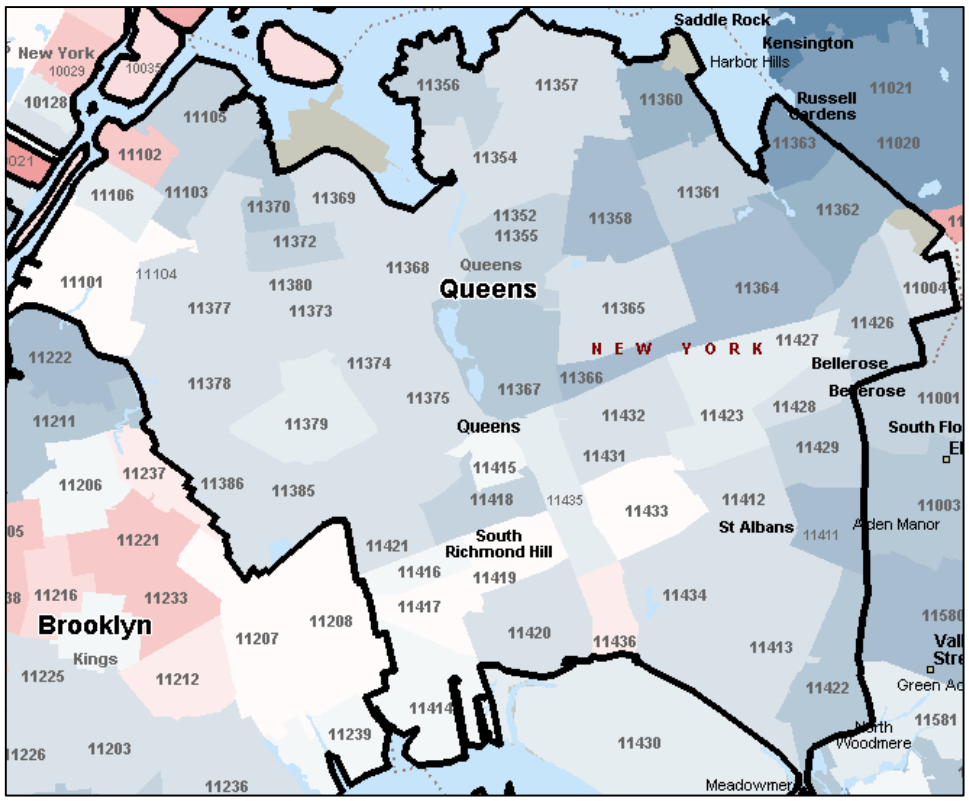
PQI Overall Composite – Manhattan



Risk Adjusted Rate per 100,000 people



PQI Overall Composite – Queens



Risk Adjusted Rate per 100,000 people

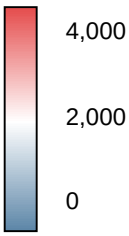
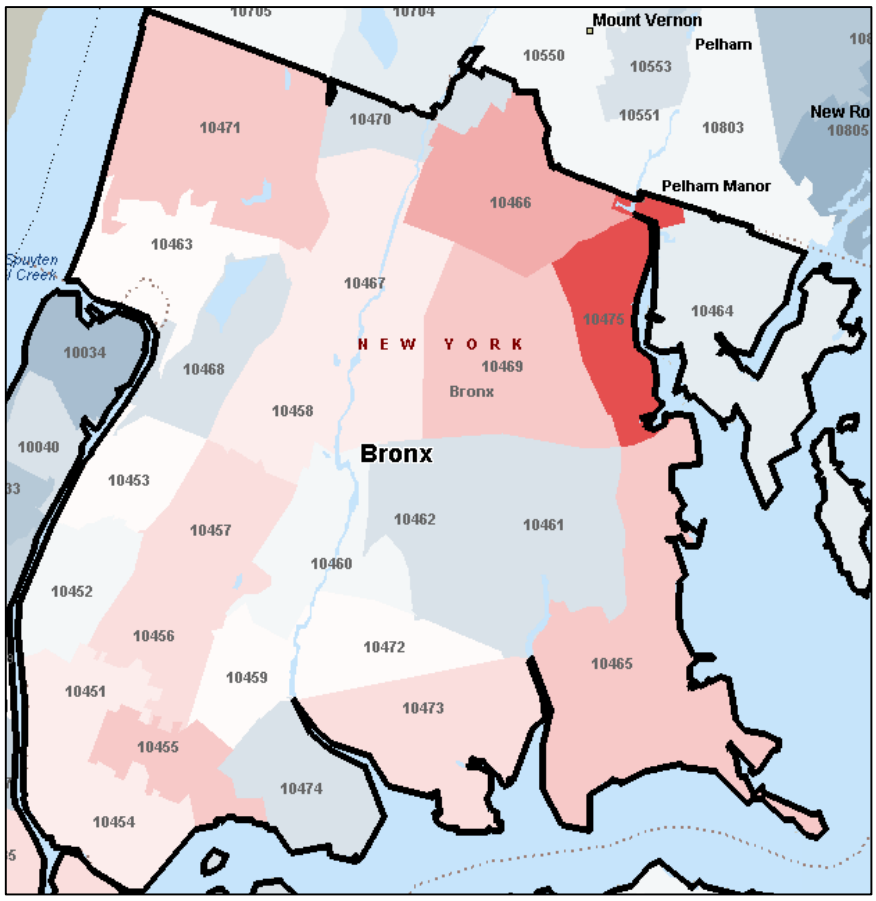
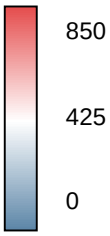


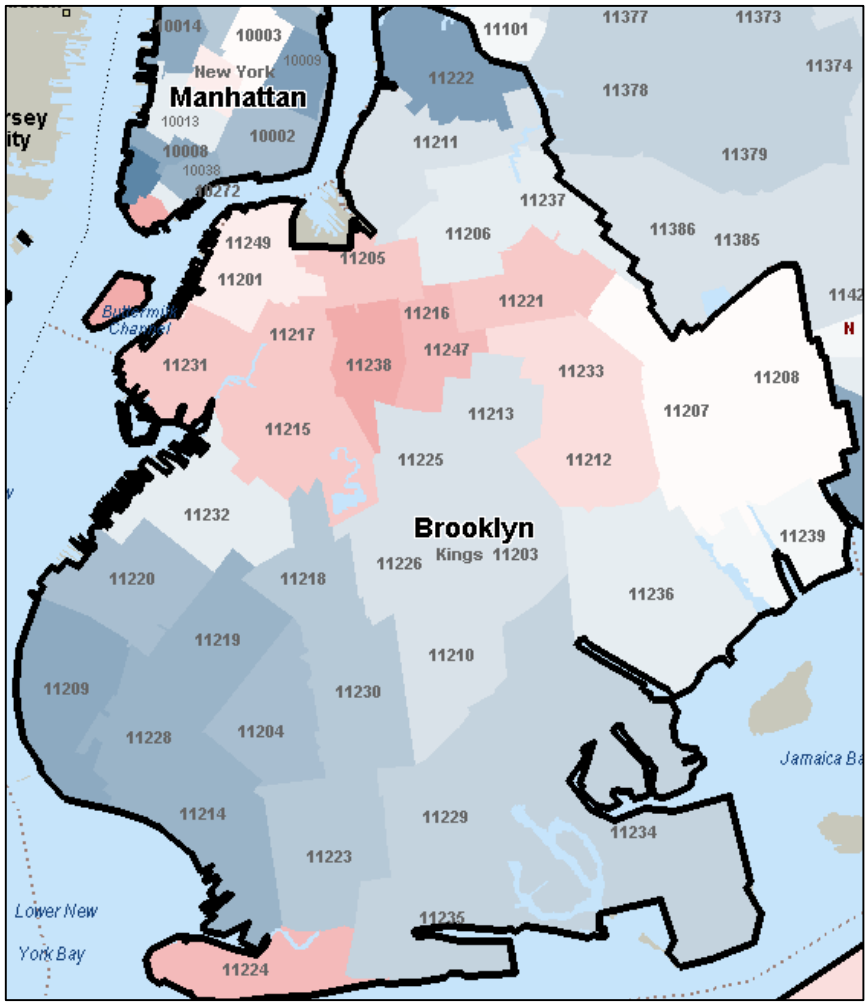
Exhibit 8B: PQI Diabetes Composite – Bronx



Risk Adjusted Rate per 100,000 people

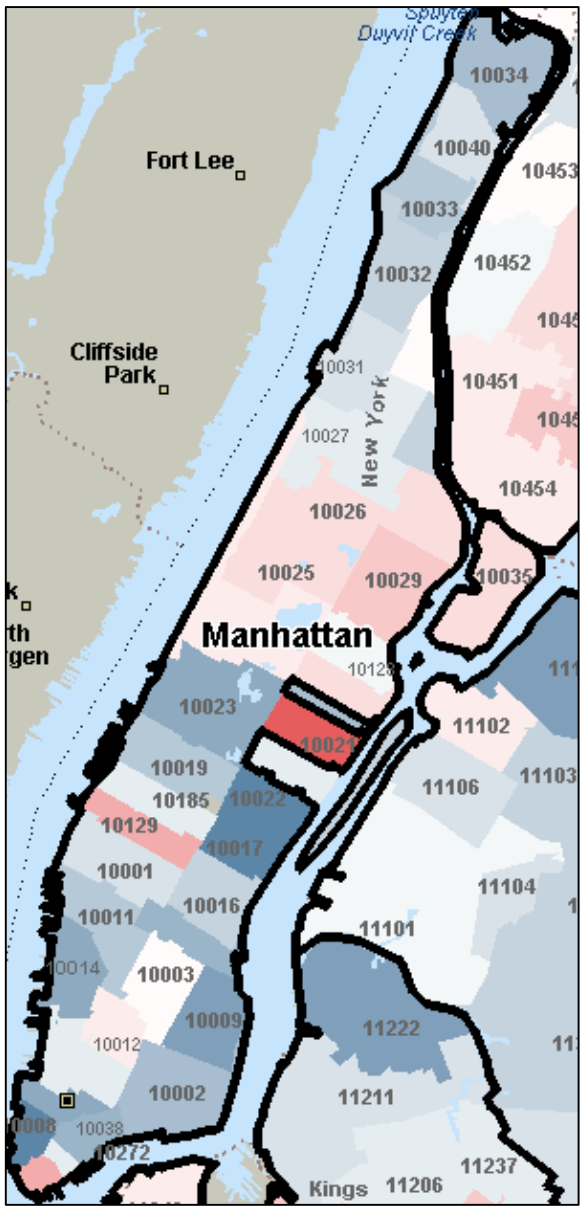


PQI Diabetes Composite – Brooklyn

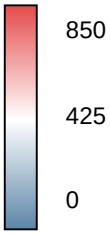


Risk Adjusted Rate per 100,000 people

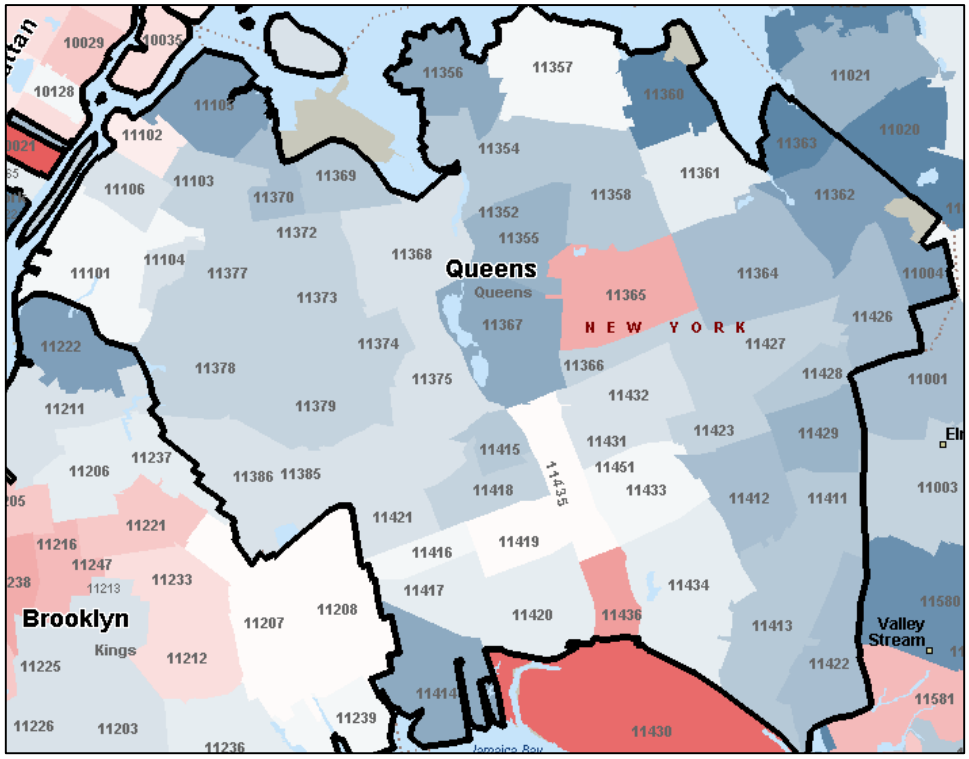
PQI Diabetes Composite – Manhattan



Risk Adjusted Rate per 100,000 people



PQI Diabetes Composite – Queens



Risk Adjusted Rate per 100,000 people

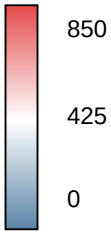
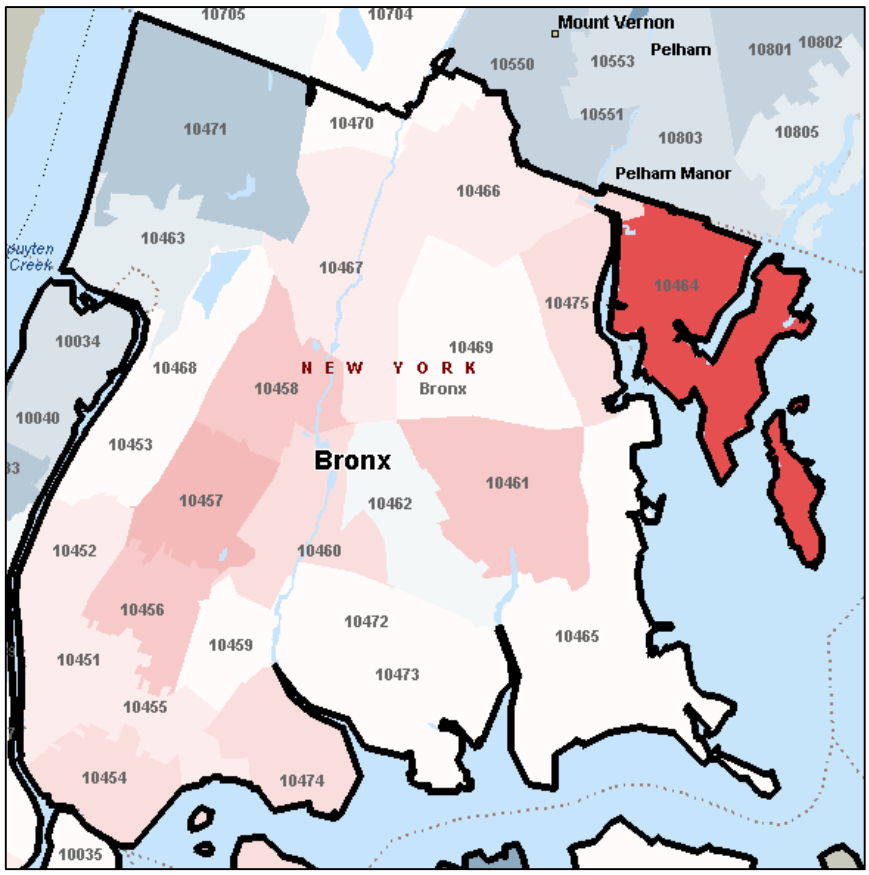


Exhibit 8C: PQI Circulatory Composite – Bronx



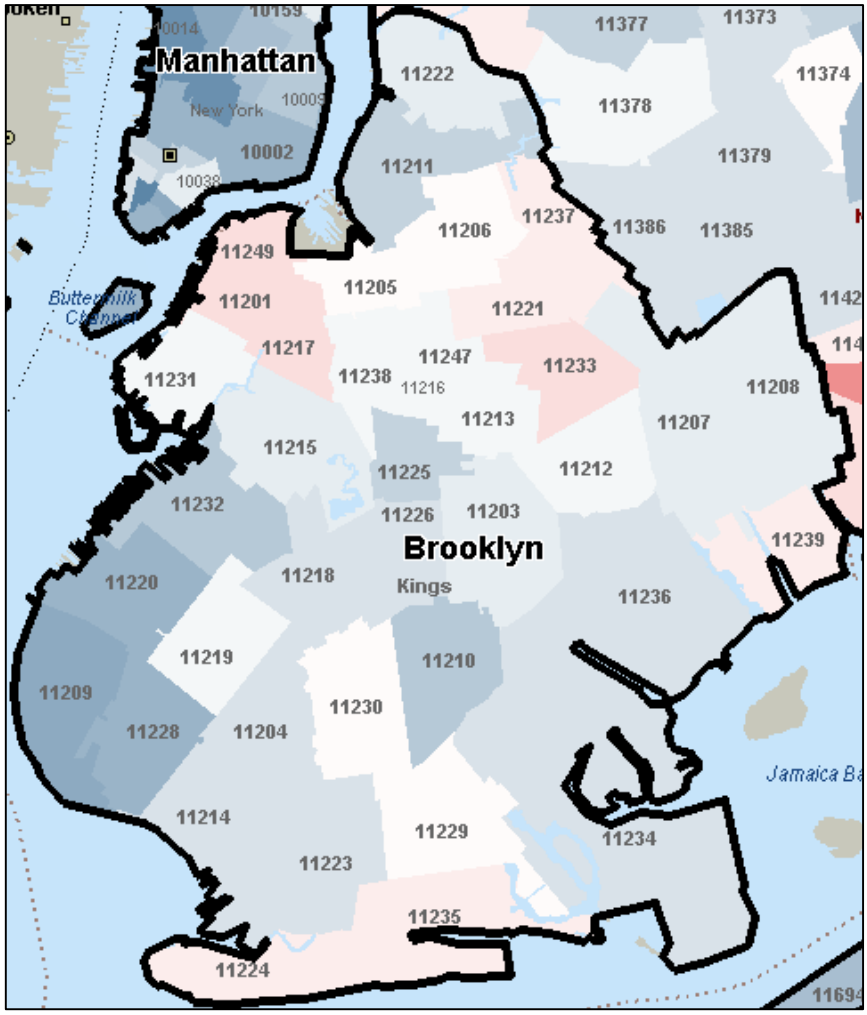
Risk Adjusted Rate per 100,000 people

1,000

500

0

PQI Circulatory Composite – Brooklyn



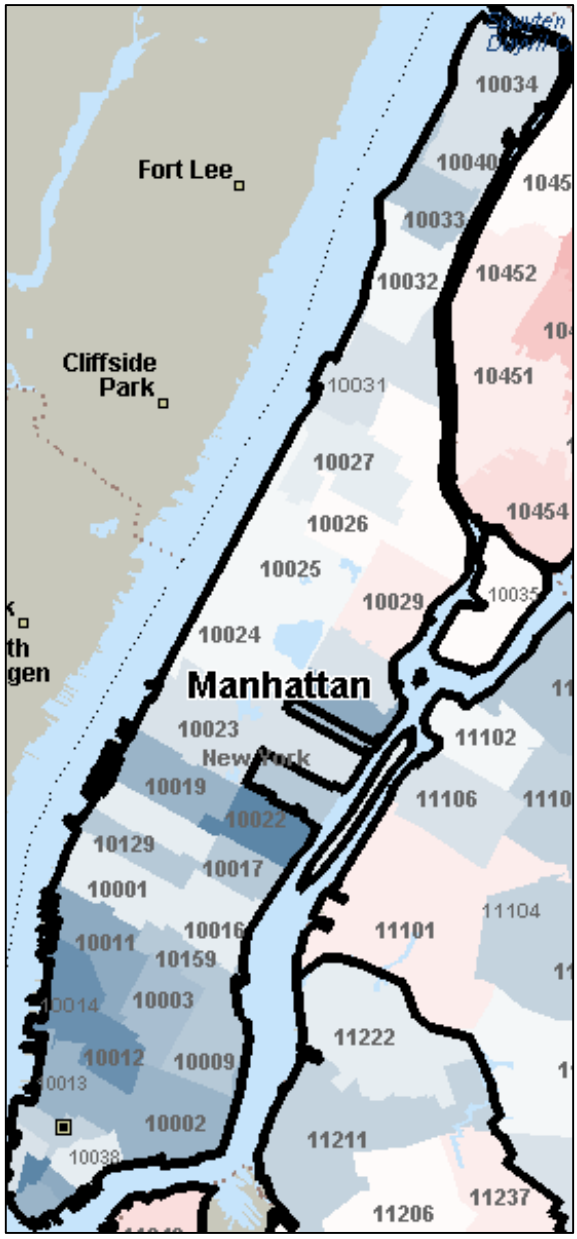
Risk Adjusted Rate per 100,000 people

1,000

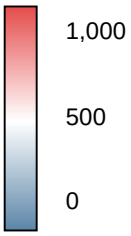
500

0

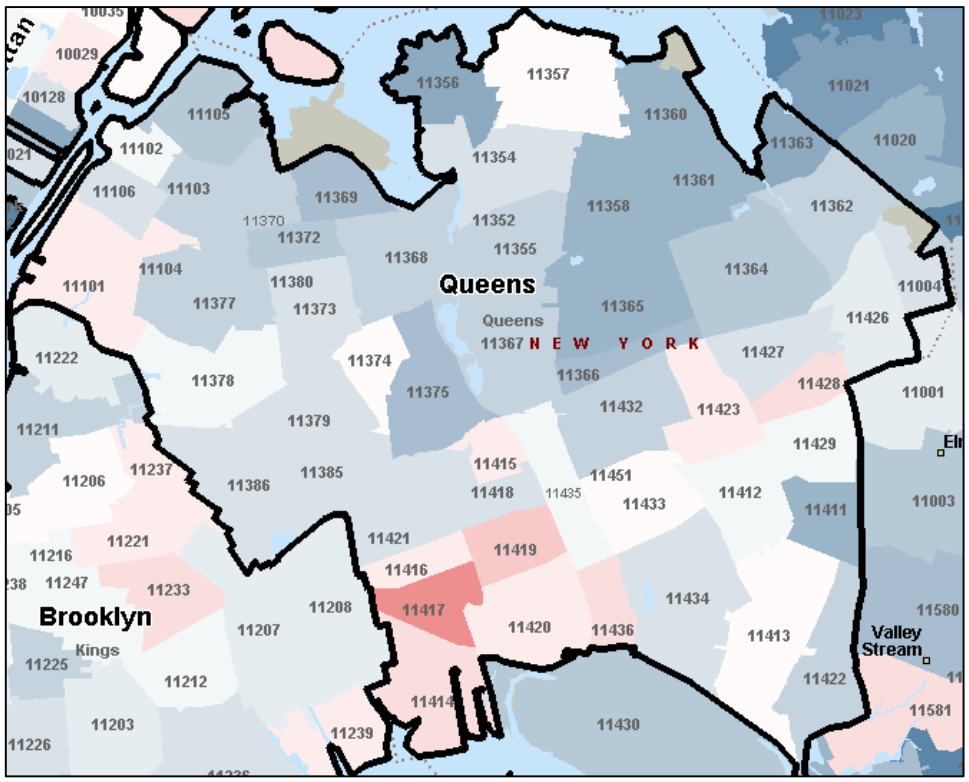
PQI Circulatory Composite – Manhattan



Risk Adjusted Rate per 100,000 people



PQI Circulatory Composite – Queens



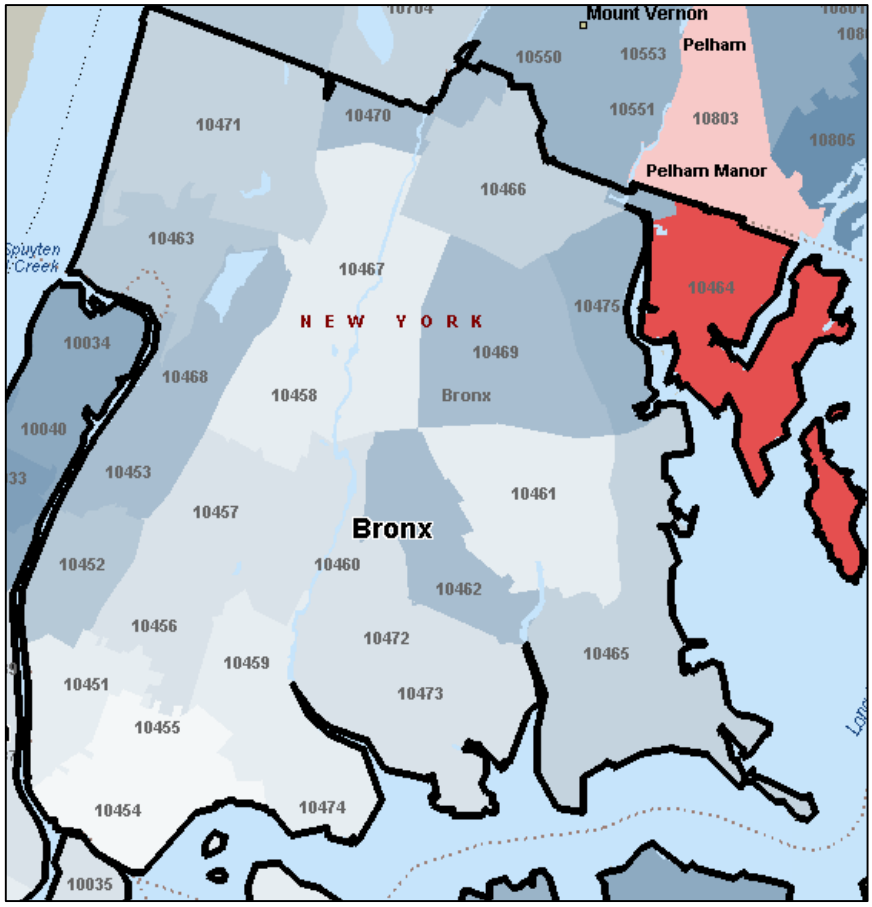
Risk Adjusted Rate per 100,000 people

1,000

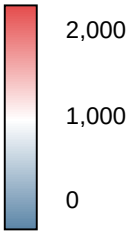
500

0

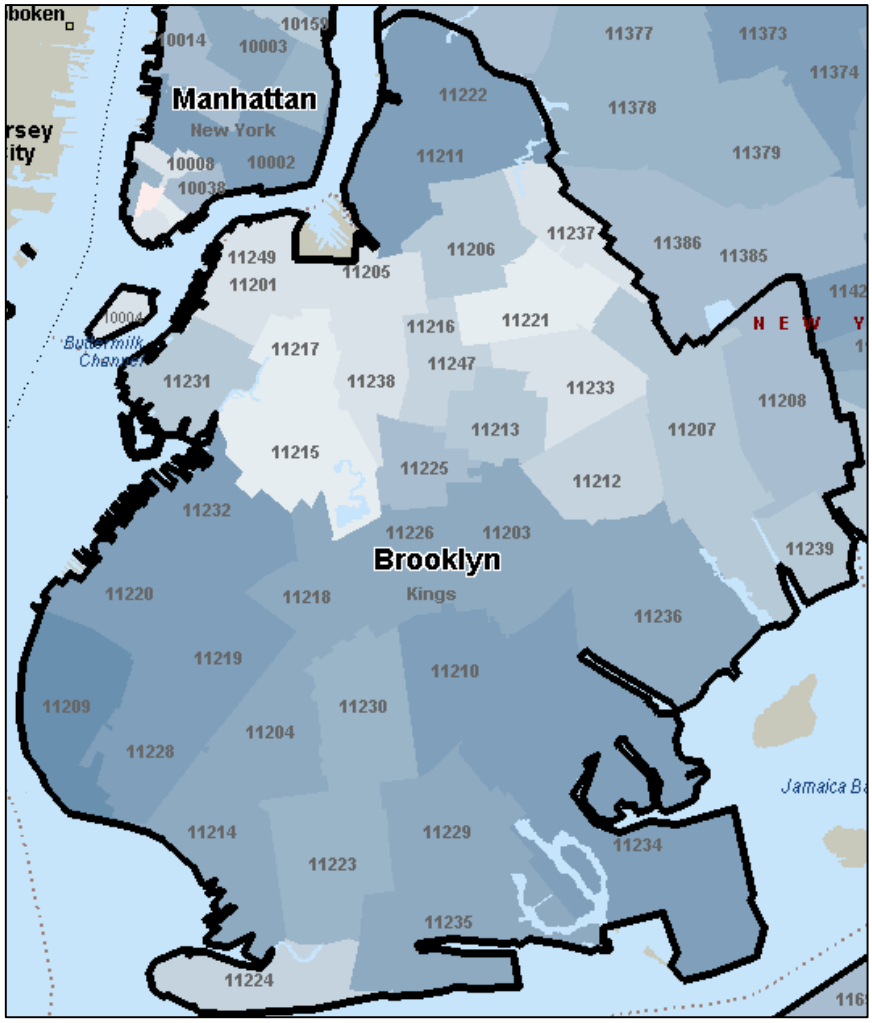
Exhibit 8D: PQI Respiratory Composite – Bronx



Risk Adjusted Rate per 100,000 people



PQI Respiratory Composite – Brooklyn



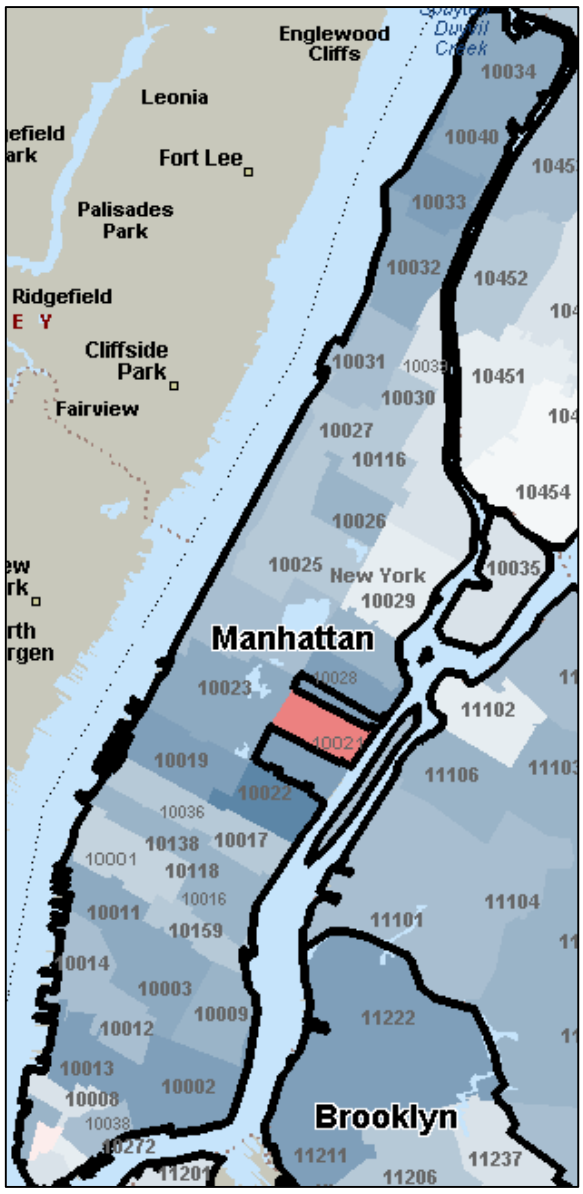
Risk Adjusted Rate per 100,000 people

2,000

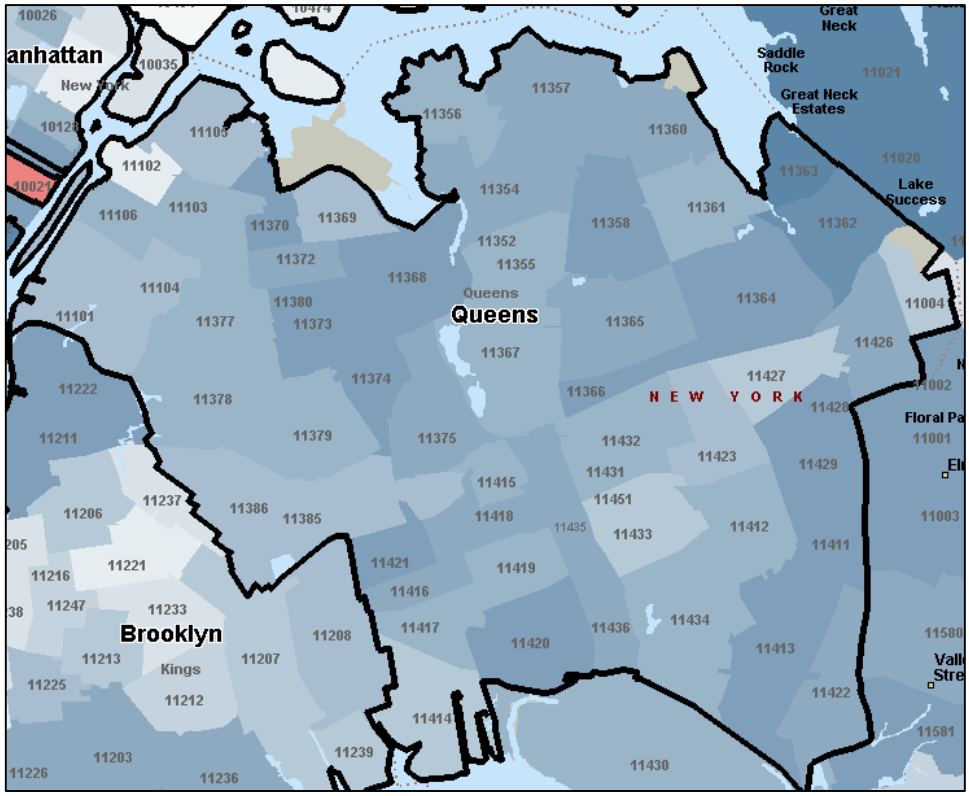
1,000

0

PQI Respiratory Composite – Manhattan



PQI Respiratory Composite – Queens



Risk Adjusted Rate per 100,000 people

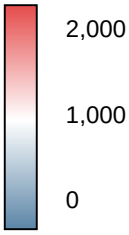
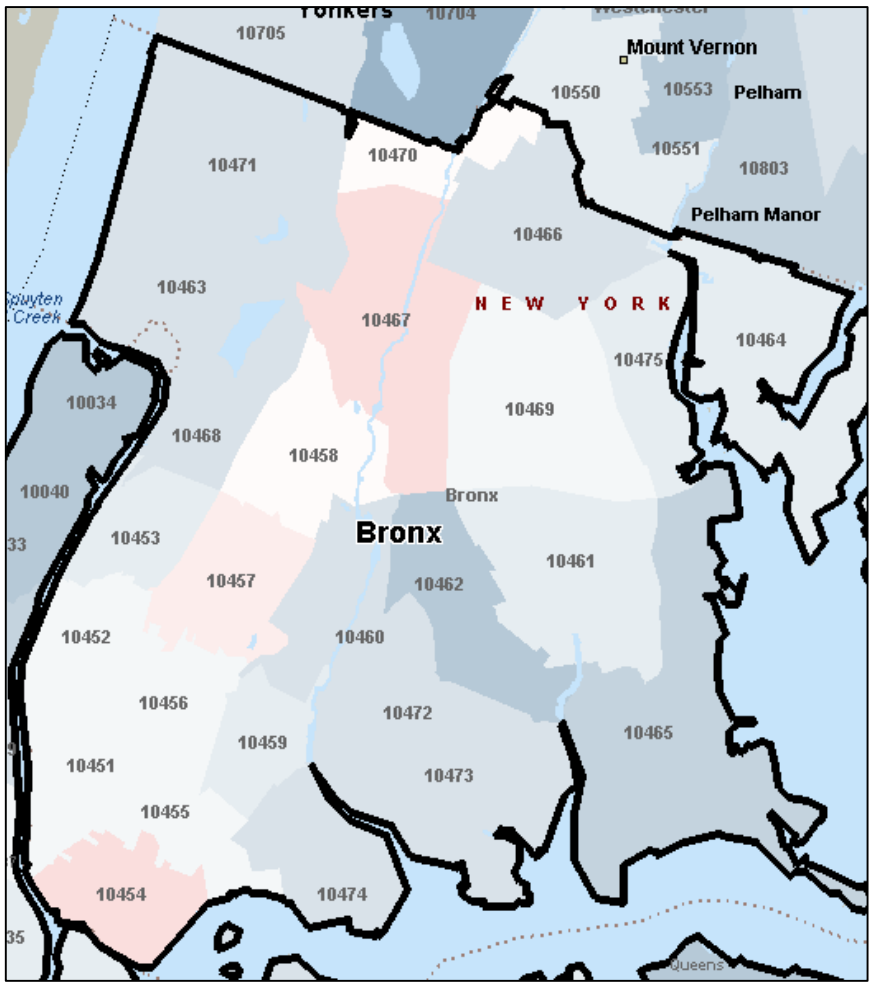


Exhibit 8E: PQI Acute Composite – Bronx



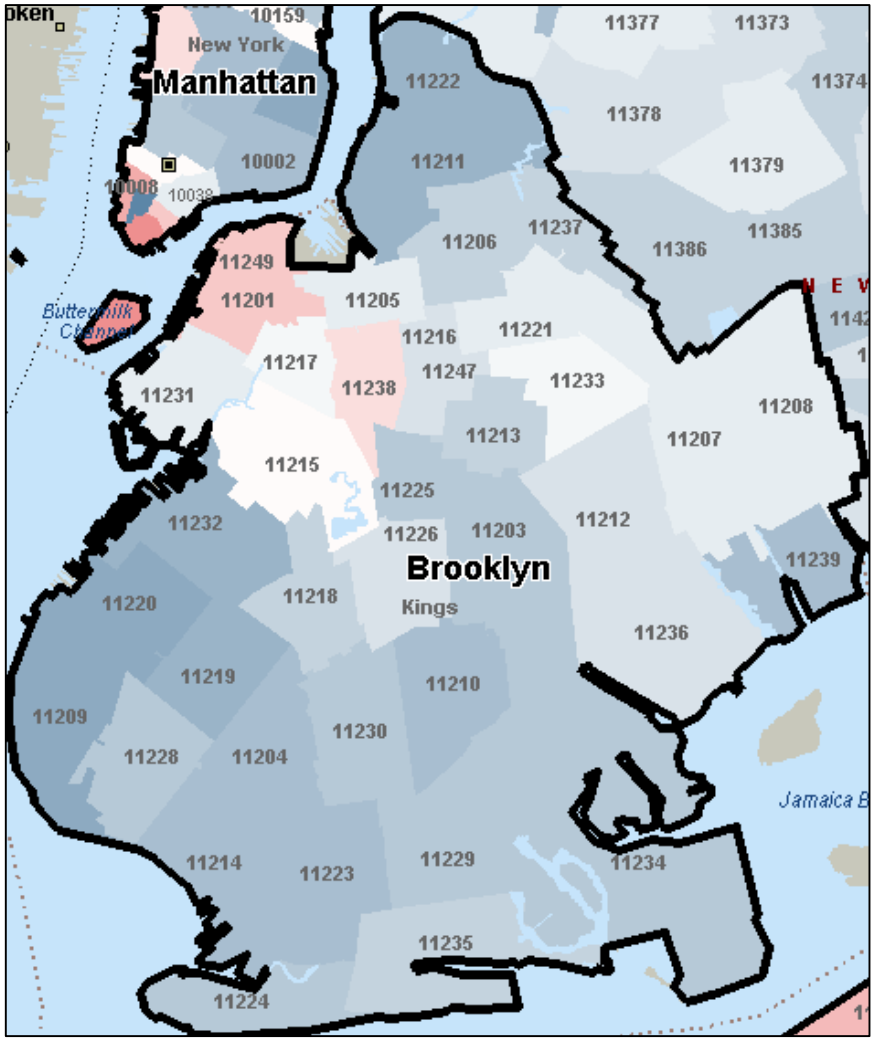
Risk Adjusted Rate per 100,000 people

1,500

750

0

PQI Acute Composite – Brooklyn



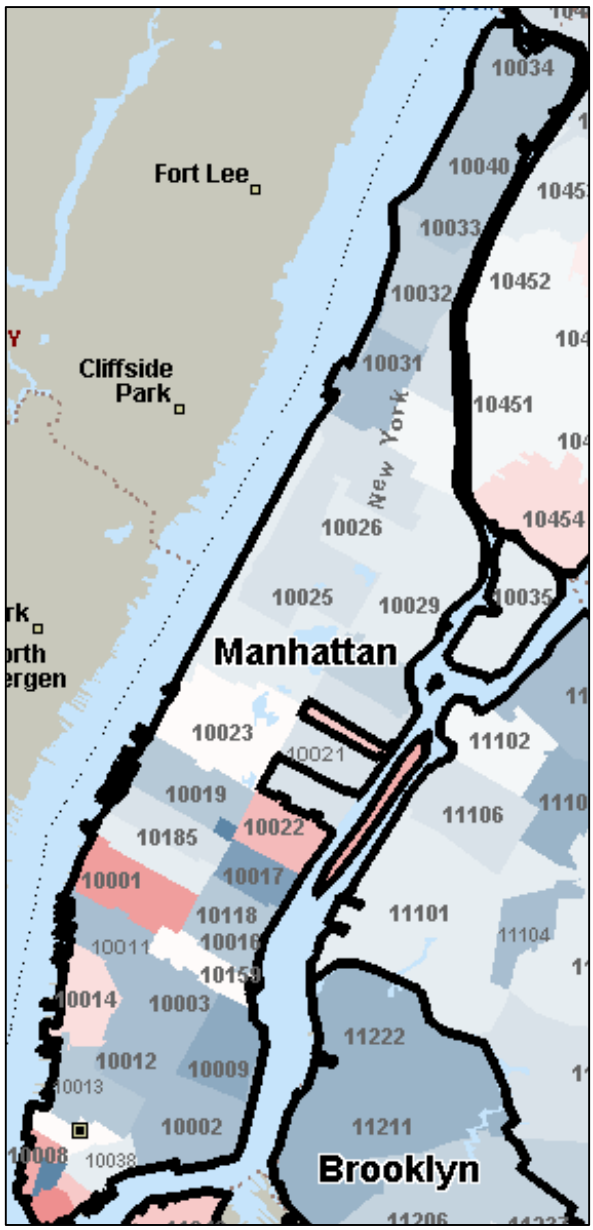
Risk Adjusted Rate per 100,000 people

1,500

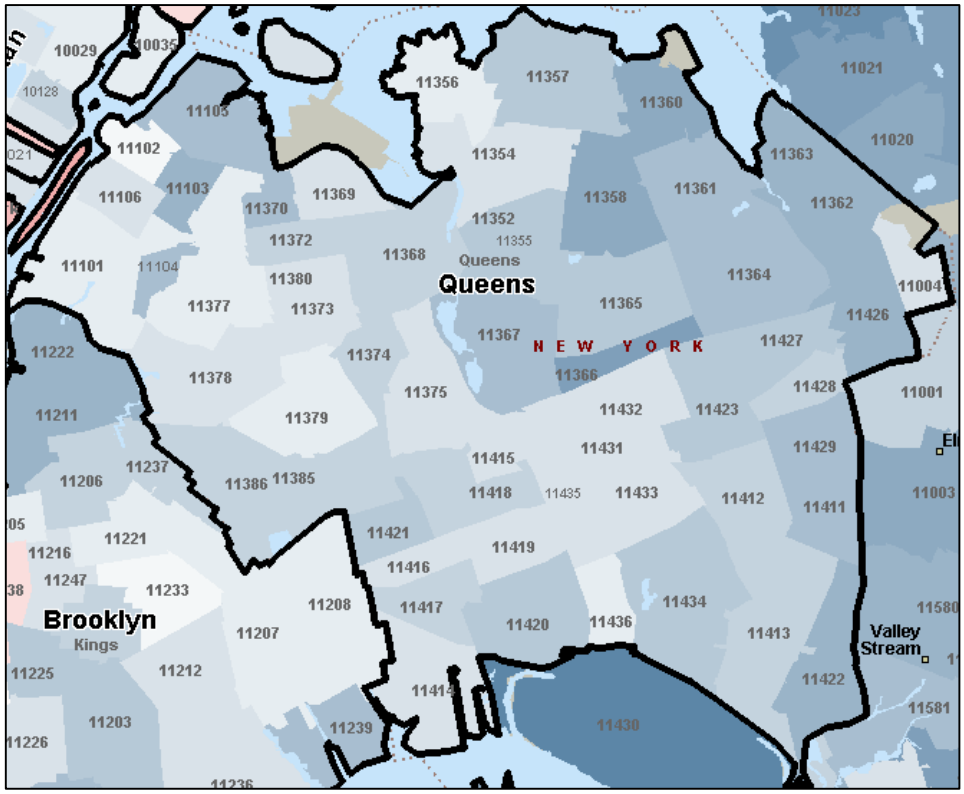
750

0

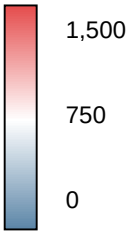
PQI Acute Composite – Manhattan



PQI Acute Composite – Queens

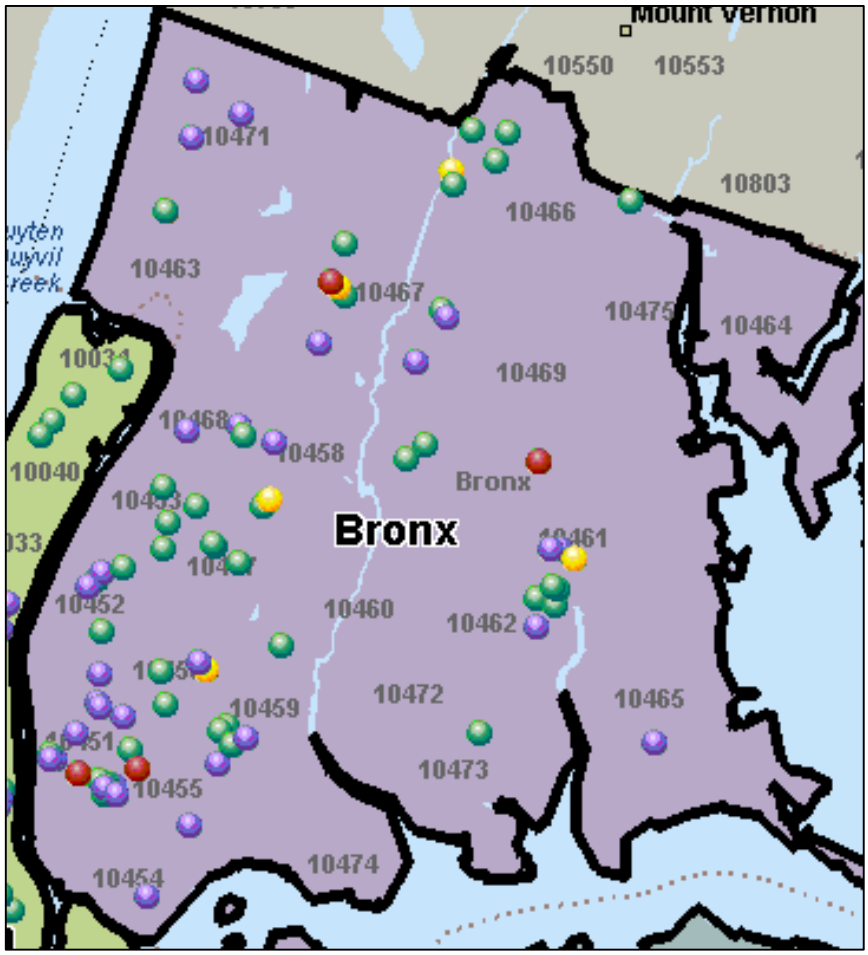


Risk Adjusted Rate per 100,000 people



Appendix 9: Mental Health Facilities Maps

Exhibit 9A: Mental Health Facilities - Bronx

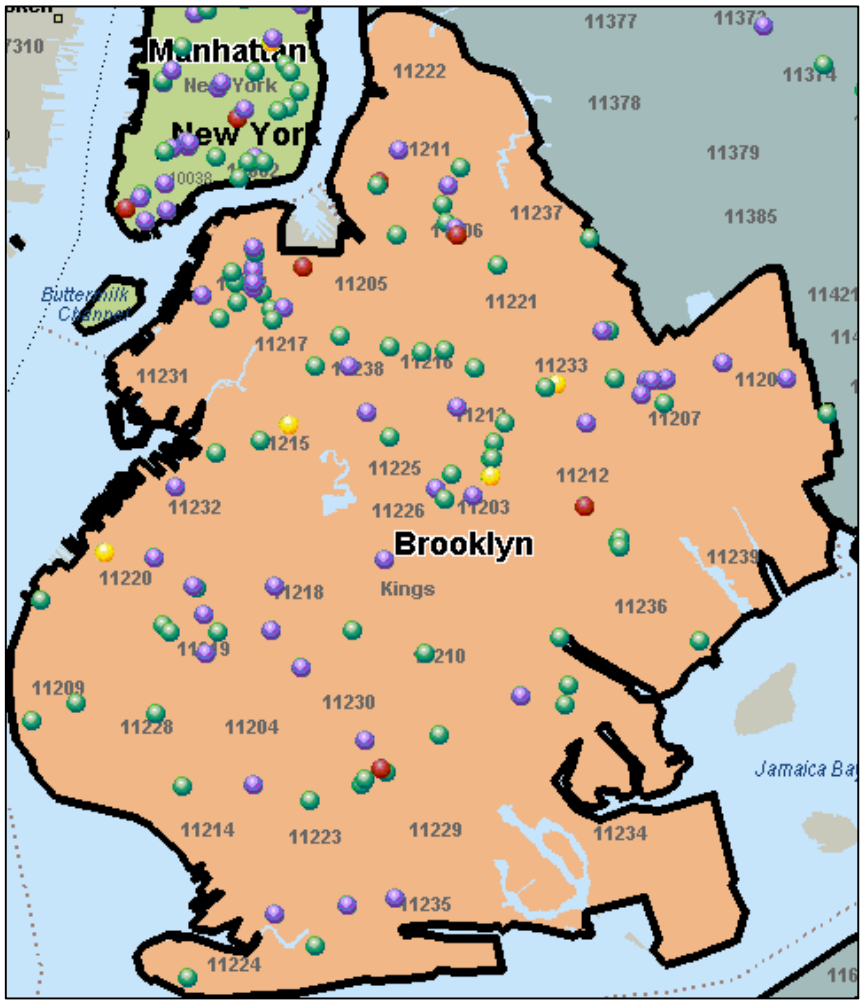


Source: New York State Office of Mental Health, Mental Health Program Directory and Microsoft MapPoint 2010

Program Category Description

- Emergency
- Inpatient
- Outpatient
- Support

Exhibit 9B: Mental Health Facilities - Brooklyn

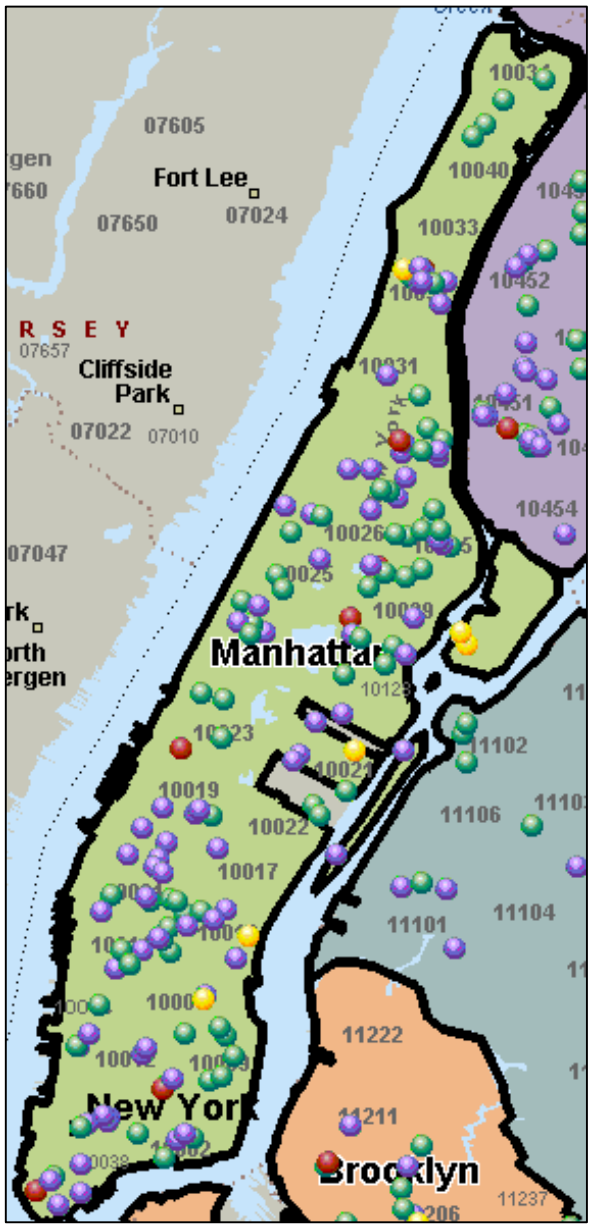


Source: New York State Office of Mental Health, Mental Health Program Directory and Microsoft MapPoint 2010

Program Category Description

- Emergency
- Inpatient
- Outpatient
- Support

Exhibit 9C: Mental Health Facilities - Manhattan

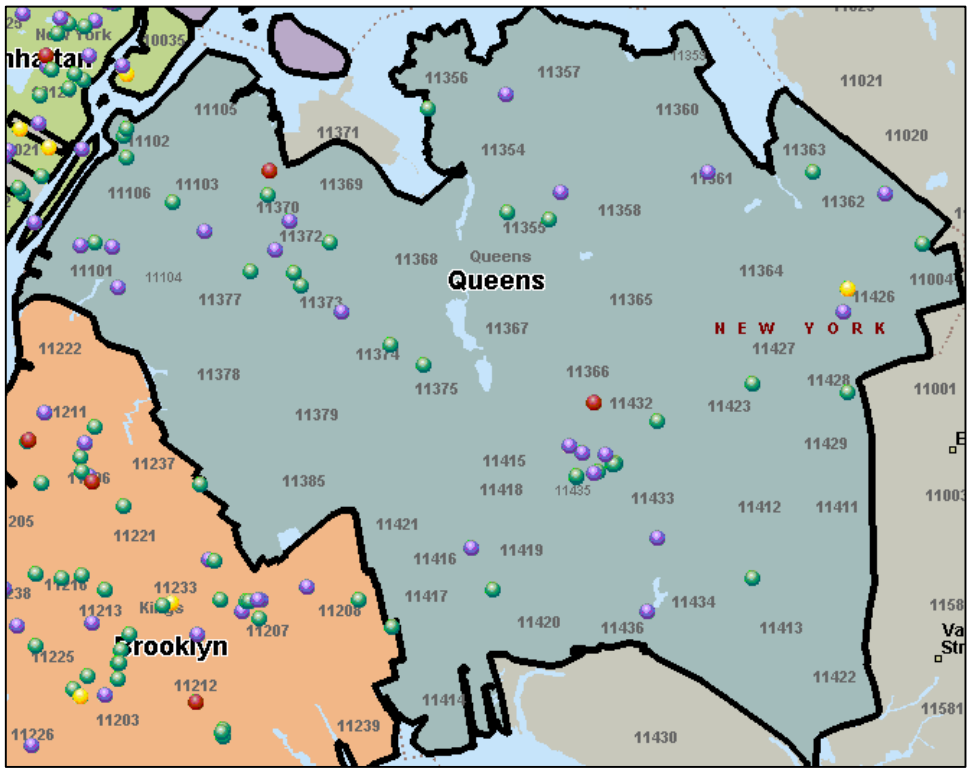


Source: New York State Office of Mental Health, Mental Health Program Directory and Microsoft MapPoint 2010

Program Category Description

- Emergency
- Inpatient
- Outpatient
- Support

Exhibit 9D: Mental Health Facilities - Queens



Source: New York State Office of Mental Health, Mental Health Program Directory and Microsoft MapPoint 2010

Program Category Description

- Emergency
- Inpatient
- Outpatient
- Support

Sources

Academy of Eating Disorders. (2014). *Find an Eating Disorder Professional*. Retrieved 2014, from: http://aedweb.org/web/index.php/education/eating-disorder-information-2

Accreditation Council for Graduate Medical Education. (2014). Retrieved 2014, from: http://www.acgme.org/ads/Public

Agency for Healthcare Research and Quality, New York City. (2011). *Services by Borough*. Retrieved 2014, from: http://www.ahrcnyc.org/services/services-by-borough/servicesbyborough.html

Agency for Healthcare Research and Quality. (2001). *AHRQ Quality Indicators—Guide to Prevention Quality Indicators: Hospital Admission for Ambulatory Care Sensitive Conditions*. Retrieved 2014, from: AHRQ Pub. No. 02-R0203

Agency for Healthcare Research and Quality. *Pediatric Quality Indicators Overview.* Retrieved 2014, from: http://www.qualityindicators.ahrq.gov/modules/pdi_overview.aspx

American Heart Association. (2014). *What is Cardiovascular Disease?* Retrieved 2014, from: http://www.heart.org/HEARTORG/Caregiver/Resources/WhatisCardiovascularDisease/What-is-Cardiovascular-Disease_UCM_301852_Article.jsp

American Osteopathic Association. (2013). Retrieved 2014, from: http://opportunities.osteopathic.org/search/search.cfm

Advocate Community Providers/NYCPP. (December 2014). *Advocate Community Providers/NYCPP Practitioner Partners*.

Bergard, Laird W. City University of New York, Center for Latin American, Caribbean & Latino Studies. (2008). *Washington Heights/Inwood Demographic, Economic, and Social Transformations 1990-2005 with a Special Focus on the Dominican Population.* Retrieved 2014, from: http://clacls.gc.cuny.edu/files/2013/10/Washington-Heights-Inwood-Demographic-Economic-and-Social-Transformations-1990_2005-with-a- Special-Focus-on-the-Dominican-Population.pdf

Brooklyn Public Library. (2014). *Hours & Locations*. Retrieved 2014, from: http://www.bklynlibrary.org/locations

Centers for Disease Control and Prevention. (2013). *2010-11 through 2012-13 State and Regional Vaccination Trend Report.* Retrieved 2014, from http://www.cdc.gov/flu/fluvaxview/reports/reporti1213/trends/index.htm

Centers for Disease Control and Prevention. (2011). *Chronic Disease Prevention and Health Promotion*. Retrieved 2014, from: http://www.cdc.gov/chronicdisease/resources/publications/aag/ddt.htm

Centers for Disease Control and Prevention. (2014). *Leading Causes of Death*. Retrieved 2014, from: http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm

Centers for Disease Control and Prevention. (2014). *Learn about Health Literacy*. Retrieved 2014, from: http://www.cdc.gov/healthliteracy/learn/index.html

Centers for Medicare and Medicaid Services. (2014). *General Hospital Information*. Retrieved 2014, from: https://data.medicare.gov/Hospital-Compare/Hospital-General-Information/xubh-q36u

Centers for Medicare & Medicaid Services. (2014). *Official Nursing Home Compare Data*. Retrieved 2014, from: https://data.medicare.gov/data/nursing-home-compare

CityMD, (2014). Retrieved 2014, from: http://www.citymd.com/urgent-care-locations

Commission on Collegiate Nursing Education. (2014). *Accredited Baccalaureate & Graduate Nursing Programs.* Retrieved 2014, from: http://directory.ccnecommunity.org/reports/accprog.asp

Community Health Care Association of New York State. (2013). *A Plan for Expanding Sustainable Community Health Centers in New York.* Retrieved 2014, from: http://www.chcanys.org/

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting Program.* Retrieved 2014, from: http://www.ucrdatatool.gov/

Food Bank for New York City. (2014). *Food Program Locator*. Retrieved 2014, from: http://www.foodbanknyc.org/foodprogramlocator

FSG. (2014). *Collective Impact*. Retrieved 2014, from: http://www.fsg.org/OurApproach/CollectiveImpact.aspx.

Goldberg, Dan. Capital New York. (2014). *Mapping Obamacare by New York City Zip Code.* Retrieved 2014, from: http://www.capitalnewyork.com/article/city-hall/2014/10/8554538/mapping-obamacare-new-york-city-zip-code

Greater New York Hospital Association. (2014). *Health Information Empowerment Tool (HITE).* Retrieved 2014, from: http://www.hitesite.org/Members/SearchChoices.aspx

Grow New York City. (2014). *Community Gardens*. Retrieved 2014, from: http://www.grownyc.org/openspace/community-gardens

Hospital Consumer Assessment of Healthcare Providers and Systems. *Summary of HCAHPS Survey Results: October 2012 to September 2013 Discharges*. Retrieved 2014, from: http://www.hcahpsonline.org/files/Report_July_2014_States.pdf

Mount Sinai Hospital. (2014). *Mt. Sinai Urgent Care*. Retrieved 2014, from: http://www.mountsinai.org/patient-care/service-areas/urgent-care

National Alliance on Mental Illness, New York City Metro. (2014). Retrieved 2014, from: http://www.naminycmetro.org

National Committee for Quality Assurance. (2014). *NCQA Updates HEDIS Quality Measures, July 1, 2014*. Retrieved 2014, from: http://www.ncqa.org/Newsroom/NewsArchive/2014NewsArchive/NewsReleaseJuly12014.aspx

National Eating Disorder Association. (2014). *Find Treatment*. Retrieved 2014, from: http://www.nationaleatingdisorders.org/find-treatment

The National Quality Forum. *Specifications for the Three-Item Care Transition Measure – CTM-3*. Retrieved 2014, from: http://www.caretransitions.org/documents/CTMspecs.pdf

New York City Administration for Children's Services. (2014). *Close to Home*. Retrieved 2014, from: http://www.nyc.gov/html/acs/html/close_to_home/close_to_home.shtml

New York City Administration for Children's Services. (2014). *Directory of Preventative Agency Location Centers.* Retrieved 2014, from: https://data.cityofnewyork.us/Social-Services/ACS-Community-Partners/9hyh-zkx9.

New York City Administration for Children's Services. (2014). *Youth and Family Justice.* Retrieved 2014, from:http://www.nyc.gov/html/acs/html/yfj/juvenile_resident_info.shtml

New York City Department of City Planning. *Selected Facilities and Program Sites*. Retrieved 2014, from: https://data.cityofnewyork.us/Housing-Development/Selected-Facilities-andProgram-Sites-Text/94qw-aaeeOpens in new window.

New York City Department of Correction. (2014). *About DOC*. Retrieved 2014, from: http://www.nyc.gov/html/doc/html/about/about_doc.shtml

New York City Department of Correction. (2014). *Average Daily Adolescent Population*. Retrieved 2014, from: http://www.nyc.gov/html/doc/downloads/pdf/adolescent/census_data/ANNUAL_REPORT_FY14_ADOLESCENT.pdf

New York City Department of Correction. (2014). *Preliminary Mayor's Management Report FY2014.* Retrieved 2014, from: http://www.nyc.gov/html/doc/downloads/pdf/MMR-2014.pdf

New York City Department of Health and Mental Hygiene. (2012). *Community Health Survey.* Retrieved 2014, from: http://www.nyc.gov/html/doh/html/data/chs-data.shtml

New York City Department of Health and Mental Hygiene. (2012). *HIV Surveillance Annual Report*. Retrieved 2014, from: http://www.nyc.gov/html/doh/downloads/pdf/dires/surveillance-report-dec-2013.pdf

New York City Department of Health and Mental Hygiene. (2014). *Site Locator*. Retrieved 2014, from: https://a816-healthpsi.nyc.gov/DispensingSiteLocator/mainView.do

New York City Department of Homeless Services. (2014). *HOPE 2015, The NYC Street Survey*. Retrieved 2014, from: https://a071-hope.nyc.gov/hope/statistics.aspx

New York City Health and Hospitals Corporation. (2013). *Find the Healthcare You Need*. Retrieved 2014, from: http://www.nyc.gov/html/hhc/html/patients/ForPatientsFindHealthcare.shtml.

New York City Housing Authority. (2013). *Resident Data Summary Sheets.* Retrieved 2014, from: http://www.nyc.gov/html/nycha/html/resources/res_data.shtml

New York City Housing Authority. (2014). *About NYCHA*. Retrieved 2014, from: http://www.nyc.gov/html/nycha/html/about/about.shtml

New York City Housing Authority. (2014). *Community Programs & Services*. Retrieved 2014, from: http://www.nyc.gov/html/nycha/html/community/community.shtml

New York City Housing Authority. (2014). *Community Programs & Services.* Retrieved 2014, from: http://www.nyc.gov/html/nycha/html/community/community.shtml

New York City Housing Authority. (2014). Retrieved 2014, from: http://www.nyc.gov/html/nycha/html/about/about.shtml

New York City Human Resources Administration. (2014). *Department of Social Services*. Retrieved 2014, from: http://www.nyc.gov/html/hra/html/services/services.shtml

New York City Independent Budget Office. (2013). *New York City by the Numbers*. Retrieved 2014, from: http://ibo.nyc.ny.us/cgi-park2/?cat=21

New York City Open Data. (2013). *Directory of NYCHA Community Facilities*. Retrieved 2014, from: https://data.cityofnewyork.us/Social-Services/Directory-of-NYCHA-CommunityFacilities/crns-fw6u

New York Public Library. (2014). *Locations and Hours*. Retrieved 2014, from: http://www.nypl.org/locations

New York Restoration Project. (2014). *Green Spaces*. Retrieved 2014, from: https://www.nyrp.org/green-spaces/Community_Gardens

New York State Department of Agriculture & Markets. (2014). *New York State Farmer's Markets.* Retrieved 2014, from: http://www.agriculture.ny.gov/ap/communityfarmersmarkets.asp

New York State Department of Health, Division of Managed Care and Program Evaluation. (2014). *County Directory of Managed Care Plans*. Retrieved 2014, from: https://www.health.ny.gov/health_care/managed_care/pdf/cnty_dir.pdf

New York State Department of Health, Health Data NY. (2014) *Health Facility General Information.* Retrieved 2014, from: https://health.data.ny.gov/dataset/Health-Facility-General-Information/vn5v-hh5r

New York State Department of Health, NYS Health Profiles. *Hospitals by County or Region.* Retrieved 2014, from: https://health.data.ny.gov/Health/HIV-Ambulatory-Care-Quality-of-Care-Performance-Re/bbkg-kmnd

New York State Department of Health, Office of Health Insurance Programs. (2007). *Potentially Preventable Hospital Readmissions among Medicaid Recipients with Mental Health and/or Substance Abuse Health Conditions Compared with All Others: New York State.* Retrieved 2014, from: https://www.health.ny.gov/health_care/managed_care/reports/statistics_data/3hospital_readmissions_mentahealth.pdf

New York State Department of Health, Office of Quality and Patient Safety. (2012). *Medicaid Redesign and Evaluation of Quality Measures and Population Indicators Report.* Retrieved 2014, from: https://www.health.ny.gov/health_care/medicaid/redesign/docs/medicaid_quality_indicators.pdf

New York State Department of Health, Office of Quality and Patient Safety. (2014). *Clinical Metrics Chartbooks.* Retrieved 2014, from: https://www.health.ny.gov/health_care/medicaid/redesign/dsrip_performance_chartbooks.htm

New York State Department of Health, Open Data NY. (2014). *SPARCS Data Set - Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011.* Retrieved 2014, from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn

New York State Department of Health, Open Data. (2014). *Community Health Indicator Reports.* Retrieved 2014, from: https://health.data.ny.gov/Health/Community-Health-Indicator-Reports-CHIRS-Latest-Da/54ci-sdfi

New York State Department of Health, Open Data. (2014). *HIV Ambulatory Care Quality of Care Performance Results.* Retrieved 2014, from: https://health.data.ny.gov/Health/HIV-Ambulatory-Care-Quality-of-Care-Performance-Re/bbkg-kmnd

New York State Department of Health, Open Data. (2014). *Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011*. Retrieved 2014, from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn

New York State Department of Health, Open Data. (2014). *Medicaid PPV by Zip Code.* Retrieved 2014, from: https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visits-/khkm-zkp2

New York State Department of Health, Open Data. (2014). *Medicaid/All Payer Potentially Preventable Emergency Visits.* Retrieved 2014, from: https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7a-34ka

New York State Department of Health, Open Data. (2014). *Potentially Preventable Readmissions*. Retrieved 2014, from: https://health.data.ny.gov/Health/Medicaid-_Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn

New York State Department of Health, QARR Report Series. (2013). *2013 Health Plan Service Use in New York State Report.* Retrieved 2014, from: https://www.health.ny.gov/health_care/managed_care/qarrfull/qarr_2013/docs/access_util13.pdf

New York State Department of Health. (2006) *ZIP Code Definitions of New York City Neighborhoods*. Retrieved 2014, from: http://www.health.ny.gov/statistics/cancer/registry/appendix/neighborhoods.htm

New York State Department of Health. (2008). *Home Health and Hospice Profile*. Retrieved 2014, from: http://homecare.nyhealth.gov/about.php

New York State Department of Health. (2012). *Health Indicators by Race/Ethnicity 2009-2012.* Retrieved 2014

New York State Department of Health. (2013). *DSRIP Managed Care Provider Network Data*. Retrieved 2014, from: https://www.health.ny.gov/health_care/medicaid/redesign/providernetwork/

New York State Department of Health. (2014) *Leading Causes of Death in New York State - Race/Ethnicity by Gender and Age.* Retrieved 2014, from: http://www.health.ny.gov/statistics/leadingcauses_death/race.htm

New York State Department of Health. (2014). *Adult Care Facilities*. Retrieved 2014, from: https://www.health.ny.gov/facilities/adult_care/.

New York State Department of Health. (2014). *Behavioral Health Transition to Managed Care.* Retrieved 2014, from: https://www.health.ny.gov/health_care/medicaid/redesign/behavioral_health_transition.htm

New York State Department of Health. (2014). *CAHPS Adult Medicaid Survey, Continuous Quality Improvement Report*. Retrieved 2014, from: https://www.health.ny.gov/health_care/managed_care/medicaid_satisfaction_report_2014/docs/c_statewide_2014.pdf

New York State Department of Health. (2014). *Delivery System Reform Incentive Payment DSRIP) Program.* Retrieved 2014, from: www.health.ny.gov/health_care/medicaid/redesign/delivery_system_reform_incentive_payment_program.htm

New York State Department of Health. (2014). *Designated Safety Net Pharmacies*. Retrieved 2014, from: https://www.health.ny.gov/health_care/medicaid/redesign/dsrip_safety_net_definition.htm

New York State Department of Health. (2014). *Early Intervention Program.* Retrieved 2014, from: https://www.health.ny.gov/community/infants_children/early_intervention/index.htm

New York State Department of Health. (2014). *HCRA 2014 Provider List*. Retrieved 2014, from: http://www.health.ny.gov/hcra/provider.htm

New York State Department of Health. (2014). *Health Coalitions-A Resource for Community Collaboration*. Retrieved 2014, from: https://health.data.ny.gov/Health/Health-Coalitions-A-Resource-for-Community-Collabo/w43m-6kfj

New York State Department of Health. (2014). *Health Homes Enrollment*. Retrieved 2014, from: http://dsripdashboards.health.ny.gov/

New York State Department of Health. (2014). *HIV Special Needs Plans*. Retrieved 2014, from: https://www.health.ny.gov/diseases/aids/general/resources/snps/

New York State Department of Health. (2014). *Leading Causes of Death.* Retrieved 2014, from: https://www.health.ny.gov/statistics/leadingcauses_death/

New York State Department of Health. (2014). *Medicaid Health Homes*. Retrieved 2014, from: https://www.health.ny.gov/health_care/medicaid/program/medicaid_health_homes/

New York State Department of Health. (2014). *Medicaid Statistics.* Retrieved 2014, from: https://www.health.ny.gov/statistics/health_care/medicaid/eligible_expenditures

New York State Department of Health. (2014). *New York State Community Health Indicator Reports - Respiratory Disease Indicators.* Retrieved 2014, from: https://www.health.ny.gov/statistics/chac/indicators/res.htm

New York State Department of Health. (2014). *New York State Community Health Indicator Reports - Cancer Disease Indicators.* Retrieved 2014, from: https://www.health.ny.gov/statistics/chac/indicators/can.htm

New York State Department of Health. (2014). *New York State Community Health Indicator Reports - Cardiovascular Disease Indicators.* Retrieved 2014, from: https://www.health.ny.gov/statistics/chac/indicators/chr.htm

New York State Department of Health. (2014). *New York State Community Health Indicator Reports - Cirrhosis and Diabetes Indicators.* Retrieved 2014, from: https://www.health.ny.gov/statistics/chac/indicators/dia.htm

New York State Department of Health. (2014). *New York State Community Health Indicator Reports - HIV/AIDS and STD Indicators.* Retrieved 2014, from: https://www.health.ny.gov/statistics/chac/indicators/sti.htm

New York State Department of Health. (2014). *New York State Community Health Indicator Reports - Maternal and Child Health Indicators.* Retrieved 2014, from: https://www.health.ny.gov/statistics/chac/indicators/mih.htm

New York State Department of Health. (2014). *New York State Nursing Home Profile*. Retrieved 2014, from: http://nursinghomes.nyhealth.gov/searches/region

New York State Department of Health. (2014). *New York State Prevention Agenda 2013-2017.* Retrieved 2014, from: https://apps.health.ny.gov/doh2/applinks/ebi/SASStoredProcess/guest?_program=/EBI/PHIG/apps/dashboard/pa_dashboard

New York State Department of Health. (2014). *Salient NYS Medicaid DSRIP Dashboard System Version 1.0*. Retrieved 2014, from: http://dsripdashboards.health.ny.gov/

New York State Division of Criminal Justice Services. (2014). *Kids' Well-being Indicators Clearinghouse.* Retrieved 2014, from: http://www.nyskwic.org/get_data/indicator_narrative_details.cfm?numIndicatorID=118

New York State Office of Alcoholism and Substance Abuse Services. *OASAS Provider Directory Search*. Retrieved 2014, from: http://www.oasas.ny.gov/providerdirectory

New York State Office of Mental Health, Office of Performance Measurement and Evaluation. (2014). *County Capacity and Utilization Data Book.* Retrieved 2014, from: https://www.omh.ny.gov/omhweb/special-projects/dsrip/ccudb.html

New York State Office of Mental Health. (2012). *Inpatient Use Dashboard.* Retrieved 2014, from: http://bi.omh.ny.gov/cmhp/dashboard#tab4

New York State Office of Mental Health. (2013). *Inpatient Readmissions Dashboard.* Retrieved 2014, from: http://bi.omh.ny.gov/cmhp/dashboard#tab5

New York State Office of Mental Health. (2013). *Patient Characteristics Survey*. Retrieved 2014, from: https://www.omh.ny.gov/omhweb/statistics/pcs-message.htm

New York State Office of Mental Health. (2014). *Mental Health Program Directory*. Retrieved 2014, from: http://bi.omh.ny.gov/bridges

New York University, School of Law, Brennan Center for Justice. (2013). *How New York City Reduced Mass Incarceration: A Model for Change?* Retrieved 2014, from: http://www.brennancenter.org/sites/default/files/publications/How_NYC_Reduced_Mass_Incarceration.pdf

NYC Administration for Children's Services. (2013). *Foster Care Placement by Borough*. Retrieved 2014, from: http://www.nyc.gov/html/acs/downloads/pdf/statistics/Placement_Stats_District_2013.pdf

Queens Library. (2014). *Hours & Locations.* Retrieved 2014, from: http://www.queenslibrary.org/ql_findabranch

Seedco. (2013). *Where We Work*. Retrieved 2014, from: http://www.seedco.org/where-we work/new-york/

U.S. Census Bureau. (2012). *American Community Survey 3-Year Estimates, 2010-2012.* Retrieved 2014, from: http://www.census.gov/acs/www/

U.S. Census Bureau. (2012). *American Community Survey 5-Year Estimates, 2008-2012.* Retrieved 2014, from: http://www.census.gov/acs/www/

U.S. Census Bureau. (2013). *American Community Survey 1-Year Estimate, 2013.* Retrieved 2014, from http://www.census.gov/acs/www/

U.S. Census Bureau. (2013). *State & County Quick Facts-New York*. Retrieved 2014, from: http://quickfacts.census.gov/qfd/states/36000.html

U.S. Census Bureau. (2014). *Zip Code Tabulation Areas*. Retrieved 2014, from: https://www.census.gov/geo/reference/zctas.html

U.S. Department of Health and Human Services, Health Resources and Services Administration. (1995). *Medically Underserved Areas/Populations: Guidelines for MUA and MUP Designation.* Retrieved 2014, from: http://www.hrsa.gov/shortage/mua/index.html

U.S. Department of Health and Human Services, Health Resources and Services Administration. (2014). *Find Shortage Areas: HPSA by State & County*. Retrieved 2014, from: http://hpsafind.hrsa.gov/

U.S. Department of Health and Human Services, Health Resources and Services Administration. *Health Workforce Mapping Tool.* Retrieved 2014, from http://ahrf.hrsa.gov/arfdashboard/ArfGeo.aspx

U.S. Department of Health and Human Services. (2014). *HRSA Data Warehouse Health Care Service Delivery and Look-Alike Sites Data.* Retrieved 2014, from: http://datawarehouse.hrsa.gov/GeoAdvisor/ShortageDesignationAdvisor.aspx

UDS Mapper. (2014). Retrieved 2014, from: http://www.udsmapper.org/

UDS Mapper. (2014). *Data Sources and Definitions*. Retrieved 2014, from: http://udsmapper.org/data-sources-and-definitions.cfm

United States Department of Agriculture. (2014). *Agricultural Marketing Services.* Retrieved 2014, from: http://apps.ams.usda.gov/fooddeserts/fooddeserts.aspx

United States Department of Agriculture. (2014). *Economic Research Service*. Retrieved 2014, from: http://www.ers.usda.gov/

University at Albany, School of Public Health, Center for Health Workforce Studies. (2013). *Physician Re-Registration Survey*.

University at Albany, School of Public Health, Center for Health Workforce Studies. (2014). *New York's Primary Care Workforce*. Retrieved 2014, from: http://chws.albany.edu/archive/uploads/2014/08/nypricare2014.pdf