

# New York City Health Provider Partnership Brooklyn Community Needs Assessment

Final Report October 3, 2014



NYAM

Prepared by The New York Academy of Medicine

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## Overview

The goal of the Delivery System Reform Incentive Payment (DSRIP) program is to promote community-level collaborations and focus on system reform in order to reduce avoidable inpatient admissions and emergency room visits by 25% over 5 years for the Medicaid and uninsured populations in New York State. To inform the health system transformation that is required under the DSRIP program, several emerging Performing Provider Systems (PPSs) contracted The New York Academy of Medicine (NYAM) to complete a Brooklyn-wide Community Needs Assessment (CNA). The CNA was governed and monitored by a Steering Committee consisting of representatives from each of the following emerging PPSs: **A W Medical; The New York City Health and Hospitals Corporation (HHC) including representatives from their central office, Coney Island Hospital (HHC), Kings County Hospital (HHC), and Woodhull Medical and Mental Health Center (HHC); Lutheran Medical Center; Maimonides Medical Center; and SUNY Downstate Medical Center.**

The specific aims of the CNA are to:

- Describe health care and community resources,
- Describe communities served by the PPSs,
- Identify the main health and health service challenges facing these communities, and
- Summarize the assets, resources, and needs for the DSRIP projects.

## Methods

To conduct this CNA, NYAM utilized both primary and secondary data collection and analyses. To ensure the perspective of community members and stakeholders was incorporated into the reported findings and to respond to specific questions that could not be sufficiently addressed through secondary source data alone, NYAM conducted and analyzed 28 key informant interviews (involving 35 individuals), 24 focus groups with community members and other stakeholders, and approximately 681 community surveys.<sup>1</sup>

NYAM developed the primary data protocol in collaboration with the PPSs using standard research methods consistent with DSRIP CNA guidance. Key Informant interviews, focus groups, and survey questions focused on community conditions conducive to health promotion, primary health concerns, available programming and services, disparities in access and use, and recommendations regarding strategies to promote improved health. NYAM collected this data, after IRB approval, in partnership with numerous community organizations, which were identified in collaboration with PPS representatives and represented a range of neighborhoods and populations, e.g., older adults, immigrant populations, and people with disabilities. NYAM also conducted street outreach for survey administration, focusing on neighborhoods identified as having large numbers of Medicaid and/or uninsured populations. The data collection materials were translated into ten languages. Socio-demographic characteristics of survey respondents included: 44.3% Black/African American, 31.8% Latino, 13.7% Asian, 53.7% foreign born, 26.3% limited English proficient, 82.4% living below the poverty line, 53.4% enrolled in Medicaid and 13.0% uninsured. The mean age of respondents was 44, with a range of 18 to 88.

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<sup>1</sup> NYAM collected primary data from July–September, 2014. Additional primary data analyses are forthcoming and will be included as Appendix D to this report.

The NYAM team analyzed the data using standard qualitative and quantitative analytic methods and reported common themes, as appropriate, throughout this report.<sup>2</sup> NYAM also conducted a review of secondary source data, including an analysis of more than 70 data sets, and a review of the literature, including existing community health needs assessments and community reports.<sup>3</sup> (See Section F. of this report and the attached Bibliography for a detailed list.)

### Summary of Findings

Brooklyn is a diverse borough, rich in culture, commerce and open space, including parks, gardens and beaches. However, disparities are pronounced, given its mix of high, medium and low income neighborhoods, and significant populations from multiple racial and ethnic groups including—but not limited to African American and Caribbean populations, Latinos (originating from multiple countries), and Chinese, Russian, Polish, South Asian, and Arab populations, including immigrants.<sup>4</sup> Each of these communities has unique needs related to culture, language, education, and economics, as well as unique strengths.<sup>5</sup>

A number of Brooklyn neighborhoods have high concentrations of public housing. These areas, which often have concentrated poverty, are described by many residents as neglected neighborhoods, without appropriate services for meeting even basic needs.<sup>6</sup> In contrast, rapid gentrification is evident in many traditionally lower income and minority Brooklyn neighborhoods, having consequences that are described by some in positive terms, including increased access to healthy foods.<sup>7</sup> More commonly, the negative consequences of gentrification are noted, including reduced affordable housing and higher prices at local businesses.<sup>8</sup>

In Brooklyn, the greatest proportion of potentially preventable admissions (PQI) is for chronic conditions including respiratory conditions (asthma, COPD), cardiovascular conditions (heart failure, hypertension), and diabetes; thus, these conditions and diseases represent the areas of greatest opportunity for reducing preventable inpatient stays.<sup>9,10</sup> A focus on these conditions is consistent with findings from the

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<sup>2</sup> Survey data were analyzed according to standard statistical methods using SAS, generating means and proportions, and, as appropriate, bivariate analyses to better understand the association between health indicators and geographic, demographic, and socioeconomic characteristics. Transcripts and focus group reports were maintained and analyzed in NVivo, a software package for qualitative research. Data were coded according to pre-identified themes relevant to health, community needs, and DSRIP, as well as themes emerging from the data themselves. Analysts utilized standard qualitative techniques, involving repeated reviews of the data and consultation between multiple members of the research team. Analyses focused on common perceptions regarding issues, populations, recommendations, etc., as well as the unique knowledge of particular individuals or groups, and explanatory information that facilitated interpretation of primary and secondary source data.

<sup>3</sup> See Section F: Documentation of the Process and Methods of this report for a detailed list of data sets; and Bibliography for a list of CHNAs and other reports reviewed.

<sup>4</sup> NYAM primary data findings, as of September 15, 2014.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> New York State Department of Health DSRIP Performance data, 2012, [http://www.health.ny.gov/health\\_care/medicaid/redesign/dsrp\\_performance\\_data/](http://www.health.ny.gov/health_care/medicaid/redesign/dsrp_performance_data/), accessed September, 2014.

primary data, which also pointed to diabetes, hypertension and asthma as areas of great concern. Many community members were also concerned about obesity and behavioral health—including anxiety, depression, substance abuse and violence—and clearly recognized the link between behavioral and physical health conditions.<sup>11</sup>

Within Brooklyn, the Medicaid beneficiaries that account for the largest number of preventable admissions are concentrated in the areas of northern/central Brooklyn and Coney Island-Sheepshead Bay, though pockets of high concentration may exist at sub-zip code levels in other neighborhoods throughout the borough.<sup>12,13</sup> Medicaid beneficiaries in northern/central Brooklyn also account for the highest number of potentially preventable emergency room visits (PPV), though PPV rates are high throughout the county, with approximately 65% to 80% of all emergency visits considered potentially preventable.<sup>14</sup> (See Appendix A, Map 53.) It should be noted that there are a large number of Medicaid beneficiaries living in the Sunset Park neighborhood, though the number of PQI admissions and rate of PPV visits per 100 beneficiaries are lower there than in northern/central Brooklyn and Coney Island–Sheepshead Bay. These areas of the borough rank consistently poorly in markers of socioeconomic determinants of health such as household poverty, unemployment, lack of health insurance,<sup>15</sup> low levels of education, as well as high prevalence of disease.

In addition, there are a large number of immigrants—including many undocumented—in a number of Brooklyn neighborhoods with barriers to health care (e.g., linguistic, eligibility for insurance, familiarity with the US healthcare system) that go beyond those of other populations and reportedly result in delayed care.<sup>16</sup>

A key component of DSRIP is to reduce avoidable hospital visits by bolstering community based providers and organizations to enhance coordination of care, prevention, and disease management, particularly for those with chronic conditions. Yet, we find the distribution of primary care providers uneven in Brooklyn, with sparse numbers in certain low-income neighborhoods. (See Appendix A, Maps 83, 84, and 89.) In addition, while community providers have made myriad efforts over the years to improve outreach to both community members and hospital providers,<sup>17</sup> concerns remain within the community regarding the adequacy and accessibility of outpatient care.<sup>18</sup> According to CNA participants, ambulatory care providers’ capacity, perceived quality, linkages to broader health care delivery systems,

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<sup>10</sup> Note the rate of potentially preventable inpatient admissions for chronic conditions (PQI 92) is 1,283 per 100,000 Medicaid beneficiaries in Brooklyn versus 480 per 100,000 beneficiaries for acute conditions (PQI 91) for the combined years 2011-2012 (NYS DOH DSRIP Chartbook, using data from the NYS DOH Office of Quality and Patient Safety, 2014). However, this measure does not assess length of stay or cost for these admission types.

<sup>11</sup> NYAM primary data findings, as of September 15, 2014.

<sup>12</sup> New York State Department of Health DSRIP Performance data, 2012, released 2014.

<sup>13</sup> NYAM data analysis is at the zip code level, the smallest boundary level for which data is available. The neighborhood names cited are United Hospital Fund (UHF) neighborhood designations, commonly used by the New York City Department of Health and Mental Hygiene, including as the reporting boundaries for their Community Health Survey. For more information, see [http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf\\_map\\_100604](http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf_map_100604)

<sup>14</sup> New York State Department of Health DSRIP Performance data, 2012, released 2014.

<sup>15</sup> Excepting Coney Island where the population is older and thus more likely to be eligible for Medicare.

<sup>16</sup> NYAM primary data findings, as of September 15, 2014

<sup>17</sup> See, for example, IPA factsheets provided by AW Medical Offices and referenced in Section A(i) of this report.

<sup>18</sup> NYAM primary data findings, as of September 15, 2014

and insufficient evening and weekend service exacerbate access issues in some high-need areas, for example in northern/central Brooklyn.<sup>19</sup> The data, including responses from large numbers of key informants and focus group participants, also suggest there is a lack of culturally and linguistically competent specialists<sup>20</sup> and multi-specialty centers that could provide a ‘one-stop shopping’ experience that many patients seek.<sup>21</sup> For example:

*When you look at specialty care, say around mental health, for example, if an individual wants to go to someone who’s culturally competent, we don’t have a lot of Asian-Americans who are going into fields like mental health or behavioral health issues. (key informant)*

From the community perspective, the costs incurred— in both time and money — in seeking medical care remains very problematic and acts as a barrier for low income populations to effectively use prevention and disease management services. The income criteria for Medicaid are described as unrealistic, given the cost of living in New York City, and the working poor who do not qualify for Medicaid — according to many focus group participants — cannot afford the premiums of the insurance offered through the Health Exchange.<sup>22</sup> Community members (and providers) consistently describe long wait times for visits and long wait times at the time of a visit. Furthermore, the possible need for multiple visits (e.g., for tests), discourages timely use of services and makes the emergency department a rational choice for “one stop shopping”.<sup>23</sup> Typical of comments reported:

*People say it’s not rational to go to the emergency room for care, but when we talk to people, they would say things like, “Well, I tried to make an appointment with my doctor, and it’s like four months in advance.” What rational person is going to wait four months rather than go [to the ER?] (key informant)*

Also, while there are a number of CBOs in Brooklyn, the data suggest more resources are needed to equip them with staff and capability, including a structured and adequate funding stream for case managers, navigators, counselors, health educators and/or community health workers placed at CBOs or in the field, as well as effective linkages – both interpersonal and electronic – between the CBOs and the medical providers.<sup>24</sup>

In addition to CBOs, the local department of health – the New York City Department of Health and Mental Hygiene (NYC DOHMH) – is a resource for population health programming and technical assistance. The NYC DOHMH has a Brooklyn District Public Health Office, which has a special focus on maternal child health and obesity prevention, and a new Center for Health Equity, which will focus on reducing health disparities citywide. There may be greater opportunities for synergies between the NYC DOHMH and the health systems in Brooklyn.

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<sup>19</sup> NYAM primary data findings, as of September 15, 2014. See also Brooklyn Healthcare Improvement Project (B-HIP) “Final Report: Making the Connection to Care in Northern and Central Brooklyn,” August, 2012.

<sup>20</sup> Ibid.

<sup>21</sup> Brooklyn Healthcare Improvement Project (B-HIP) “Final Report: Making the Connection to Care in Northern and Central Brooklyn,” August, 2012

<sup>22</sup> NYAM primary data findings, as of September 15, 2014

<sup>23</sup> NYAM primary data findings, as of September 15, 2014. B-HIP Report, August, 2012.

<sup>24</sup> NYAM primary data findings, as of September 15, 2014.

Overall, community members and providers that participated in the CNA clearly recognized the impact that poverty and lack of community resources have on health and well-being.<sup>25</sup> Low-income Brooklyn residents describe very stressful lives, with concerns that include, but are not limited to, employment, housing (which is in increasingly short supply with the gentrification of many Brooklyn neighborhoods), safety, access to healthy food, and appropriate resources for children and teens. A number of African American communities report poor access to services. Immigrant communities reported workdays may be 16 hours or more, and the pressures of assimilation are persistent.<sup>26</sup> Across populations, community members attribute high rates of diabetes, hypertension, obesity, depression and others illnesses, to their daily stresses.<sup>27</sup> They hope for community programming and other resources to assist with their basic needs.<sup>28</sup> In addition, primary data suggest that there are particular very high need populations, including the chronically street homeless, those with severe alcohol dependence and/or serious mental illness, victims and survivors of domestic violence, individuals coming out of jails and prisons, and individuals with particular disabilities. These would likely benefit from more targeted and intensive services to ensure that a wide range of needs are addressed and systemic barriers are ameliorated.<sup>29</sup>

### Northern/Central Brooklyn

Within northern and central Brooklyn, the highest number of avoidable inpatient admissions for chronic conditions are concentrated in the United Hospital Fund (UHF) neighborhoods of East New York, Williamsburg-Bushwick, Bedford Stuyvesant-Crown Heights and East Flatbush-Flatbush.<sup>30</sup> The highest ratio of observed/expected admissions for these conditions occur in some of these neighborhoods as well as Downtown- Brooklyn Heights-Park Slope, and range as high as 1.28-1.55 across a large swath of this region. (See Appendix A, Maps 35- 37). Similarly, the highest number of potentially preventable emergency room visits (PPV) are also clustered in these areas. (See Appendix A, Map 53.)

Residents of northern and central Brooklyn neighborhoods tend to have low incomes, especially in areas with large public housing structures, and report concerns about securing basic needs like housing, food (including healthy food), and employment, and resources needed to appropriately care for children.<sup>31</sup> Crime, including gun violence, and perceived threats to personal safety in some neighborhoods may impact health seeking behaviors as well as the availability of health care providers.<sup>32</sup>

### Coney Island–Sheepshead Bay

Compared to Brooklyn as a whole, the population in Coney Island-Sheepshead Bay is older and disproportionately white (European).<sup>33</sup> There is a high concentration of dual-eligible individuals.<sup>34</sup>

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<sup>25</sup> NYAM primary data findings, as of September 15, 2014.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> These are UHF neighborhood designations. For more information, see [http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf\\_map\\_100604](http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf_map_100604).

<sup>31</sup> NYAM primary data findings, as of September 15, 2014.

<sup>32</sup> NYAM primary data findings, as of September 15, 2014. B-HIP Report.

<sup>33</sup> US Census American Community Survey 5 year, 2008-2012.



Approximately 18% of the population in the primary service area of the southern Brooklyn public hospital, Coney Island Hospital (CIH), is aged 65 or older, compared to approximately 11% in NYC and 12% in NYS.<sup>35</sup> Language presents a challenge in serving this community; approximately 36% of the population in CIH's primary service area speak European languages (primarily Russian) at home, 14% speak Asian languages (Chinese, Urdu), and 8% speak Spanish.<sup>36</sup> Chronic diseases and conditions such as diabetes, cardiovascular disease, behavioral health, asthma and obesity are the primary health needs in the area.<sup>37</sup>

CIH was severely impacted by Super Storm Sandy, and its extension clinic, the Ida G. Israel Community Health Center, was completely destroyed and has not yet reopened, reducing the currently available outpatient care in the area.<sup>38</sup> There are a number of facilities dedicated to serving the older population in this area, including 15 nursing homes and Assisted Living Residences with a total of 3,500 (2431 + 1069) beds<sup>39</sup> and 23 senior centers, and 6 Naturally Occurring Retirement Communities (NORCs) in CIH's service area.<sup>40</sup> While CIH regularly partners with these providers and support services, more is needed to ensure coordination of care and disease management for the older population in the area, particularly the provision of culturally appropriate care for those who require care in languages other than English.<sup>41</sup>

Focus group participants described great needs in Coney Island<sup>42</sup>:

*Coney Island is the group that suffers greatly economically. We have a high rate of unemployment in Coney Island. High rate of high school drop outs. Lots of senior citizens. Lots of young mothers.... Some of the medical needs that we have are obesity, asthma, hypertension and heart disease. HIV and mental illness too, but the first five are really kind of rampant, in terms of our medical needs... We probably have the most [public housing] in New York City....Coney Island has been like a warehouse. That's why Coney Island has so many problems and so many needs. For about 30 years, no money had been invested in Coney Island, so what it had been used for—for a long time—was just to warehouse people. And now they're trying to turn it back around to its glory days.*

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<sup>34</sup> NYS Department of Health, 2012 data posted in 2012 to the DSRIP Performance Data site at [http://www.health.ny.gov/health\\_care/medicaid/redesign/dsrp\\_performance\\_data/](http://www.health.ny.gov/health_care/medicaid/redesign/dsrp_performance_data/), accessed September 15, 2014.

<sup>35</sup> "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," New York City Health and Hospitals Corporation, 2013.

<sup>36</sup> Ibid.

<sup>37</sup> NYAM primary data findings, as of September 15, 2014.

<sup>38</sup> Coney Island Hospital is working to rebuild outpatient services in a shorefront location. "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," NYC Health and Hospitals Corporation, 2013.

<sup>39</sup> Data is for facilities in the zip codes 11214, 11224 and 11235. Source: New York State Department of Health Nursing Home Profiles and Assisted Living Residence data, accessed September 2014.

<sup>40</sup> "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," NYC Health and Hospitals Corporation, 2013.

<sup>41</sup> "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," New York City Health and Hospitals Corporation, 2013 and NYAM primary data findings, as of September 15, 2014.

<sup>42</sup> NYAM primary data findings, as of September 15, 2014.

Community resources are described as increasingly limited, as the City apparently closed cooling centers and community centers, resulting in gaps for older adults and teens, in particular.<sup>43</sup> As described by one focus group participant:

*You have so many teenagers living in NYCHA buildings and there is no place to go for them. I can speak to Coney Island in particular. There is nowhere for young people to go. It's about a year and a half now, they built a YMCA. But, the YMCA is for people that can afford the YMCA. So there is still that segment out there that has no direction at all. So they're left to be out on the street. So even if you have community centers, those centers are locked up.*

### Sunset Park

The Sunset Park population includes a high number of Medicaid beneficiaries, but the rate of avoidable admissions, readmissions and emergency visits is lower here than in other parts of the borough with similar proportions of Medicaid beneficiaries and populations with a similar socio-economic status. Notably, nearly half of the population in the Sunset Park service area is foreign-born, with notably large Asian (Chinese) and Latino communities.<sup>44</sup>

The Chinese community of Sunset Park has been growing rapidly.<sup>45</sup> The diversity within it has also grown, and includes populations from multiple provinces, each with its own dialect and perceptions.<sup>46</sup> Health concerns among participants from the Chinese community are similar to those of other populations, and diabetes is considered to be common.<sup>47</sup> However, diet is generally considered healthy, obesity rates are lower than other communities, and physical activity is relatively common (e.g., walking, biking, Tai Chi).<sup>48</sup> Smoking is a main concern, with rates reported to be higher in the Chinese community than among other populations, resulting in high rates of asthma, lung cancer, and other respiratory problems.<sup>49</sup> CNA participants reported that cultural beliefs and access to health information impacted utilization of health care services within the Chinese community, particularly among older adults and recent immigrants.<sup>50</sup> Cultural beliefs discouraged some individuals from seeking medical care, particularly non-urgent or preventive services. In addition, stigma associated with serious illnesses can prevent open dialog around health and health care, both for patient and in the larger community. Furthermore, there is a lack of knowledge of preventive services among some residents, and language barriers limit access to health information, from the media, government, and providers, that is readily available to English speakers. Residents were reported to seek treatment through practitioners of Chinese medicine, which may limit use of Western medicine when necessary. Providers discussed the need to balance Western and Chinese medicine, and insure and patients are receiving safe treatment. Participants reported that community members were receptive to outreach efforts of medical providers, but also expressed the need for more health education within the community to address stigma

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<sup>43</sup> Ibid.

<sup>44</sup> Lutheran Healthcare "Community Health Needs Assessment and Community Service Plan" Conducted in 2013. "Maimonides Comprehensive Community Service Plan and Community Health Needs Assessment (2014-2016)," Maimonides Medical Center, 2013.

<sup>45</sup> NYAM primary data findings, as of September 15, 2014.

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

associated with some illnesses and increase knowledge of preventive services. Participants emphasized that information must be provided in the appropriate language and be culturally sensitive. They cited the success of past Tai Chi programming that incorporated information regarding depression, a subject that would otherwise be avoided.<sup>51</sup>

Latino residents in Sunset Park report many of the same health issues as other populations, such as obesity (including among children), diabetes, and depression.<sup>52</sup> Several report concerted efforts to eat a healthy diet and to engage in physical activity—or to encourage their children to do so. However, lack of time and budget constraints, as well as some ingrained habits, serve as barriers to healthy choices -- one focus group participant reports that Latino residents regularly work 16 hours per day. Lack of insurance is reported to be more common in the Latino community than among other groups, and results in high out of pocket costs, neglect of primary care and preventive services, and use of emergency care for non-urgent issues.<sup>53</sup>

Sunset Park's history as a first stop for immigrants along a waterfront in a historically manufacturing and industrial center brings with it environmental factors that may impact health, such as overcrowding in housing and environmentally toxic brownfields.<sup>54</sup> Sunset Park has high numbers of beneficiaries with asthma and other respiratory conditions, yet has low numbers of asthma and respiratory-related PQI hospitalizations.<sup>55</sup>

### **Implications for Project Selection:**

#### **Domain 2 System Transformation Projects**

The high number of potentially preventable inpatient admissions, emergency visits, and potentially preventable readmissions in this area, suggests that systems transformation is needed to reduce these. Thus, for the county as a whole, the needs assessment suggests that any of the DSRIP domain 2 projects could be appropriate. For an individual Performing Provider System, a specific project may be more appropriate dependent on ongoing initiatives, current infrastructure, payor mix, partners, and service area.

In addition to the DSRIP Domain 2 projects focused on creating integrated delivery systems (Domain 2A), implementation of care coordination and transitional care programs (Domain 2B), and connecting settings (Domain 2C), the New York State Department of Health has announced it is adding a new project (Domain 2D) focused specifically on the uninsured, as well as low- and non-utilizing Medicaid beneficiaries.

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<sup>51</sup> Unpublished NYAM primary data findings, 2013.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Lutheran Community Health Needs Assessment, 2013. Also, UPROSE, which notes on its web site: "In Sunset Park, as in many communities that have been home to manufacturing for the past hundred years, brownfield properties can present a major challenge to realizing the ultimate vision for revitalizing a neighborhood. A "brownfield" or "brownfield site" is defined as any real property whose redevelopment or reuse may be complicated by the potential presence of a contaminant."

<sup>55</sup> NYS Department of Health, 2012 data.

## Uninsured

In Brooklyn, according to the latest available data, approximately 344,000 people are uninsured, accounting for approximately 16% of all the uninsured individuals in New York State.<sup>56</sup> Adults over the age of 18 account for the largest proportion of the uninsured in Brooklyn, with a rate of 16.9%, versus approximately 2% among those aged 65 and older, and 4.5% among children aged 0-17.<sup>57</sup> Within the borough, the highest number of uninsured appear to be clustered in the zip codes of 11220 Sunset Park and 11226 East Flatbush, with high numbers in Williamsburg-Bushwick, East New York, and East Flatbush-Flatbush. (See Appendix A, Map 3.)

The 2008-2012 5-year American Community Survey estimated that 207,094 (or 60.0%) of the total number of 344,916 uninsured Brooklyn residents were foreign born. Of these 207,094 foreign-born uninsured residents, the largest number were born in Latin American countries (75,577, 36.5%), followed by those born in non-Hispanic Caribbean countries (48,893, 23.6%), China (24,494, 11.8%), Russia (6,051, 2.9%), Poland (5,665, 2.7%), South Asian countries (5,532, 2.7%), and Arab countries (2,220, 1.1%).

Uninsured foreign-born Latinos are concentrated primarily in Community District (CD) 4, Bushwick, and CD 7, Sunset Park and Windsor Terrace. Those uninsured born in Caribbean countries reside primarily in CD 17, East Flatbush, Farragut, and Rugby; CD 18, Canarsie and Flatlands; and CD 9, Crown Heights South, Prospect Lefferts, and Wingate. The Chinese-born uninsured are found mostly in CD 7, Sunset Park and Windsor Terrace and CD 11, Bensonhurst and Bath Beach. Those from Russia are more dispersed with some concentration in CD 13, Brighton Beach and Coney Island and CD 15, Sheepshead Bay, Gerritsen Beach, and Homecrest. Those from Poland are concentrated in CD1, Greenpoint and Williamsburg. The South Asian and Arab foreign born uninsured are fairly evenly dispersed throughout Brooklyn.

A significant portion of the uninsured in Brooklyn may be undocumented.<sup>58</sup> Despite health reform, data suggest insurance coverage also remains problematic (or is increasingly problematic) even for those eligible.<sup>59</sup> As mentioned above, income restrictions for Medicaid are considered unrealistically low, and self-purchased coverage is repeatedly described as too expensive, given the difficulties of paying for basic necessities including food and housing.<sup>60</sup> Lack of health insurance is reported to result in reduced use of preventive and community based care and increased emergency department use.<sup>61</sup>

*I go to emergency room. That's where most people have to go if they don't have a doctor. That's where everybody has to go if you don't have health insurance. [Flatbush focus group]*

## **Domain 3 Clinical Improvement Projects**

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<sup>56</sup> Note these figures were estimated prior to the implementation of the Affordable Care Act (ACA) insurance exchange in New York State, and may have changed. Data Source: US Census, American Community Survey, 5 year data, 2008-2012.

<sup>57</sup> Ibid.

<sup>58</sup> NYAM primary data findings, as of September 15, 2014

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> Ibid.

As noted above, the greatest proportion of potentially preventable admissions (PQI) in Brooklyn are for chronic conditions including respiratory conditions, cardiovascular conditions, and diabetes.<sup>62</sup> Thus, these conditions and diseases also represent the areas of opportunity for reducing preventable inpatient stays. Also, as noted above, the Medicaid beneficiaries that account for the largest proportion of these preventable admissions are concentrated in the areas of northern/central Brooklyn and Coney Island-Sheepshead Bay.<sup>63</sup> These areas also account for the highest rates of potentially preventable emergency room visits (PPV), though PPV rates are high throughout the county, with approximately 65% to 80% of all emergency visits considered potentially preventable.<sup>64</sup> (See Appendix A, Map 53.) Implementing clinical improvement projects that galvanize or build upon current resources could improve coordination of care, prevention and disease management and thus reduce avoidable admissions and emergency visits.

### Behavioral Health Comorbidities with Physical Health

Many patients with behavioral health conditions also have chronic physical health conditions. According to data from the NYS Office of Mental Health (OMH), approximately 54.8% (13,141/23,994) of Brooklyn clients served had at least one chronic medical condition. (See Appendix B, Table 32 and Chart 35.) The 2011 OMH Patient Characteristics Survey states that 51.5% of Brooklyn adults surveyed had cardiac or metabolic illnesses, and 10.4% of Brooklyn children surveyed had a pulmonary condition.<sup>65</sup>

Medicaid beneficiaries appear with a behavioral health utilization appear to be concentrated in north central Brooklyn, from Bedford-Stuyvesant through Crown Heights, Brownsville, to East New York.<sup>66</sup> (See Appendix A, Maps 31-32.)

### Asthma/Respiratory Conditions

Approximately 6.0% of Medicaid beneficiaries in Brooklyn had asthma-related service utilization (including pharmacy) in 2012, compared to 6.7% in NYC overall and 6.4% in NYS.<sup>67</sup> Within Brooklyn, these rates range from 3.0% to 10.0% and the highest rates are clustered in Downtown, Red Hook, Coney Island, Williamsburg/Bushwick, East New York, and Sunset Park. (See Appendix A, Map 23.) While the observed rate of potentially preventable inpatient stays for Medicaid beneficiaries for respiratory conditions (PQI 05 and PQI 15) has declined in Brooklyn since 2009, it remains at or above the expected rate, with significant variability among zip codes.<sup>68</sup> The areas of Brooklyn with the highest PQI respiratory composite hospitalizations are located in North/Central Brooklyn, with especially high numbers in Bushwick and Crown Heights, and in the south in Coney Island. (See Appendix A, Map 40.) These are also the areas with the highest concentration of potentially preventable hospitalizations for

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<sup>62</sup>New York State Department of Health, 2012 data.

<sup>63</sup> Ibid.

<sup>64</sup> Ibid.

<sup>65</sup> NYS OMH Patient Characteristics Survey, 2011

<sup>66</sup> These numbers reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories within a single Major Diagnostic Category. Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence Among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Dept of Health Data, 2012.

<sup>67</sup> Ibid.

<sup>68</sup> Ibid.

older adults for asthma or COPD (PQI 05) (See Appendix A, Map 43.) Notably, while Sunset Park has high numbers of beneficiaries with asthma and other respiratory conditions, it has low numbers of asthma and respiratory-related PQI hospitalizations. Among “younger adult” (aged 18-39) Medicaid beneficiaries, potentially preventable hospitalizations for asthma (PQI 15) are most heavily concentrated in Bushwick and Brownsville. (See Appendix A, Map 51.)

Regarding environmental triggers, limited data is available. However, data on the rate of serious housing violations by Community District, i.e., housing code violations that are considered “immediately hazardous or serious,” show prevalence in many of the same neighborhoods with high numbers of preventable respiratory PQI hospitalizations: Bedford-Stuyvesant, Crown Heights, Williamsburg, Bushwick, Brownsville, and East New York; plus Flatbush and East Flatbush. (See Appendix A, Map 15.) In Bushwick, community members consider the prevalence of asthma to be “huge” and largely attribute it to indoor and outdoor environmental conditions, including poor housing conditions, traffic, and the historic industrial base of the community, with likely persistent toxic chemicals.<sup>69</sup> Also, as noted above, in Sunset Park there is a history of toxic environments due to ‘brownfields,’ especially along the waterfront where there is a historically industrial area.

When looking at the location of asthma health care resources in relation to Respiratory Composite PQI hospitalizations (Appendix A, Map 72), there appears to be fairly good alignment of health care resources to need; however, as noted above in regard to Sunset Park compared to other areas with high numbers of beneficiaries with respiratory conditions, the relationship of these resources to the prevention of PQI hospitalizations varies and is uncertain, especially when considering additional socio-demographic variables that may be influencing the PQI hospitalization outcome. Whatever the current efficacy of these resources in preventing asthma-related hospitalizations, they provide a foundation to implement the DSRIP clinical improvement projects around medication adherence and home-based self-management, which includes a focus on reducing home environmental triggers. There are effective models for reducing household environmental triggers that can be implemented in Brooklyn, including those promulgated in the State’s Prevention Agenda.<sup>70</sup>

### Cardiovascular Disease

In 2012, the number of potentially preventable hospitalizations among Medicaid beneficiaries for circulatory conditions (PQI S02 Circulatory Composite) in Brooklyn was 3,694, accounting for more than one in five (23.3%) of all such admissions in the State. However, the ratio of observed/expected (O/E) admissions in Brooklyn (1.04) was lower than the ratio for NYC (1.06) for the same time period. Although the overall O/E ratio for the borough was 1.04 for Circulatory Composite PQI hospitalizations, the range across zip code areas was 0.34 to 1.47, with 22 of the 37 zip code areas having an O/E ratio over 1.00, indicating relatively broad prevalence across the borough. The highest O/E PQI ratios for Circulatory Composite are in north-central Brooklyn, a cluster of zip codes from Downtown in the west to Bedford-Stuyvesant and Bushwick in the east, and in Flatbush, East Flatbush, and Coney Island - Sheepshead Bay. (See Appendix A, Map 39.)

The highest rates of cardiovascular-related service utilization (including pharmacy) were found in south Brooklyn, in Coney Island and Sheepshead Bay, extending northward to Borough Park.<sup>71</sup> (See Appendix

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<sup>69</sup> NYAM primary data findings, as of September 15, 2014.

<sup>70</sup> [https://www.health.ny.gov/prevention/prevention\\_agenda/2013-2017/](https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/)

<sup>71</sup> These numbers reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories within a single Major Diagnostic Category.

A, Map 26.) The north central Brooklyn neighborhoods noted above, with high numbers and O/E ratios for PQI hospitalizations, have relatively low rates of cardiovascular-related utilization. This suggests opportunities for greater patient education and outpatient service utilization in those communities aimed at the DSRIP clinical improvement project objectives of implementing primary and secondary prevention strategies, more efficacious patient self-management, and enhanced clinical disease management. In regard to disease information and support services, much of Brooklyn including the north central high needs areas, appear to have these services available; however, in the high need south Brooklyn areas, these services appear to be lacking. (See Appendix A, Maps 67-68.) Specialty cardiovascular services similarly do not appear to be located in the areas of greatest need. (See Appendix A, Map 70.)

### Diabetes

Diabetes is considered by many residents and key informants to be the most significant health issue in Brooklyn.<sup>72</sup> The diabetes composite PQI (S01) for Brooklyn (1.00) is overall the same as for New York City (1.01) and New York State (1.00).<sup>73</sup> But, within Brooklyn, the range for PQI S01 observed / expected ratios is 0.30 to 1.69. (See Appendix A, Map 38.) Across New York State, only 51% of Medicaid Managed Care beneficiaries with diabetes received all recommended tests in the last year, and 33% of Medicaid Managed Care beneficiaries in NYS with diabetes have poorly controlled HbA1c (>9%).<sup>74</sup>

The Diabetes Composite PQI (PQI S01) suggests there are large clusters of potentially preventable hospitalizations in northern and central Brooklyn, extending from Bedford-Stuyvesant and Williamsburg-Bushwick through Crown Heights and Brownsville to East New York; and in Coney Island. (See Appendix A, Map 38.) Additional areas with significant numbers of Diabetes Composite PQI hospitalizations, if not an O/E ratio over 1.00, can be found in Flatbush and East Flatbush. (See Appendix A, Map 38.) Rates of Medicaid avoidable hospitalizations in Brooklyn for short-term diabetes complications are comparable to those for New York City and New York State.<sup>75</sup> Brooklyn, overall, had 838 Diabetes short-term complications (PQI 01) hospitalizations and a PQI O/E ratio of 0.87.<sup>76</sup> Thirteen zip code areas have an observed/expected (O/E) ratio greater than 1.00 and account for 546 of these hospitalizations; these are found in a large cluster in north central Brooklyn, extending from Bedford-Stuyvesant and Williamsburg-Bushwick through Crown Heights and Brownsville to East New York, and in Coney Island. (See Appendix A, Map 41.)

The geographic concentration of PQI hospitalizations makes the potential return on investments in practice reforms and personnel high in terms of incentive payments for reduced PQI admissions and overall improved disease management. However, the available data suggests there may be a

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Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence Among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Dept of Health Data, 2012.

<sup>72</sup> NYAM primary data findings, as of September 15, 2014.

<sup>73</sup> Ibid.

<sup>74</sup> QARR, 2011.

<sup>75</sup> NYS Department of Health, 2012 data.

<sup>76</sup> Ibid.

geographic misalignment of diabetes care management resources with need (as shown in terms of Diabetes Composite PQI S01 hospitalizations).<sup>77</sup> (See Appendix A, Map 71.)

#### Obesity and Healthy Food Access

In addition to bolstering community providers and community based organizations to improve coordination of care and disease management, reducing the obesity rate in the population will be a key factor in controlling the incidence and prevalence of non-congenital cardiovascular disease and Type II diabetes. This will require a multi-faceted approach that includes changes to the built environment, changes in food access and availability, and traditional community-based obesity prevention efforts. The problem is more complicated by differing perceptions of 'healthy' weight among the diverse cultures represented in Brooklyn.<sup>78</sup>

As noted in the NYS Prevention Agenda<sup>79</sup>, health care systems and community actors can work together to create environments that promote good health including access to fresh, affordable healthy foods and safe, accessible places for exercise. It will be important to align these interventions with the areas of greatest need throughout the borough. (See Appendix A, Map 69 for the current healthy and active living resources by neighborhood and Map 71 for the current diabetes care resources by neighborhood.)

#### Integrating Care to Address Co-Morbidities

As noted above, many patients that have a chronic disease may suffer from multiple physical- and behavioral health co-morbidities. Thus, co-locating and integrating behavioral health and primary care services may help promote more seamless coordination of care for these patients. Within the medical health realm, patients with a chronic health illness often need multiple services and tests. Thus, integrating care into multi-service centers, for example that include primary care providers, specialists, lab and radiology services, may provide a 'one-stop' shopping location that is desired by patients who may currently use the ED to obtain this experience.

### **Domain 4 Population Health Projects**

Domain 4 projects are intended promote population health and reduce health risks. Specifically, these projects are to: (1) promote mental health and prevent substance abuse, (2) prevent chronic disease, including promoting tobacco use cessation and improving preventive care and disease management for chronic diseases not covered in Domain 3b, such as cancer, (3) prevent HIV and STDs, and (4) promote healthy women, infants and children.

#### (1) Promote Mental Health and Prevent Substance Abuse

Among the Brooklyn population as a whole, the age-adjusted percentage of adults with poor mental health for 14 or more days of 7.4%, as well as the age-adjusted suicide rate of 4.6%, were lower than the

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<sup>77</sup> The list of diabetes resources are from the GNYHA HITE SITE providers who list "diabetes" among their services or programs, plus a list of FQHCs and Community Health Centers servicing the area.

<sup>78</sup> NYAM primary data findings, as of September 15, 2014.

<sup>79</sup> [https://www.health.ny.gov/prevention/prevention\\_agenda/2013-2017/plan/chronic\\_diseases/focus\\_area\\_1.htm#sector](https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/plan/chronic_diseases/focus_area_1.htm#sector)



state and city rates.<sup>80</sup> 6.1% of all people in Brooklyn report experiencing serious psychological distress, compared to 5.5% in NYC overall. In NYC, people who are currently experiencing psychological distress are more likely to report binge drinking in the last 30 days than people who did not report psychological stress and are more than twice as likely to report being a current smoker. Coney Island, in particular, appears to be disproportionately impacted by psychological distress with 12% of residents reporting it, nearly double the rate for the Borough (6.1%). Those in Bay Ridge-Bensonhurst and Williamsburg-Bushwick also report high rates of psychological distress, with approximately one in ten residents surveyed reporting it. Rates in the remainder of the borough range from approximately 8.5% in Greenpoint to a minimum of 1.6% in Sunset Park. (See Appendix B, Table 33.)

The myriad of stresses on lower income Brooklyn residents were considered overwhelming to some and resulted in high levels of depression.<sup>81</sup> Low-income immigrant populations—whether they be Latino, Arab, African, Asian or Caribbean—may have additional stressors, as well as poorer access to care, due to insurance and language issues.<sup>82</sup>

While the geographic distribution of behavioral health resources (Appendix A, Map 86) appears to match the widespread distribution of behavioral health conditions among beneficiaries as indicated by service utilization,<sup>83</sup> questions as to the adequacy of these resources in terms of capacity were raised in focus groups and key informant interviews.<sup>84</sup> Access to mental health services is reported to be limited, although it might be the case that community organizations and residents are not aware of available services or how to access them. In addition, behavioral health issues generally carry greater stigma than other health concerns, which tends to limit use of services. Key informants and focus group participants both reported that many affected families try to address problems internally – or not at all.<sup>85</sup>

According to providers themselves, the system is fragmented, with possibly poorer integration within behavioral health services themselves than between physical and behavioral health. Behavioral health services are reported to be highly regulated by multiple agencies: Office for People with Developmental Disabilities (OPWDD), Office for Alcoholism and Substance Abuse Services (OASAS), and Office of Mental Health (OMH) with patient care being restricted according to the funding and regulatory agency—despite the frequency of co-occurring disorders. Thus, a mental health provider might be limited in the severity of illness that can be treated, the age of the patient, and other factors.<sup>86</sup>

## (2) Prevent Chronic Disease

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<sup>80</sup> 2008-2009 Behavioral Risk Factor Surveillance Survey (BRFSS) and Expanded BRFSS data as reported on the NYS Prevention Agenda 2013-2017 State and County Dashboard, accessed September, 2014.

<sup>81</sup> NYAM primary Data findings as of September 15, 2014.

<sup>82</sup> Ibid.

<sup>83</sup> These numbers reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories within a single Major Diagnostic Category. Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence Among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Dept of Health Data, 2012.

<sup>84</sup> NYAM primary Data findings as of September 15, 2014.

<sup>85</sup> Ibid.

<sup>86</sup> Ibid.

a. Promoting tobacco use cessation

The percentage of cigarette smoking among adults in Brooklyn is roughly on par with NYC and NYS rates (16.0% in Brooklyn versus 15.5% in NYC and 16.2% in NYS in 2012), but rates vary widely by neighborhood. (See Appendix B., Tables 37 and 47.) Nearly one-quarter (23%) of Coney Island residents report being a current smoker. High rates are also found in Williamsburg-Bushwick, Greenpoint, Bay Ridge-Bensonhurst, East New York-New Lots and Bedford Stuyvesant-Crown Heights, where rates range from approximately 16-19%. (See Appendix B., Tables 37 and 47.)

Culturally appropriate messaging and interventions will likely be important to achieve cessation among certain groups, including some immigrant groups. According to interviews with key informants and focus groups, smoking was considered problematic among particular populations, including Chinese and Arab immigrants.<sup>87</sup> Among Arab populations (living largely in Bay Ridge and Bensonhurst), smoking is considered an indicator of maturity and offering cigarettes a common courtesy.<sup>88</sup> In addition the increasing number of hookah bars in Arab neighborhoods, was also an issue of concern.<sup>89</sup>

b. Preventive care and disease management for chronic diseases not covered in Domain 3b

The leading cause of premature death in the borough is cancer.<sup>90</sup> Rates for some preventive screening measures in Brooklyn are on par with NYC and NYS, e.g., approximately half of adults aged 50-75 years received a colorectal cancer screening in the borough, compared to 52%% in NYC and 49% in NYS in 2012, the latest year for which data is available.<sup>91</sup> However, the borough lags in other related risk factors, such as obesity: the prevalence of obesity in Brooklyn is higher than in NYC or NYS, with just over one-quarter (27%) of all adults in Brooklyn obese, versus 24.2% in NYC and 23.6% in the state.<sup>92</sup> (See Appendix B, Table 46.) The obesity rate varies widely within Brooklyn with the highest rates in East New York (37.6%), high rates in Canarsie-Flatlands, Coney Island- Sheepshead Bay and Williamsburg-Bushwick (28.5% - 30.5%) and the lowest rates in the borough in Downtown-Heights-Slope (16.2%), where the fewest number of Medicaid beneficiaries reside in the Borough.<sup>93</sup> (See Appendix A, Maps 17-18.) Among children and adolescents, approximately one in five is obese (21.7%), on par with NYC, but higher than NYS (17.6%, excluding NYC) for the same time period.<sup>94</sup> (See Appendix B, Table 70.)

Community members and key informants recognized the high rates of obesity in Brooklyn, seeing it as a significant health concern: “*Obesity. Obesity. Obesity. That’s number one.*” [Flatbush focus group] They attributed obesity to dietary behaviors, which in turn were attributed to food availability, as well as lack of knowledge, lack of time, lack of money, and ingrained habits. Across lower income neighborhoods

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<sup>87</sup> NYAM primary data findings, as of September 15, 2014.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

<sup>90</sup> Premature deaths (< age 75) for the three years 2010-2012. Vital Statistics Data as of March, 2014, New York State Department of Health - Bureau of Biometrics and Health Statistics.

<sup>91</sup> Healthcare Effectiveness Data & Information Set (HEDIS), Medicaid Recipients, 2012, as presented by the New York State Department of Health, Office of Health Systems Management

<sup>92</sup> Community Health Survey, 2012. New York State Department of Health, 2012.

<sup>93</sup> It should be noted these rates are by UHF neighborhood, as rates are not available at the zip code level, so there could be variation within these UHF neighborhoods that is not captured here.

<sup>94</sup> Data years 2010-2011.

and communities, respondents described poor access to fruit and vegetables. Fast food and bodegas were abundant; in many communities if supermarkets were present quality was considered inferior. Although many communities did have farmers markets, they were often held just once a week and operating during regular business hours so were not accessible to working people. Price was also a concern, particularly in neighborhoods that were gentrifying or for participants that felt that only organic produce was healthy.<sup>95</sup>

### (3) Prevent HIV and Sexually Transmitted Diseases (STDs)

The fifth leading cause of premature death in the borough is AIDS. In fact, premature deaths in Brooklyn due to AIDS account for approximately one-third of all such deaths in NYC.<sup>96</sup> Among new cases of HIV, the virus causing AIDS, there are stark disparities in Brooklyn: the rate of new HIV diagnoses among black/African American people living in Brooklyn is more than five times the rate among whites in the borough (79.9 compared to 14.0 cases per 100,000 people).<sup>97</sup> The rate of new HIV diagnoses among Latinos living in Brooklyn is over 2.5 times that of whites (36.6 compared to 14.0 cases per 100,000 people).<sup>98</sup> In addition, primary data suggests many of the same populations that historically struggled with HIV are now facing a new challenge with Hepatitis C incidence and prevalence.<sup>99</sup>

Rates of other STDs such as gonorrhea, chlamydia and syphilis in Brooklyn outpace corresponding rates in NYS. In 2012, the rate of gonorrhea among women aged 15-44 years in Brooklyn was 1.3 times the State rate, and, among men, the Brooklyn rate was 1.4 times the State rate. The chlamydia rate among Brooklyn women was 1.3 times the State rate in the same time period.<sup>100</sup> Among Brooklyn men, the primary and secondary syphilis case rate was 1.7 times the State rate for 2012, and, among women, the rate was 1.4 times the State rate.<sup>101</sup> The neighborhoods of Bedford Stuyvesant-Crown Heights, Williamsburg-Bushwick, East New York, Flatbush, and Flatlands experience the greatest burden from disparities in HIV and STDs.

### (4) Promote Healthy Women, Infants and Children

The domain 4 project for this topic is specifically focused on reducing premature births. Low birth weight is correlated with premature birth and poor health outcomes. Over the period 2010-2012, the latest years for which data is available, the overall Low Birth Weight (LBW) rate for Brooklyn was 8.2%, compared to 8.5% for NYC and 8.1% for the state.<sup>102</sup> Across zip codes, the LBW rates ranged from 5.2% to 13.4%, with the highest rates found in a large cluster of zip codes extending through the north

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<sup>95</sup> NYAM primary data findings, as of September 15, 2014.

<sup>96</sup> The number 4 cause of premature death in NYS for the same time period is Lower Respiratory Disease, and the number 5 cause is Diabetes. Premature deaths (< age 75) for the three years 2010-2012. Vital Statistics Data as of March, 2014, New York State Department of Health - Bureau of Biometrics and Health Statistics.

<sup>97</sup> New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System - [HIV/AIDS Surveillance Data 2011]. [1 August 2014]. <http://nyc.gov/health/epiquery>.

<sup>98</sup> New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System - [HIV/AIDS Surveillance Data 2011]. [1 August 2014]. <http://nyc.gov/health/epiquery>.

<sup>99</sup> NYAM primary data findings, as of September 15, 2014

<sup>100</sup> Data for 2012 is not reported for men on the NYS Prevention Agenda 2013-2017 State and County Dashboard.

<sup>101</sup> 2012 data reported on the NYS Prevention Agenda 2013-2017 State and County Dashboard.

<sup>102</sup> New York State Vital Statistics Data 2010-2012, available at <http://www.health.ny.gov/statistics/chac/perinatal/county/kings.htm#kings>, accessed September, 2014.

central, central, and eastern parts of the borough in the neighborhoods of Bedford-Stuyvesant, Crown Heights, Flatbush, Brownsville, East New York, and Canarsie. These neighborhoods also experience the highest rates of infant mortality.<sup>103</sup> (See Appendix A, Map 6.)

Over the same period, the number of live births per year averaged 41,969 in Brooklyn, representing 35.5% of the births in New York City and 17.5% of the births in the state. The percentage of all births in Brooklyn that were Medicaid or self-pay was 65.9%, compared to 59.7% in NYC and 50.1% in the state; the percentage of Medicaid or self-pay births across Brooklyn zip codes ranged from 12.5% to 91.2%. (See Appendix A, Map 8.) The highest fertility rates are found in Bay Ridge, Borough Park, and Williamsburg.

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<sup>103</sup> Ibid.

### Background

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In April 2014, New York State finalized a waiver amendment from the Centers for Medicaid and Medicare Services that allows for reinvestment of approximately \$8 billion in projected savings resulting from the State's Medicaid Redesign Team reforms. These funds will be used to support transformation of the health care system in NYS to promote clinical and population health. The majority of the funds will be distributed through a Delivery System Reform Incentive Payment (DSRIP) program. A central part of DSRIP is the formation of Performing Provider Systems (PPS) - collaborative partnerships between hospitals, community-based organizations, and other health care providers across the full spectrum of care. The goal of DSRIP is to advance innovative projects designed to transform the safety net health care delivery system, improve population health, and reduce avoidable hospitalizations.

To inform the DSRIP project planning process, PPSs are required to complete a Community Needs Assessment (CNA). The New York Academy of Medicine (NYAM) was contracted to complete a borough-wide CNA in Brooklyn. The CNA was governed and monitored by a Steering Committee consisting of representatives from each of the following emerging PPSs: **A W Medical, Coney Island Hospital, Kings County Hospital, Lutheran Medical Center, Maimonides Medical Center, SUNY Downstate Medical Center, and Woodhull Medical and Mental Health Center.**

The specific aims of the CNA process are to:

- Describe health care and community resources,
- Describe communities served by the PPSs,
- Identify the main health and health service challenges facing the community, and
- Summarize the assets, resources, and needs for the DSRIP projects.

This report follows the New York State Department of Health (DOH) CNA Guidance dated June 6, 2014, and the section headers A-F, therein. Also attached here are appendices including Appendix A. Maps of Brooklyn, Appendix B. Tables, Charts and Graphs, and Appendix C. Primary Data Collection Instruments. Forthcoming is an Appendix D. with Primary Data Collection Findings. In addition to these appendices, NYAM will provide an electronic version of the tables with zip code (or UHF neighborhood, or Community District) level data, as available.

## SECTION A. DESCRIPTION OF HEALTH CARE RESOURCES AND COMMUNITY RESOURCES

### Sections i and ii

#### Health Care Resources

In Brooklyn, a large proportion of community members that were surveyed appear to be engaged regularly in primary and preventive care. Eighty-two percent of survey respondents reported having a “primary care provider or personal doctor;” 83.4% reported that there’s a place they “usually for health care, when it is not an emergency.” The majority of respondents (55.4%) went to a primary care doctor’s office, 13.5% went to a hospital outpatient clinic, 13.0% went to a community/family health center, and 8.8% went to a specialist doctor’s office. Eighty-four percent reported that the place they usually go is in Brooklyn; 10.8% reported that it is Manhattan. Eighty-four percent of respondents reported that their last routine check-up was within the last year. Approximately 60% had seen a dentist within the last year.<sup>104</sup>

However, there also seemed to be high use of the emergency room and episodes where respondents went without care. Close to 40% had been to the ER in the last year. Approximately 23% reported that there was a time in the last 12 months when they needed “health care or health services but did not get it.” The most common reasons were lack of insurance (44.4%), cost of co-pays (18.8%), other responsibilities (12.5%), and “couldn’t get an appointment soon or at the right time” (11.8%).<sup>105</sup>

Independent of the actual number of health care resources described in the sections below, strong themes that emerged from the primary data collection (key informant interviews and focus groups) included the perception that there were insufficient resources for those that were uninsured, wait times were often so long (3-4 months) that they discouraged optimal use of primary care services, and that access to providers with linguistic and cultural competency remains somewhat problematic, particularly for behavioral health services. In addition, there were concerns with quality of care, given the typical visit length, and perceptions that providers seek the easy solution—generally medication—rather than providing education or other supports that might be more effective.<sup>106</sup>

- **Hospitals**

There are 14 major hospital systems in Brooklyn: Beth Israel Medical Center; Brookdale Hospital Medical Center; Brooklyn Hospital Center - Downtown Campus; Coney Island Hospital; Interfaith Medical Center; Kings County Hospital Center; Kingsbrook Jewish Medical Center; Lutheran Medical Center; Maimonides Medical Center; New York Community Hospital of Brooklyn; New York Methodist Hospital; State University of New York Hospital Of Brooklyn; Woodhull Medical and Mental Health Center; and Wyckoff Heights Medical Center. (See Appendix B, Table 1.) These hospitals have bed capacity ranging from 134 to 711 with an average of 414 total beds per hospital. Many of them are located in North-Central Brooklyn in the neighborhoods of Williamsburg-Bushwick, Downtown–Heights–Slope, Bed Stuyvesant–Crown Heights and East Flatbush-Flatbush. Additionally, there are hospitals located in Sunset Park, Canarsie-Flatlands and Coney Island. Several neighborhoods, including Greenpoint, East New York, and

<sup>104</sup> NYAM Primary Data Findings, September 2014.

<sup>105</sup> Ibid.

<sup>106</sup> Ibid.

Bensonhurst-Bay Ridge, appear to have no hospitals. (See Appendix A, Map 79.) Of these hospitals, the HHC system hospitals (Kings, Coney Island, Woodhull) are the public, safety net hospitals, treating a large proportions of Medicaid and uninsured populations. The Veterans Administration also operates one hospital in the Borough.

In 2011, as part of state Medicaid redesign, the Brooklyn Health Systems Redesign Work Group convened to examine the healthcare delivery infrastructure in the Borough. The Work Group generated recommendations that particularly addressed six area hospitals: Brookdale Hospital Medical Center, Brooklyn Hospital Center, Interfaith Medical Center, Kingsbrook Jewish Medical Center, Long Island College Hospital, and Wyckoff Heights. Efforts to restructure the area health system per the recommendations have been ongoing, and have been tracked closely by advocacy and community groups, elected officials, and the media for their impact on the local economy as well as access to care. Reactions from community members include concerns that, with closures, remaining hospitals will receive an influx of patients that will overload the system.<sup>107</sup>

- **Ambulatory Surgical Centers**

There are approximately 16 ambulatory surgery centers and 103 office based surgical practices in Brooklyn, highly concentrated in the higher SES neighborhoods of Downtown – Heights – Slope, Greenpoint, Bensonhurst-Bay Ridge and Canarsie-Flatlands. These types of services are noticeably absent in many zip codes with high proportions of Medicaid beneficiaries and uninsured including Williamsburg-Bushwick and East New York. Clusters of ambulatory surgical centers and office surgical practices are also found in Sunset Park, Borough Park and Coney Island-Sheepshead Bay (See Appendix A, Map 62.)

- **Urgent Care Centers**

Because there is no standardized definition or regulation of urgent care centers in NYS, it is difficult to comprehensively catalog them (there also appears to be more recent rapid proliferation). According to GNYHA HITE, the American Academy of Urgent Care database, and a web-based search, there are 21 urgent care centers in Brooklyn. Although the urgent care model is attractive to many participants in the CNA, because they are reported to target privately insured patients, they tend to be concentrated in higher income communities and to be inaccessible to those with Medicaid and the uninsured.<sup>108</sup> (See Appendix B, Table 3 for full list.)

- **Health Homes**

There are four DOH designated ‘health homes’ in Brooklyn providing care management and service integration to Medicaid beneficiaries with complex chronic medical and behavioral health conditions. They are: Community Healthcare Network; Coordinated Behavioral Care, dba Pathways to Wellness; New York City Health and Hospitals Corporation; and Southwest Brooklyn Health Home, dba Brooklyn Health Home (Maimonides).

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<sup>107</sup> NYAM primary data findings, as of September 15, 2014

<sup>108</sup> Ibid.

- **Community Health Centers, including Federally Qualified Health Centers (FQHCs)**

There are approximately 19 FQHCs in Brooklyn: some are located in neighborhoods with high uninsured and Medicaid populations like Sunset Park and East New York and others are located in neighborhoods with lower or moderate Medicaid and Uninsured populations like Downtown–Heights–Slope and Bedford Stuyvesant–Crown Heights. However, there is a dearth of FQHCs in East Flatbush and Flatbush, which have some of the highest numbers of uninsured residents in the borough. In addition, there are approximately 319 diagnostic and treatment centers (D&TC) in Brooklyn, which include outpatient care for primary care visits and specialty clinics such as for dental, Obstetrics/Gynecology (Ob/Gyn). Of these, approximately half (55%) serve Medicaid and uninsured populations and are scattered relatively evenly throughout the borough, with clusters in Sunset Park, East New York, Williamsburg-Bushwick and Downtown – Heights – Slope.<sup>109</sup> (See Appendix A, Maps 54-57.)

We have hours of operation information for approximately 129 out of the 175 clinics who service Medicaid and Uninsured patients. Of those, approximately 40% list some weekend operating hours and approximately 55% list some evening hours.<sup>110</sup>

Among survey respondents in Brooklyn, about 13% reported that they go to a community/family health center for non-emergency healthcare services. In addition, approximately 14% of respondents said they access these services at a hospital-based clinic and about 9% at a private clinic.

- **Primary care providers including private, clinics, hospital based including residency programs**

According to the Center for Health Workforce Studies Physician Re-Registration data published online by the NYS Department of Health, there were 7,074 physicians in Brooklyn in 2013, or approximately 282 per 100,000 population, lower than the rate for NYC (428 per 100,000) overall.<sup>111</sup> In Brooklyn, the number of primary care and “mental health” physicians range considerably across zip codes. Pediatricians range from 1-109 by zip code with an average of 24.4 per zip code.<sup>112</sup> Ob/Gyn physicians range from 0-50 across zip codes, with an average of 10.8 per zip code. Other primary care physicians, including family practice, general practice and non-specialty internal medicine range from 0-159 by zip code, with an average of 54.4 per zip code.<sup>113</sup> Mental health physicians range from 0 - 89 across Brooklyn zip codes, with an average of 14.8 per zip code. The zip code with the largest number of mental health physicians (89) is 11203, where Kingsboro Psychiatric Center, Kings County Hospital Center, and SUNY Downstate Medical Center are located.<sup>114</sup>

#### Safety Net Physicians

The number of safety net physicians – defined as non-hospital based providers with at least 35% of all patient volume in their primary lines of business associated with Medicaid, dual-eligible or uninsured

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<sup>109</sup> This includes the New York State DOH “Safety Net Clinics” list, as of August 26, 2014, and clinics listed on HITE SITE that accept Medicaid or have a sliding-fee-scale or provide services to patients free of charge.

<sup>110</sup> NYAM primary data findings, as of September 15, 2014.

<sup>111</sup> Center for Health Workforce Studies, 2013 data, published by NYS DOH online at [http://www.health.ny.gov/health\\_care/medicaid/redesign/dsrip\\_workforce\\_information.htm](http://www.health.ny.gov/health_care/medicaid/redesign/dsrip_workforce_information.htm), accessed September 17, 2014.

<sup>112</sup> Ibid.

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.



patients - ranges considerably among zip codes in Brooklyn from 2 - 185, with an average of 36.5 per zip code.<sup>115</sup> Some neighborhoods with high Medicaid and uninsured populations, including Sunset Park, Brownsville and East Flatbush, have clusters of DOH designated safety net physicians. However, other neighborhoods with moderately high to high numbers of Medicaid and uninsured appear to have very few DOH designated safety net physicians. These include: East New York, Williamsburg – Bushwick and Canarsie. (See Appendix A, Maps 82-83.)

#### Physicians Assistants and Nurse Practitioners

In Brooklyn, there are approximately 895 nurse practitioners (35.2 per 100,000 population, compared to 47 per 100,000 in NYC<sup>116</sup> and 76<sup>117</sup> NYS), and 848 physician assistants (33.3 per 100,000 population compared to 36 per 100,000 in NYC and 61 in NYS.<sup>118</sup> Approximately 109 nurse practitioners and physician's assistants in Brooklyn are safety net providers.<sup>119</sup> These non-physician safety net providers vary considerably by zip code, from 0 to 22 in Brooklyn, with an average of 2.9 per zip code.<sup>120</sup> (See Appendix A, Maps 82-83.)

#### Physicians Serving Self-Pay Patients

According to Center for Health Workforce Data, there are approximately 390 physicians in Brooklyn whose self-pay patients comprise more than 30% of their panels.<sup>121</sup> Of these, 84 are primary care physicians, 21 are OB/GYNs, 23 are pediatricians (excluding pediatric sub-specialties), and 82 are “mental health” physicians. The number of these physicians ranges from 0-84 by zip code, with an average of 8.4 per zip code. “Mental Health” physicians whose panels are comprised of 30% or more self-pay tend to be clustered in Downtown–Heights–Slope. There is a cluster of this type of primary care physician in East Flatbush, yet they appear to be absent from several neighborhoods with high uninsured, such as East New York, Bushwick, Flatbush and Canarsie. (See Appendix A, Map 88.)

#### Access and Adequacy of Care, Providing Culturally Appropriate Care and Creating Linkages with Hospitals, Health Plans and Community Organizations

A number of physicians in Brooklyn have made efforts to build practices delivering culturally appropriate care. While a complete list of these physicians is unavailable, there is, for example, the Chinese American Independent Practice Association (CAIPA), the Chinese Community Accountable Care Organization, Inc. (CCACO) and Eastern Chinese American Physicians IPA, Inc. (ECAP), which serve patients in Brooklyn and throughout NYC. CAIPA is comprised of over 700 physician members in the greater New York area and has an office in Brooklyn.<sup>122</sup> Their specialties include acupuncture, cardiovascular disease, family practice, internal medicine, pediatrics, and dentistry. CAIPA also runs a

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<sup>115</sup> New York State Department of Health “Eligible Safety Net Physicians” list, as of August 26, 2014. Accessed at [http://www.health.ny.gov/health\\_care/medicaid/redesign/dsrip\\_safety\\_net\\_definition.htm](http://www.health.ny.gov/health_care/medicaid/redesign/dsrip_safety_net_definition.htm).

<sup>116</sup> Includes midwives

<sup>117</sup> Includes midwives

<sup>118</sup> Martiniano R, Siwach G, Krohl D, and Smith L. *New York State Health Workforce Planning Data Guide 2013*. Rensselaer, NY: Center for Health Workforce Studies, September 2013.

Report: [nys\\_health\\_workforce\\_planning\\_data\\_guide\\_2013.pdf](#) (5.9 MB)

<sup>119</sup> New York State Department of Health “Eligible Safety Net Physicians”, as of August 26, 2014

<sup>120</sup> Ibid.

<sup>121</sup> Center for Health Workforce Studies, Analysis of Physician Re-registration Data. 2008-2013 Blended.

<sup>122</sup> CAIPA Fact Sheet, provided by AW Medical Offices, September, 2014.

social day care center. CCACO has more than 200 physicians including 100 primary care physicians as well as specialist physicians in the areas of cardiology, gastroenterology, otolaryngology, endocrinology, gynecology/obstetrics, and pediatrics. The group serves 12,000 Medicare beneficiaries within the Chinese communities in the boroughs of Manhattan, Brooklyn and Queens. ECAP's primary care and specialty physicians serve an estimated 150,000 Medicare and Medicaid beneficiaries within the Chinese communities throughout New York City in the boroughs of Manhattan, Brooklyn and Queens. ECAP provides culturally competent and language specific care to patients in this underserved community that may otherwise have limited access to healthcare.<sup>123</sup>

In addition, hundreds of physicians in Brooklyn, represented by IPAs have worked toward creating better linkages with hospitals, health plans and community providers. For example, the Corinthian Medical IPA, which has over 1,200 physician members, approximately 13% of which are based in Brooklyn, has a mission to create a "network of medically accomplished and culturally sensitive physicians" and works with major health plans and government partners to ensure "complete and efficient care" for its patients.<sup>124</sup> They have formed an Accountable Care Organizations which is affiliated with the Balance Medical IPA, the Breukelen Community Network IPA, and the Excelsior IPA, the Queens County IPA and Queens County ACO; and have Medicaid contracts with seven major health plans in NYC.

Despite these efforts, feedback from the community suggests that ambulatory care providers' capacity, perceived quality, linkages to broader health care delivery systems, and insufficient evening and weekend service, leads to access issues in some high need areas, for example in northern and central Brooklyn.<sup>125</sup> The data, including responses from large numbers of key informants and focus group participants, also suggest there is a lack of culturally and linguistically competent specialists<sup>126</sup> and multi-specialty centers that could provide a 'one-stop shopping' experience that many patients seek. Of those surveyed, only 55.4% of Brooklyn respondents said that they access non-emergency healthcare services at a primary care doctor's office and about one quarter reported that primary care medicine was "not very available" or "not available at all." Similarly, nearly one-third of respondents reported that pediatric and adolescent services were "not very available" or "not available at all."<sup>127</sup>

- **Specialty medical providers including private, clinics, hospital based including residency programs**

In addition to primary care physicians, there are approximately 3,890 specialty physicians, or 153 per 100,000 population compared to 271 per 100,000 in NYC. These Brooklyn specialists include 853 Internal Medicine subspecialists (33.5 per 100,000 population), 171 general surgeons (6.7 per 100,000 population), 559 surgery subspecialists (22 per 100,000), 536 general psychiatrists (21.1 per 100,000 population) and 1,772 physicians other specialties (69.7 per 100,000 population).<sup>128</sup> Approximately 40%

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<sup>123</sup> "CCACO ECAP Background Information," provided by AW Medical Offices, September, 2014.

<sup>124</sup> "Corinthian Fact Sheet" provided by AW Medical Offices, September 2014

<sup>125</sup> NYAM primary data findings, as of September 15, 2014. Brooklyn Healthcare Improvement Project (B-HIP) "Final Report: Making the Connection to Care in Northern and Central Brooklyn," August, 2012.

<sup>126</sup> Ibid.

<sup>127</sup> NYAM primary data findings, as of September 15, 2014.

<sup>128</sup> Martiniano R, Siwach G, Krohl D, and Smith L. *New York State Health Workforce Planning Data Guide 2013*. Rensselaer, NY: Center for Health Workforce Studies, September 2013.

of Brooklyn survey respondents reported that medical specialists were “not very available” or “not available at all.”<sup>129</sup>

- **Palliative Care**

Based on a search through GNYHA HITE data, there are approximately 12 facilities serving Medicaid and the Uninsured in Brooklyn providing specialty pain management services. These include health centers, hospitals, home health agencies and nursing homes. Additionally, there are 23 facilities with hospice services (these include nursing homes, hospices and general hospitals) located in the borough.<sup>130</sup> Additional organizations providing pain management services may exist in the borough, but no exhaustive directory of such services could be identified.

- **Dental providers including public and private**

There are approximately 1,314 dentists, or 51.7 per 100,000 population compared to 74 per 100,000 population in NYC. In Brooklyn, there are approximately 520 dental hygienists (20.4 per 100,000 population).<sup>131</sup> Of these, there are 279 designated safety net dentists by NYS DOH.<sup>132</sup> The number of safety net dentists ranges from 0 – 33 across Brooklyn zip code, with an average of 7.3 per zip code. (See Appendix A, Maps 84-85.)

There are also approximately 54 dental clinics in Brooklyn, located primarily in northern/central Brooklyn, Flatbush and Sunset Park.<sup>133</sup> (See Appendix A, Maps 76-77.) Access to dental care was variable, with some CNA participants reporting easy access and others reporting limitations. More consistent were concerns regarding quality and access to optimal services.<sup>134</sup>

*I always go to the dentist but what I found is ... it is a whole 'nother story when you have to rely on the dental coverage of the healthcare [insurer]. They'd rather pull your teeth out than give you a cap. So now I have to turn around and take money out of my pocket because the medical coverage doesn't want to pay for it. 'We don't want to save your teeth---just pull it out!' It's not really about what's best for me, it's just what's expedient for the insurance company. [Flatbush focus group]<sup>135</sup>*

In addition, approximately one-third of survey respondents in Brooklyn identified dental services as “not very available” or “not available at all.”<sup>136</sup>

- **Rehabilitative services including physical therapy, occupational therapy, and speech therapy, inpatient and community based**

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<sup>129</sup> NYAM primary data findings, as of September 15, 2014.

<sup>130</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August 2014.

New York State Department of Health “Home Health and Hospice Profile,” as of July, 2014.

<sup>131</sup> Ibid.

<sup>132</sup> New York State Department of Health “Eligible Safety Net Physicians”, as of August 26, 2014

<sup>133</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August 2014.

<sup>134</sup> NYAM primary data findings, as of September 15, 2014.

<sup>135</sup> Ibid.

<sup>136</sup> Ibid.

Based on a review of the GNYHA HITE database, there are approximately 73 programs and services specializing in physical therapy, occupational therapy and/or speech therapy located in Brooklyn.<sup>137</sup> Clusters of these programs and services are found in Downtown-Heights – Slope and Sunset Park. Several neighborhoods have little to none of these services, including East Flatbush – Flatbush, Canarsie – Flatlands, Greenpoint and Red Hook. (See Appendix A, Map 63.) Please note that there may be more organizations providing these types of therapy, but no exhaustive directory of such services could be identified.

- **Behavioral health resources**
  - **Mental Health**

There are 536 general psychiatrists in Brooklyn, which is a rate of 21.1 per 100,000, much lower than the NYC rate of 49 per 100,000.<sup>138</sup> There are 4,899 social workers in Brooklyn, or 192.7 per 100,000 compared to 231 per 100,000 in NYC.<sup>139</sup>

Behavioral Health resources appear to be scattered throughout the Borough with a large cluster in the Downtown-Heights-Slope neighborhoods and other smaller clusters in Williamsburg-Bushwick, Bedford Stuyvesant-Crown Heights, East Flatbush, Canarsie and Sunset Park. (See Appendix A, Map 86.) The geographic distribution of behavioral health resources appears to match the widespread distribution of behavioral health conditions among beneficiaries as indicated by service utilization (see Appendix A, Map 31 and section, below); however, questions as to the adequacy of these resources in terms of capacity were raised in focus groups and key informant interviews. Approximately half (47.0%) of survey respondents reported that mental health services were “available” or “very available” in Brooklyn, compared—for example—to 74% who reported primary care was available.<sup>140</sup>

Per DSRIP behavioral health clinical improvement projects, the integration of behavioral health specialists into primary care clinics could help address this issue if it entails a net increase of behavioral health resources. Further, it may also address low behavioral health services utilization among some beneficiaries because of the stigma associated with having a behavioral health condition and seeking treatment at a behavioral health services provider location. Conversely, the integration of primary care services into existing behavioral health services settings addresses the high rates of co-morbidity between behavioral health and chronic physical health conditions for those currently utilizing behavioral health services.

#### Inpatient and Residential

There is one State-run adult psychiatric hospital in Brooklyn, Kingsboro Psychiatric Center, with 140 beds.<sup>141</sup> At Brooklyn general hospitals, there are 790 psychiatric inpatient beds, which is 40.2 beds per

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<sup>137</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August 2014.

<sup>138</sup> Martiniano R, Siwach G, Krohl D, and Smith L. *New York State Health Workforce Planning Data Guide 2013*. Center for Health Workforce Studies.

<sup>139</sup> Ibid.

<sup>140</sup> NYAM primary data findings, as of September 15, 2014.

<sup>141</sup> New York State Office of Mental Health “County Capacity and Utilization Data Book, Calendar Years 2012-2013,” prepared April, 2014.

100,000 compared to 41.0 in NYC.<sup>142</sup> In addition, there are a number of residential treatment facilities. (See Appendix B, Table 6.)

There are 186 mental health residential programs in Brooklyn, including apartment/treatment, children and youth community residences, congregate support, congregate treatment, single room occupancy (SRO) community residence, supported housing community service, and supported/SRO.<sup>143</sup> Certain neighborhoods are described as having an overabundance of such services, impacting on perceptions of safety and quality of life for other residents.<sup>144</sup> There is also a New York City Department of Health and Mental Hygiene administered Single Point of Access (SPOA) and a SPOA Brooklyn Housing Demonstration Project staffed by the Center for Urban Community Services, which has been operating in Brooklyn since August 2001.<sup>145</sup> In addition, there are 14 emergency programs: two CPEP crisis intervention programs, nine crisis intervention programs, one crisis resident program, and two home based crisis intervention programs. (See Appendix A, Map 86.)

### Outpatient and Support

There are 93 outpatient programs in Brooklyn, including 13 Assertive Community Treatment (ACT) programs, 67 clinic treatment programs, six comprehensive PROS with clinical treatment programs, one continuing day treatment (CDT) program, three day treatment programs, one intensive psychiatric rehabilitation treatment program and two partial hospitalization programs. Additionally, there are 71 mental health support programs in Brooklyn, including family support services, supportive case management, vocational services, adult home supportive case management (SCM), Home and Community Based Services (HCBS) waiver services, Psychosocial Clubs (Club Houses). There are 23 targeted case management (TCM) programs serving 3,726 patients as of August, 2011 (the most recent available date).<sup>146</sup> (See Appendix A, Map 86.)

### Youth

There are 100 mental health programs for youth in Brooklyn: 12 emergency programs, three inpatient programs including one residential treatment facility (RTF), five other residential programs, 51 outpatient programs including three day treatment programs, 29 support programs including two HCBS waiver programs, and a Children's Single Point of Access (CSPOA) program.<sup>147</sup> (See Appendix A, Map 86.) According to key informants with expertise in the field, there is a severe shortage of pediatric mental health professions in Brooklyn—and the nation.

*There's a huge crisis nationwide is the lack of child and adolescent psychiatrists. It is a crisis in this country right now that we don't have enough child and adolescent psychiatrists. The sad thing from my perspective is that New York State is dealing with this by saying well,*

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<sup>142</sup> NYS DOH Hospital Profiles, <http://profiles.health.ny.gov/hospital>, accessed September 2014

<sup>143</sup> New York State Office of Mental Health, "Local Mental Health Programs in New York State" Directory, as of August, 2014.

<sup>144</sup> NYAM primary data findings, as of September 15, 2014

<sup>145</sup> New York State Office of Mental Health web site and the Center for Urban Community Services at <http://www.cucs.org>.

<sup>146</sup> New York State Office of Mental Health, "Targeted Case Management Programs Location with Program Capacity," August 2011.

<sup>147</sup> New York State Office of Mental Health, "Local Mental Health Programs in New York State" Directory, as of August, 2014, and the New York State Office of Mental Health web site.

*“Pediatricians can, no, pediatricians always could prescribe but we’re going to give training to pediatricians to be able to meet the needs that the child and adolescent psychiatrists could do.” So, that’s putting more stuff on to pediatricians ... which they really don’t get paid for. It’s not fair for a pediatrician to have no support and be told you have to figure out how to help this mother deal with the behavioral needs of her child.*

- **Alcohol/Drug Use Resources**

Based on GNYHA and NYC Dept. of City Planning data, there are approximately 111 alcohol/drug use programs and services in Brooklyn.<sup>148</sup> Many of these programs are clustered in north/central Brooklyn and very few programs are located in Flatbush, Canarsie-Flatlands and Southwest Brooklyn. (See Appendix A, Map 62.) More than half (59.2%) of survey respondents identified substance abuse services as being “not very available” or “not available at all.”

#### Inpatient

There are 30 inpatient alcohol/drug use programs in Brooklyn: 6 community residence programs with a total capacity of 321 beds, six medically managed detoxification programs with a total capacity of 104 beds, one medically supervised withdrawal program with 10 beds, two inpatient rehabilitation programs with a total capacity of 80 beds, eight intensive residential programs with a total capacity of 601 beds and one residential supportive living program with a total capacity of six beds.<sup>149</sup> (See Appendix A, Map 62.)

#### Outpatient

There are 81 outpatient alcohol/drug use programs in Brooklyn: three syringe exchange programs, 40 medically supervised withdrawal programs, 18 methadone maintenance/treatment programs with a total capacity of approximately 5,950 patients, and one outpatient rehabilitation program.<sup>150</sup> (See Appendix A, Map 62.) Additionally, there are approximately 192 doctors certified to prescribe buprenorphine in Brooklyn.<sup>151</sup>

- **Skilled Nursing Facilities and Assisted Living**

There are 42 nursing homes with a total certified bed capacity of 10,426 scattered relatively evenly throughout the borough. However, there appear to be no nursing homes in the northernmost part of the borough in Greenpoint and Williamsburg, nor in Canarsie-Flatlands.<sup>152</sup> (See Appendix A, Maps 64-65.)

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<sup>148</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August 2014 and New York City Department of City Planning “Selected Facilities and Program Sites,” as of June, 2014. Data from OASAS with this information was publicly unavailable as of September 2014.

<sup>149</sup> Ibid.

<sup>150</sup> Outpatient capacity information was only available for Methadone Maintenance/Treatment Programs. Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August 2014 and New York City Department of City Planning “Selected Facilities and Program Sites,” as of June, 2014.

<sup>151</sup> Substance Abuse and Mental Health Services Administration “Physicians Certified for Buprenorphine Treatment,” accessed July, 2014.

<sup>152</sup> New York State Department of Health “New York State Nursing Home Profile,” as of July, 2014.

There are 22 Adult Care Facilities in Brooklyn, with a total capacity of 3,120 beds. Six of these facilities have Assisted Living Programs (ALP), with a total capacity of 442 beds. In addition, three programs have Assisted Living Residence (ALR) bed capacity of 470, enhanced ALR bed capacity of 413 and special needs ALR bed capacity of 104.<sup>153</sup> There is one cluster of adult care facilities in Coney Island–Sheepshead Bay, where the percentage of dual-eligible beneficiaries (of total beneficiaries) is relatively high. The rest of these facilities are scattered throughout the borough and appear to be absent from several areas with relatively high proportions of dual-eligible beneficiaries including Downtown-Heights-Slope and Greenpoint. (See Appendix A, Map 69.)

- **Home Care Services**

There are 31 certified home health agencies (CHHA), 11 long term home health care agencies (LTHHC), and seven home care hospice agencies that service Brooklyn residents. Of these agencies, 19 CHHAs, five LTHHCs, and four home care hospices, are located in Brooklyn.<sup>154</sup> Approximately 40% of survey respondents reported that home health care was “not very available” or “not available at all.”<sup>155</sup>

- **Laboratory and radiology services including home care and community access**

Based on the NYS DOH Health Care Reform Act (HCRA) provider data, there are three D&TC-based clinical laboratories and 25 hospital-based clinical laboratories in Brooklyn.<sup>156</sup> In addition, there are approximately 14 health centers with radiology services that provide care to those with Medicaid and the uninsured.<sup>157</sup> There may be additional organizations in Brooklyn providing laboratory and radiology services, but no directory or inventory of such services appears to exist.

- **Specialty developmental disability services**

There are approximately 493 developmental disability programs in Brooklyn and the majority (76%) of them are residential, with a total bed capacity of 2,901 beds. These include supervised community residences, individualized residential alternative programs, developmental centers and intermediate care facilities. There are also 116 non-residential programs including day treatment programs, day training programs, geriatric services, clinic treatment programs, day habilitation programs, evaluation and diagnosis programs, counseling and crisis intervention programs, behavior management programs, supported work/employment training programs and recreation programs.<sup>158</sup> These resources are located throughout all parts of the borough, with many non-residential programs in Downtown – Heights – Slope and clusters of both residential and non-residential programs in Central and Southwest Brooklyn. (See Appendix A, Map 66.)

- **Specialty services providers such as vision care and DME**

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<sup>153</sup> New York State Department of Health, “Adult Care Facility Profiles,” as of July, 2014.

<sup>154</sup> New York State Department of Health “Home Health and Hospice Profile,” as of July, 2014.

<sup>155</sup> NYAM primary data findings, as of September 15, 2014.

<sup>156</sup> New York State Department of Health “HCRA Provider List,” as of July, 2014.

<sup>157</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August 2014. New York City Department of City Planning “Selected Facilities and Program Sites,” as of June, 2014. New York State Department of Health, 2014. Health Resources Services Administration “Health Care Service Delivery and Look-Alike Sites,” accessed August, 2014. New York State Department of Health “Safety Net Clinics,” as of June, 2014.

<sup>158</sup> New York City Department of City Planning “Selected Facilities and Program Sites,” as of June, 2014.

There are 202 optometrists in Brooklyn (7.9 per 100,000 population)<sup>159</sup> and approximately 21 health centers serving Medicaid beneficiaries and the uninsured population provide eye care services.<sup>160</sup> Among survey respondents, about 41% reported that vision services were “not very available” or “not available at all.”<sup>161</sup>

- **Pharmacies**

There are 140 NYS DOH designated safety net pharmacies located in Brooklyn. Of their total prescriptions, 92 pharmacies have between 35% and 50% Medicaid prescriptions, 36 have between 50% and 75% Medicaid prescriptions and 12 have 75% or more Medicaid prescriptions. The total number of Medicaid prescriptions for these pharmacies ranges from 4,000 to 199,351 with an average of 49,034. (See Appendix B, Table 7 for a list of safety net pharmacies in Brooklyn.)

- **Local Health Departments**

The New York City Department of Health and Mental Hygiene is the local health department for New York City, including Brooklyn. DOHMH has a District Public Health Office located in Brooklyn, designed to serve high-need areas of the borough. In addition to the population health projects of DOHMH in the borough, the Brooklyn DPHO also focuses on two major population health initiatives: maternal and infant health and promoting physical activity and good nutrition. In addition, the DeBlasio administration has recently established a new Center for Health Equity within the DOHMH that was created to oversee the Brooklyn DPHO (as well as the DPHOs in East Harlem and the South Bronx) and implement new efforts to address health disparities. For DSRIP projects, DOHMH has offered to serve a technical assistance role to PPS in the borough, particularly regarding population health projects.

- **Managed Care Organizations**

There are twelve Medicaid Managed Care (MMC) plans including three HIV Special Needs Plans (SNPs) serving Brooklyn.<sup>162</sup> Many of these plans also serve members in other counties. While plan enrollment data is not available at the county level, the nine MMC plans serving Brooklyn had a total NYC enrollment of 2.25 million members as of 2012.<sup>163</sup>

- **Area Health Education Centers (AHECs)**

The Area Health Education Center serving Brooklyn, the Brooklyn Queens Long Island Area Health Education Center (BQLI-AHEC), is located in Downtown Brooklyn and hosts the following programs: Community Health Experience, a summer program for medical school students interested in gaining

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<sup>159</sup> Center for Health Workforce Studies.

<sup>160</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August 2014. New York City Department of City Planning “Selected Facilities and Program Sites,” as of June, 2014. New York State Department of Health, 2014. Health Resources Services Administration “Health Care Service Delivery and Look-Alike Sites,” accessed August, 2014. New York State Department of Health “Safety Net Clinics,” as of June, 2014.

<sup>161</sup> NYAM primary data findings, as of September 15, 2014.

<sup>162</sup> New York State Department of Health Division of Managed Care and Program Evaluation “County Directory of Managed Care Plans,” as of July, 2014.

<sup>163</sup> United Hospital Fund, “Medicaid Managed Care Enrollment by Region,” 2012.



exposure to community and public health experiences through placement in a community organization and specialized lecture series; the Medical Academy of Science and Health (MASH), a camp promoting health professions to students in grades six through nine; the Summer Health Internship Program, a summer internship placement program for high school and college students; Student/Resident Experiences and Rotations in Community Health (SEARCH), a program for health profession students and residents; and the Nursing Club, which exposes high school students to health professions including, but not limited to nursing.

### Community Based Resources

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- **Food Pantries, Community Gardens, Farmers' Markets**<sup>164</sup>

There are 256 food banks in Brooklyn, including 202 food pantries and 52 soup kitchens.<sup>165</sup> In addition, there are 86 community gardens and 65 farmers markets in Brooklyn, many of which are heavily concentrated in north and central Brooklyn, especially in higher SES neighborhoods like Greenpoint, Downtown–Heights–Slope and Williamsburg–Bushwick.<sup>166</sup> Comparatively, there is a dearth of these types of resources in the southern part of the Borough, most notably in Canarsie – Flatlands, where there appear to be no farmers markets. (See Appendix A, Map 70.) Community members are concerned about farmers' market accessibility and the quality of food available from food pantries.<sup>167</sup> Although there is apparently some variability (by host organization) in the selection of food available at pantries, much of it is reported to be highly processed and not appropriate for individuals that have to restrict their food or salt intake.<sup>168</sup>

Across lower income neighborhoods and communities, respondents described poor access to fruit and vegetables. Fast food and bodegas were abundant; in many communities if supermarkets were present quality was considered inferior. Although many communities did have farmers markets, they were often held just once a week and operating during regular business hours so were not accessible to working people. Price was also a concern, particularly in neighborhoods that were gentrifying or for participants that wanted to eat organic produce.<sup>169</sup> Typical of comments heard from many key informants and residents of low income Brooklyn neighborhoods:

*If you really look at East New York or like, a lot of neighborhoods where there's people like us, if you look at the stores in walking distance it's like McDonalds or Burger King or Chinese food. The farmers markets and stuff like that, you have to get on a train or bus to get access to those places. So obviously a lot of people would be tempted to go to get junk food, like Chinese food or fried chicken, stuff like that, and get fat. [Flatbush focus group]*

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<sup>164</sup> If an organization provides multiple services, they are included under each header for which they provide services.

<sup>165</sup> Food Bank for New York City "Food Bank Locator," Accessed July 2014.

<sup>166</sup> New York State Department of Agriculture & Markets "New York State Farmers' Markets," accessed July 2014. New York City Department of Health and Mental Hygiene "New York City Farmers Markets," accessed July 2014.

<sup>167</sup> NYAM primary data findings, as of September 15, 2014.

<sup>168</sup> Ibid.

<sup>169</sup> Ibid.

In addition, approximately 40% of survey respondents reported that healthy food was “not very available” or “not available at all” in their neighborhood.

- **Financial assistance and support including clothing and furniture banks**

Approximately 99 organizations throughout Brooklyn provide some type of financial assistance to their participants. Some of these organizations serve special populations including but not limited to: pregnant women, mothers and children, adults with mental illness, people living with HIV/AIDS (PLWHA), homeless families, immigrants and older adults. There are two Financial Empowerment Centers that offer free, individual, professional financial counseling located in Brooklyn: one in Central Brooklyn and another in East New York/New Lots at Partnership for the Homeless. There are also approximately 29 WIC programs throughout Brooklyn.<sup>170</sup>

Additionally, based on GNYHA data, at least 21 community-based organizations in Brooklyn provide “material goods” services, free clothing and/or furniture and about five community-based organizations provide utility assistance. There are also four clothing banks located in Brooklyn in Park Slope, Bay Ridge, Bedford-Stuyvesant and Bushwick.<sup>171</sup>

- **Individual Employment Support Services**

About 100 organizations in Brooklyn provide employment/vocational support services to varying populations including but not limited to: young adults, Asian-Americans, veterans, male homeless individuals, out-of-school and unemployed youth and pregnant or parenting women.<sup>172</sup> However, approximately two-thirds (66.7%) of survey respondents reported that job training was “not very available” or “not available at all” in their community.<sup>173</sup>

- **Housing services, including advocacy groups and housing providers, including those for the homeless population**

There are approximately 85 non-profit or public agencies and community based organizations that provide housing services of varying types located in Brooklyn. These include intake and community centers; housing programs including emergency shelters, temporary housing and permanent supportive housing programs; case management agencies; public and non-profit clinics; and advocacy, empowerment and counseling organizations. Many of these agencies provide housing services to special populations, including but not limited to: victims of domestic violence, PLWHA, people with mental illness, homeless veterans, older adults, immigrants, chronically street-homeless, ex-offenders, adolescents aging out of foster care and people with a history of substance use.<sup>174</sup> In addition, 15

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<sup>170</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

<sup>171</sup> Seedo, Earn Benefits Online “Clothing Resources Spreadsheet, accessed August, 2014.

<sup>172</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

<sup>173</sup> NYAM primary data findings, as of September 15, 2014.

<sup>174</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

organizations provide housing or rent assistance. There are approximately 103 NYCHA Developments and 146 NYCHA Community Facilities located in Brooklyn.<sup>175</sup> Housing and homeless resources, including Homebase locations, housing and rent assistance programs, NYCHA community facilities and shelters, appear to be located predominantly in north and central Brooklyn. They are comparatively scarce in southern Brooklyn, even in neighborhoods with high numbers of Medicaid and uninsured like Sunset Park. (See Appendix A, Maps 88-89.) Additionally, among survey participants, 69.5% identified affordable housing as “not very available” or “not available at all.”

- **Not for profit health and welfare agencies**

There are approximately 528 non-profit social service agency sites scattered throughout Brooklyn.<sup>176</sup> Yet, approximately 40% of survey respondents reported that social services were “not very available” or “not available at all.”

- **Local governmental social service programs**

There are 68 local governmental agencies located in Brooklyn such as food stamp programs, Medicaid offices, job centers, the Brooklyn Community Service Center and the Veterans Service Center. They are predominantly located in northern/central Brooklyn in the neighborhoods of East New York, Downtown–Heights–Slope and Williamsburg–Bushwick.<sup>177</sup> (See Appendix A, Maps 80-81.)

- **Community Outreach Agencies**

There are approximately 32 organizations in Brooklyn including health centers, faith-based organizations, care management agencies and community service organizations, among others, that conduct outreach activities ranging from mobile health vans to homeless outreach, based on an analysis of GNYHA HITE database. They serve many different populations including but not limited to: low-income residents, older adults, immigrants and people who speak English as a second language (ESL), active and former drug users, people living with mental illness, PLWHA and victims and survivors of domestic violence.<sup>178</sup>

- **Transportation services**

Based on analysis of GNYHA HITE database, there are approximately 15 organizations in Brooklyn that provide varying types of transportation services. Eight of these provide transportation for seniors, 2 provide transportation services for the disabled and two organizations provide taxi or car services for their participants.<sup>179</sup> While there may be other organizations that provide transportation services to

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<sup>175</sup> New York City Housing Authority (NYCHA) “NYCHA Development Data Book,” as of 2014. New York City Housing Authority “Directory of NYCHA Community Facilities,” as of 2013.

<sup>176</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

<sup>177</sup> Ibid.

<sup>178</sup> Ibid.

<sup>179</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

their participants, no directory or inventory of these services seems to exist. There are many concerns regarding ease of access to these services, and a perception that the process is complicated and unreliable, “a nightmare.”<sup>180</sup> Comments from focus group participants included:

*I gotta live my own life, I gotta go to school, I gotta work but now I gotta get up in the morning and make sure that [my aunt] gets her medication, make sure I check her sugar. She was supposed to get Access-a-Ride to go somewhere and they had sent her a letter telling her that they'd have a car pick her up and she's waiting there but the car never showed up. And then she talked to the people and they said you have to look at the letter on the bottom and it says that you have to call two days in advance and then she misses her doctor's appointment. [Flatbush focus group]*

*You have an appointment at a certain time and they don't get you there. They say they picked you up and they didn't.*

There were also isolated reports of problems with basic transit in some communities and concerns that some public transit is not accessible to the disabled. For example:

*Transportation in this area, especially because it's such a commercial area, this is considered a commercial area, there are just legendary tales about how the buses just don't run. And when we have snowstorms and we have the winters that we've had, or the erratic tropical storms, this is an area that is down. I don't know if anybody even takes on the fact that Brownsville exists when we have blackouts, brownouts, because it's one of the last communities to come up again. Like the lights go on, the plows come through. You can have snow on the street for two days before you actually see the plow mark. ... We do have all the housing, New York City housing, and imagine New York City housing, streets not paved, no one could get to the grocery store, because the grocery store owners couldn't get into the community, it just gets shut down.*

However, over 90% of survey respondents identified accessible transportation as “available” or “very available.”<sup>181</sup>

- **Religious service organizations**

There are many faith based institutions and religious service organizations providing care and resources in Brooklyn. We have included these institutions and organizations throughout our inventory of community based resources listed and accounted for here. Although faith organizations provide a number of valuable services, community members and leaders caution that they have their own priorities and perspectives so are not appropriate for all populations and the issues they face.<sup>182</sup>

- **Specialty community-based and clinical services for individuals with cognitive or developmental disabilities**

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<sup>180</sup> NYAM primary data findings, as of September 15, 2014.

<sup>181</sup> Ibid.

<sup>182</sup> Ibid.

Both the community based and clinical resources for individuals with intellectual and developmental disabilities are included in the health care resources section above. Serving individuals with developmental disabilities is considered to be challenging in the changing healthcare environment, as they commonly have multiple co-morbidities and appointment length is extended due to issues around comprehension.<sup>183</sup>

- **Peer, Family Support, Training and Self- Advocacy Organizations**

Based on a review of the GNYHA HITE database, there appear to be approximately 29 organizations in Brooklyn that offer peer, family support and self-advocacy programs and services. These organizations serve many populations with psychosocial issues including individuals with mental illness, disabilities, alcohol/drug use, involvement in the criminal justice system and older adults, and their families, among others.<sup>184</sup> There may be additional organizations providing these services as part of their broader menu of services, but a complete directory with that information does not appear to exist.

- **NAMI**

The Brooklyn National Alliance on Mental Illness (NAMI), is located in East Flatbush and serves the Greater Brooklyn area. NAMI offers family, peer, teacher and provider education, training and support through support and recovery groups and other programs.<sup>185</sup>

- **Youth Development Programs**

There are 574 Department of Youth and Community Development (DYCD)-funded programs located in Brooklyn of the following types: 402 after-school programs; 50 family support programs including housing programs and fatherhood initiatives; 57 employment and/or internship programs; 96 summer programs and 11 runaway and homeless youth programs, among others. There are also 46 Mayor's Office Programs in Brooklyn offering education, employment, health and justice programming. These include but are not limited to: two Cure Violence programs, ten Cornerstone Mentoring programs, two Nurse-Family Partnership programs, five Young Adult Internship Programs and four Young Adult Literacy Programs.<sup>186</sup> Both DYCD-funded and Mayor's Office programs seem to be clustered mainly in north/central Brooklyn and less densely scattered throughout southern Brooklyn. (See Appendix A, Maps 90-91.) In addition, there are approximately 90 organizations including public libraries, YMCAs, Boys and Girls Clubs, Youth Clubs, Recreation Centers, and other types of community-based organizations that offer after-school and/or youth group services in Brooklyn. Forty-three (43) organizations in Brooklyn offer summer youth programs and 38 organizations offer tutoring.<sup>187</sup>

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<sup>183</sup> Ibid.

<sup>184</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

<sup>185</sup> National Alliance on Mental Illness (NAMI) Website.

<sup>186</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

<sup>187</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

- **Foster Children Agencies**

There are 49 Administration for Children’s Services (ACS) Community Partners providing preventive and family treatment and rehabilitation services throughout the borough, and six ACS Child Protective Borough Offices located in Brooklyn located in Central Brooklyn, East New York/New Lots, Greenpoint, and Northwest Brooklyn.<sup>188</sup>

- **Education: schools, community-based education programs including programs for health professions/students, libraries**

There are approximately 903 schools in Brooklyn, including 254 public elementary schools, 87 public middle schools, 24 junior/senior high schools, 110 public high schools, 61 public charter schools, and 333 private/parochial schools. In additions, there are five public colleges located in Brooklyn: the SUNY Health Science Center at Brooklyn, Brooklyn College (CUNY) and Medgar Evers College (CUNY) in Flatbush, Kingsborough Community College (CUNY) in Southern Brooklyn and the NYC College of Technology (CUNY) in Northwest Brooklyn.<sup>189</sup>

There are also 192 community-based organizations in Brooklyn providing education services such as GED/High School Equivalency (HSE) preparation, ESL, read aloud programs, cultural programming, tutoring and recreational activities. Some of these organizations offer education services to special populations including children with serious emotional disturbances, children with cerebral palsy, at-risk youth, and immigrants, refugees and asylees.<sup>190</sup> There are approximately five Associates’ Degree Nursing programs and two Community Health Worker programs located in Brooklyn.<sup>191</sup> There are 60 public libraries in Brooklyn, including branch and central locations.<sup>192</sup> Two Brooklyn Public Library central locations are in Downtown – Heights – Slope and near Prospect Park, and 58 Brooklyn Public Library branch locations are scattered somewhat evenly throughout the borough. (See Appendix A, Maps 92-93.)

- **Reentry Organizations and Alternatives to Incarceration**

Based on a review of GNYHA HITE database, there are approximately 15 organizations that offer criminal justice offender services located in Brooklyn. These services include: outpatient substance use treatment, volunteer mentoring to at-risk youth, programming specific to women, housing placement, job skills training, case management, referrals to mental health and medical treatment, youth-specific programming and employment.<sup>193</sup>

- **HIV prevention/outreach and social service programs, including Ryan White programs**

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<sup>188</sup> Administration for Children’s Services (ACS) “ACS Community Partners”

<sup>189</sup> New York City Department of City Planning “Selected Facilities and Program Sites,” as of June, 2014.

<sup>190</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

<sup>191</sup> New York State Education Department Office of the Professions “New York State Nursing Programs” and New York State Department of Health “Community Health Worker Programs,” Accessed July, 2014.

<sup>192</sup> New York City Department of City Planning “Selected Facilities and Program Sites,” as of June, 2014.

<sup>193</sup> Greater New York Hospital Association (GNYHA) Health Information Tool for Empowerment (HITE) data, as of August, 2014.

There are approximately 97 organizations in Brooklyn with specialty HIV/AIDS services, including health centers, care management agencies, harm reduction programs, housing providers, hospital-based programs, day treatment programs, and multiservice providers.<sup>194</sup> Many of these organizations serve special populations, including but not limited to: men who have sex with men (MSM), teens, women, victims of sexual violence, substance users and veterans.<sup>195</sup> The HIV/AIDS Resources map suggests an apparent good geographic alignment between the residence zip codes of Medicaid Beneficiaries with an HIV/AIDS service utilization in the Calendar Year and the location of HIV/AIDS resources. (See Appendix A, Map 74.)

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<sup>194</sup> Greater New York Hospital Association Health Information Tool for Empowerment Data, as of August, 2014.

<sup>195</sup> Ibid.

### Section iii Domain 2 Metrics

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See Attached Appendix B, Domain 2 Tables.

## SECTION B. DESCRIPTION OF THE COMMUNITY TO BE SERVED

### Section i: Demographics of the Population in Brooklyn

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#### Population Size, Age, Sex, and Race/Ethnicity

Brooklyn's large population of 2.5 million is approximately one-third of the total NYC population, and approximately 13% of the statewide population.<sup>196</sup> Approximately two-thirds (64.7%) of Brooklyn's population are working age adults, aged 18-64; approximately one quarter (23.7%) are children aged 0-17, and just over ten percent (11.6%) are older adults, aged 65+.<sup>197</sup> The age of Brooklyn's population approximately mirrors that of NYC and NYS, with a slightly lower proportion of older adults in Brooklyn (11.6%) than either NYC (12.2%) or NYS (13.6%).<sup>198</sup> Slightly more than half of the Brooklyn population is female, roughly analogous to the populations of NYC and NYS.<sup>199</sup> (See Appendix B, Tables 10-11.)

Brooklyn's population is racially and ethnically diverse. Approximately one in three (34.2%) people in Brooklyn identify as Black or African American, a much larger proportion than in NYC as a whole (25.1%) or NYS (15.7%).<sup>200</sup> In fact, the Black/African American population in Brooklyn accounts for slightly more than one-quarter (28.3%) of the total Black/African American population in New York State.<sup>201</sup> The Black/African American population includes US born and immigrant populations, including significant numbers from the Caribbean islands.<sup>202</sup> Approximately one-fifth (19.8%) of the Brooklyn population identifies as Hispanic/Latino of any race, accounting for approximately 14.5% of this population statewide.<sup>203</sup> Approximately one in ten (10.6%) people in Brooklyn identify as Asian.<sup>204</sup> (See Appendix B, Table 12.)

Although there are many overlaps, each of these immigrant communities has unique needs related to culture, language, education, and economics—as well as unique strengths, which may include close family ties and strong work ethics. Comments from key informants representing diverse ethnic groups commonly emphasize some combination of difficulties meeting basic needs, prioritization of work and

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<sup>196</sup> US Census American Community Survey, 5 year, 2008-2012.

<sup>197</sup> Ibid.

<sup>198</sup> Ibid.

<sup>199</sup> Ibid.

<sup>200</sup> Ibid.

<sup>201</sup> Ibid.

<sup>202</sup> NYAM primary data findings, as of September 15, 2014.

<sup>203</sup> US Census American Community Survey, 5 year, 2008-2012.

<sup>204</sup> Ibid.



children, economic constraints, lack of sufficient information on health and health services, and stigma.<sup>205</sup>

### Arab and North African Community

The Arab and North African community in Sunset Park and Borough Park areas is diverse, with origins that include Egypt, Palestine, Iraq, Syria, Yemen, Morocco, and Algeria. Socioeconomically, there is variability as well, including a portion without education or English language skills and a portion that is academically and economically very successful. The community is also longstanding, so includes families that have been in the area for decades, as well as relatively recent immigrants.

Consistent with other communities, diabetes and obesity are common concerns. Participants reported preparing food at home using healthy ingredients, although foods tend to be fried. As described below, cultural traditions tend to both discourage a healthy weight and limit opportunity for exercise. However, such beliefs were not held by everyone and opportunities to exercise were found within the home and at local gyms.<sup>206</sup>

*If a woman is thin, she's like, well, what are you going to do with this woman? So they encourage women to eat and be big. Of course, back home you've got to be able to work on the land. You've got to be able to support your family and for your family you've got to have a strong...It's not about your dress and makeup and sitting looking pretty, about being what's in this country. Back home it's about real life. It's about a partnership and making things meet. And it's not about losing weight. It's about how you can gain weight. So that's what it is.<sup>207</sup>*

*Exercise is not one of the issues which they care for because they're working all the time, and the older people who are 50 years old or 45 years, you can't have shorts and a jogging suit and go to Shore Road and run ... So exercise is not part of their "culture," quote/unquote. Especially for women. Now that's a big issue for women because where will they go where they are covered? You can't run in the street with the shorts. So now we're trying to get them involved in exercise through places like Lucille Roberts and Harbor, which provides a women-only window for two hours.<sup>208</sup>*

In addition to obesity, smoking is a very significant concern within the Arab community. Smoking is common and encouraged by community norms. In addition, there is a lack of health materials in Arabic that might be used to explain the risks of smoking.<sup>209</sup>

*People back home smoke like chimneys. And now we have this new phenomenon that the hookah cafés are popping up all over the place. And our young and old are getting addicted to them. And every corner in my community you will see a hookah bar. And that's a real health concern to us. And actually we wanted to bring a resolution to City Council to close them down and we were unable to do that. So the only thing we were able to do is pass a resolution to regulate them. That*

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<sup>205</sup> NYAM primary data findings, as of September 15, 2014.

<sup>206</sup> Ibid.

<sup>207</sup> Ibid.

<sup>208</sup> Ibid.

<sup>209</sup> Ibid.

*means certain laws have to apply to them because in some cafés, I will see kids who are 14-15 are there. And that's a major concern to our community.*<sup>210</sup>

Focus group participants reported that mental health issues are common and tend to go unaddressed because of stigma and lack of information. *"We think it's embarrassing,"* explained one focus group participant.<sup>211</sup>

Participants reported that they do seek care when needed, but that the Arab community strongly prefers to see Arab doctors. Consequently, those doctors have very large patient panels. Key informants felt that additional Arabic-speaking and Muslim providers are needed in the community and in the hospital.<sup>212</sup>

*All of them will go to the local Arabic-speaking doctor or the Muslim doctor... I see doctors in our community that will stay in their office until 10:00-11:00-12:00 at night. And people will sit and wait.*

Although focus group participants reported regular doctor visits, key informants from the Arab community felt there was an underutilization of preventive care services.<sup>213</sup>

*When it comes down to health issues, they go to the doctor when they're sick. They don't know much about preventive medicine and that you have to go for the yearly checkup or anything. Unless you are sick, you don't go to the doctor. And that's one of the struggles we have in our community.*

### Latino Population

*It's varied. [Bushwick] used to be mostly Puerto Rican, then it became Puerto Rican-Dominican. Now, it's moved on to Puerto Rican-Dominican...Ecuadorian, Central American influence mostly. And there are some Colombians moving into the area as well.*<sup>214</sup>

Latino residents and key informants in Brooklyn reported many of the same health issues as other populations, such as obesity (including among children), diabetes, and depression. Several reported concerted efforts to eat a healthy diet and to engage in physical activity—or to encourage their children to do so. However, lack of time and budget constraints, as well as some ingrained habits, served as barriers to healthy choices. Typical of comments regarding competing priorities are:

*We see people who have very low paying jobs. But as long as they're able to have their children in school, as long as they're able to maybe send them to a community college – really the vision and the longer term goal is about their children, and their children having better futures. So I would say that's a main thing. I think the downside to that is that people that we work with are so – I don't like frame it as it's their concern and that it's their fault – but they're so concerned about jobs, and that other things kind of fall to the wayside. So health is a key part of that really.*

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<sup>210</sup> Ibid.

<sup>211</sup> Ibid.

<sup>212</sup> Ibid.

<sup>213</sup> Ibid.

<sup>214</sup> NYAM Primary data findings, September, 2014.

*Most of us parents are constantly working, and many times we don't have the time to commit to cooking a healthy meal every night – and so, we resort to fast food.*

Lack of insurance is a noted problem in the Latino community and resulted in high out of pocket costs, neglect of primary care and preventive services, and use of emergency care for non-urgent issues. In general, many Latinos reported only seeing a doctor when necessary.

*Some of us have no insurance or not enough money to pay large medical bills so going to the doctor for preventive care is next to impossible. (Latino focus group)*

It was reported that the churches effectively helped Latino community members to learn about health services and access care and that more church-based health programing should be offered.<sup>215</sup>

### Asian Population

Health concerns among participants from the Chinese community were similar to those of other populations. Their diet was generally considered healthy, obesity rates were lower than other communities, and physical activity was relatively common (e.g., walking, biking, Tai Chi). However, diabetes was still considered to be common. Smoking was a main concern, with rates reported to be higher in the Chinese community than among other populations, resulting in high rates of asthma, lung cancer, and other respiratory problems.<sup>216</sup>

Cost of care was described as a significant issue by a key informant from the Asian community:

*We had interviewed clients among our social service agencies just to find out what are some of their primary issues. Language access came up over and over again. But the bigger issue was actually the cost of services, which I thought was really interesting because it was much higher than language access needs. And so oftentimes they would forego getting any care, getting screenings, or even if they were deathly ill, they will totally wait until the end, and even with people who had insurance, because they were afraid of the cost of care.<sup>217</sup>*

CNA participants reported that cultural beliefs and access to health information impacted utilization of health care services within the Chinese community, particularly among older adults or recent immigrants. Cultural beliefs discouraged some individuals from seeking medical care. In addition, stigma associated with serious illnesses can prevent open dialog around health and health care, both for the patient and in the larger community.<sup>218</sup>

*Being tradition, when you got sick most things are taken care of by your family members and the family tries to keep some secrets from the patient, telling him you have pneumonia or something you can treat, but they never tell them they have cancer. And I think probably there's the misconception that when I tell you cancer, you're going to get scared or you're going to get really depressed and you're going to die from it...You have cancer and they don't want to let other people know because they worry about people may try to keep distant from them or worry*

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<sup>215</sup> Ibid.

<sup>216</sup> NYAM unpublished primary data findings, 2013

<sup>217</sup> NYAM primary data findings, September, 2014.

<sup>218</sup> Ibid.

*about them...It's just a whole social, ethnic issue, I think some people just like to keep their stuff inside of them.*

Furthermore, there is a lack of knowledge of preventive services among some residents, and language barriers limit access to health information, from the media, government, and providers, that is readily available to English speakers. Residents were reported to seek treatment through practitioners of Chinese medicine, which may either limit use of Western medicine when necessary. Even those Chinese treatments that are focused on symptom relief or perceived strengthening of the immune system may interfere with treatment. Providers discussed the need to balance Western and Chinese medicine, and insure and patients are receiving safe treatment<sup>219</sup>:

*Our Chinese population will at times refuse to take medications that we'll prescribe. Instead, going down the street and getting some sort of a Chinese herb or ointment or something, and we spend an inordinate amount of time trying to find out what's in those herbs or in those ointments...to try and protect the patients in case they're harmful, in case they interact.*

Participants reported that community members were receptive to outreach efforts of medical providers, but also expressed the need for more health education within the community to address stigma associated with some illnesses and increase knowledge of preventive services. Participants emphasized that information must be provided in the appropriate language and be culturally sensitive. They cited the success of past Tai Chi programming that incorporated information regarding depression, a subject that would otherwise be avoided.<sup>220</sup>

#### Black/African American and Caribbean Population

The Black population of Brooklyn remains sizable, but has been declining in size –and shifting –due to gentrification of traditionally African American neighborhoods including Bedford-Stuyvesant and Crown Heights. The Black population described in this report includes both African American and non-Hispanic Caribbean groups, as they were often indistinguishable in focus groups and surveys. Although combining them may obscure important distinctions, it is consistent with the terminology used by the US Census American Community Survey statistics cited in this report. The non-Hispanic Caribbean population includes large numbers from Haiti, Jamaica and other West Indian nations—a portion of which are undocumented. Income constraints force choices that may delay use of needed health care. As explained by a key informant working with African American and Caribbean populations:

*[Do] you prioritize buying food, paying for your kids' education or going to check this pain that you have in your chest. Do you think you can do it later? Until you have a massive heart attack, right? Certain of the type of work that people do, in those fields you don't have a lot of health insurance coverage prior to this Affordable Care. A lot of our community work in construction, a lot of community works in service area, restaurants, small business things. So they don't receive healthcare through work-related insurance. So emergency room becomes the place that they go to – and so they don't have a primary physician care, they don't have a continued care. (key informant interview)*

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<sup>219</sup> Ibid.

<sup>220</sup> Ibid.

The resilience of particular communities was emphasized, as below.

*I think Haitians are very strong in character – I think we persevere. I mean we persevere, and no matter what the challenges with Haiti or with Haitians here, you can still see that. It’s a community that strives above and beyond, in spite of it all... A lack of service and organization and adequate support to respond to the need of the community makes us weak, because there’s only but so much we can do with what you have.... Our slice of the pie was so much smaller in comparison. (focus group participant)*

However, the challenges in many neighborhoods were pronounced. CNA participants from, or working in, lower income African American and Caribbean neighborhoods noted persistent poverty and prejudice, as well as significant disparities in resources available to those communities. A key informant explained:

*So the agency that provides supports, the perception of the community is that these agencies are just there to stigmatize – to take away our kids. They’re not there to help us. They want to know if we’re getting welfare, if we’re doing what we’re doing to cut the services, people still see it as – their approach to us is punitive action towards us. ...You see the same of the impact of incarceration. Brooklyn has one of the million dollar blocks. In BedStuy and some of the communities that we’re spending more money putting kids in prison and to maintain them in prison, than we want to pay to send them to school around the block. So, those things are major impact in our community.*

In Brownsville, Coney Island, and East New York, key informants and focus group participants described a poor resource base, including lack of healthy food and green space, community programs, and funding for needed services. Health providers described delayed care and low expectations:

*What folks assume that they are, you know, just because they can get up and get through a day, they assume, well that's what it means to be physically fit and to be healthy...Every day that I'm vertical, it's a good day. You'll hear folks say that.*

### Citizenship Status and Language Spoken at Home

Approximately 17% of Brooklyn’s population are not US citizens, compared to 18% in NYC and 11% in NYS.<sup>221</sup> The total foreign born living in Brooklyn is 950,471, representing approximately 35% of the borough’s population. Approximately 22.6 thousand people in Brooklyn are reported to have migrated to the United States less than one year ago. Survey data likely underestimates the foreign born population in Brooklyn, because the number of undocumented individuals is reported to be substantial.<sup>222</sup>

Approximately one in four people (566,247) report speaking English less than “very well.”<sup>223</sup> Nearly half (46%) of Brooklyn residents report speaking a language other than English at home.<sup>224</sup> Approximately 17% speak Spanish or Spanish Creole; approximately 7% speak Chinese, and approximately 5% speak

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<sup>221</sup> US Census, American Community Survey, 5-year data, 2008-2012.

<sup>222</sup> NYAM primary data findings, as of September 15, 2014.

<sup>223</sup> US Census, American Community Survey, 5-year data, 2008-2012.

<sup>224</sup> Ibid.

Russian. Within the borough, high proportions of non-citizens are found in Bushwick and Sunset Park. These areas, along with Bay Ridge and Coney Island, also have high rates of residents who speak English less than “very well”. (See Appendix A, Maps 9-10, and Appendix B, Tables 16-18.)

Those who are not US citizens and who speak English less than “very well” may experience additional regulatory, linguistic and cultural barriers to health care access.<sup>225</sup> Although bilingual providers and interpretation services may be available for the largest language groups, there are concerns about quality in some settings and smaller populations, feel the burden of translation and interpretation falls on them.<sup>226</sup>

Among the undocumented population, the concerns of other immigrant populations are further magnified. Access to most services is limited, and the fear of deportation results in lower utilization of services.<sup>227</sup> Providers and leaders of community based organizations interviewed for the CNA report that people who are undocumented want to avoid reporting information about themselves, and avoid “the system” to the greatest extent possible.<sup>228</sup>

### Income, Education and Unemployment

The median household income in Brooklyn is approximately \$45,000 per year, lower than NYC (\$52,000) and NYS (\$58,000).<sup>229</sup> Slightly more than one in five (22%) households in Brooklyn lives below the federal poverty level, compared to just fewer than one in five (19%) in NYC and approximately 14% in NYS.<sup>230</sup> Furthermore, CNA participants frequently pointed out the high cost of living in NYC, which made income and poverty guidelines unrealistic. The highest rates of poverty are in northern and northeastern parts of the Borough, in the neighborhoods of Williamsburg-Bushwick, East New York, and parts of Bedford Stuyvesant-Crown Heights, where approximately one in three households have incomes below the federal poverty level (FPL).<sup>231</sup> There are also high rates of poverty in Sunset Park and Coney Island, where approximately 25%-30% of households have incomes below 100% FPL.<sup>232</sup> (See Appendix A, Map 5 and Appendix B, Table 13.)

Trends in primary data collection activities suggest that, for some communities, including a number of immigrant groups, economic constraints are countered with very long work hours and multiple jobs, which make it extremely challenging to maintain good health habits.<sup>233</sup>

*People [are] literally working, you know, 18 to 20 hours a day. Some of our people are working two to three jobs. So either by the priorities they set, or just what they have time for – you know, accessing health services is one of the last things that is on the list of priorities. And there’s also the issue of the work situations they’re in, and how stressful they can be, and how they’re not safe workplaces, healthy workplaces. (Key informant, immigrant focused CBO)*

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<sup>225</sup> NYAM primary data findings, as of September 15, 2014.

<sup>226</sup> Ibid.

<sup>227</sup> Ibid.

<sup>228</sup> Ibid.

<sup>229</sup> US Census, American Community Survey, 5 year data, 2008-2012.

<sup>230</sup> Ibid.

<sup>231</sup> US Census, American Community Survey, 5 year data, 2008-2012

<sup>232</sup> Ibid.

<sup>233</sup> NYAM primary data findings, as of September 15, 2014.

Approximately eight out of ten (78%) Brooklyn residents aged 25 or higher has a high school degree or equivalent, on-par with NYC (79%), but lower than NYS (85%).<sup>234</sup> Those aged 25 or higher who have earned a bachelor degree is lower at 30%, compared to 34% in NYC and 33% statewide.<sup>235</sup> (See Appendix B, Table 14.)

The overall unemployment rate in Brooklyn is 10.3%, approximately the same as the rate for NYC (10.2%) and higher than the rate for NYS (8.7%). (See Appendix B, Table 15.) Unemployment in the borough ranges from 6.2% to 17.7% with the highest rates in the northern and central portions of the borough, and Coney Island.<sup>236</sup> (See Appendix A, Map 4.)

### Ambulatory Difficulties and Disability

Ambulatory difficulty among the age 65+ population is concentrated in two clusters, one extending from the far northern tip of the borough in Greenpoint in a southeasterly direction to East New York, and the other from Sunset Park southeasterly through Borough Park to Sheepshead Bay. For the age 18-64 category, the rates are much lower but ambulatory difficulty still affects a sizable number of people, with a similar geographic pattern. (See Appendix A, Maps 11-12 and Appendix B, Table 25.)

Individuals with physical and/or cognitive disabilities are disproportionately low income and have a high number of co-morbidities. They are dependent on systems that provide inadequate accommodation and face a number of logistic, psychosocial and emotional barriers to care. A key informant working in the field reported the following:

*One-third of people with disabilities in New York City are living in poverty, and on a long-term basis. Other populations cycle in and out of poverty, but people with disabilities live in poverty on a long-term basis.*

*Currently, only about 20 percent of youth with disabilities will obtain a high school diploma. ... Only about 32, 33 percent of people with disabilities are employed.*

*The State of New York knows that there's a higher prevalence of obesity, cardiovascular disease, hypertension and other diseases and health conditions for people with disabilities, but does not inquire into why that might be or how its programs for prevention and treatment and delivery of services need to be thought about in terms of how to address that problem. And yet those disparities are higher than for people of certain races and ethnicities. And yet services are directed and organized to them, but not for people with disabilities. It is suggestive of stigma in planning and program development. SPARCS data does not collect data about disability. It collects gender, age, race, ethnicity, but not disability. And yet we know that disability affects emergency room use, hospitalization and healthcare utilization. (key informant, disability services organization)*

She described the multiple barriers to care, which were echoed in focus groups with individuals having vision impairment, hearing impairment, mobility issues, traumatic brain injury, and developmental delays.

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<sup>234</sup> US Census, American Community Survey, 5 year data, 2008-2012

<sup>235</sup> Ibid.

<sup>236</sup> Ibid.

*A requirement, for example, that you come to an appointment timely, or if you miss an appointment three times, you can be dis-enrolled from a program or a provider. If you use Access-a-Ride for example, it is almost impossible to know when you will arrive at a location on a consistent basis. The service is simply of such poor quality that if you cannot use the subways where you need to go, or the buses, and you need door-to-door transportation, you need flexibility in appointment scheduling.*

*In the health setting, practitioners are often listed – clinics are often listed as being wheelchair accessible in managed care program directories. But in fact, according to a survey by the Community Service Society, it was found that these practitioners have steps at their front entrance. The providers don't even know what accessibility means. And so they list themselves as accessible, but when you go to their site or you call them on the phone, they'll say, "Oh yes, we have a few [steps] at our entrance, but that's no big deal."*

*They don't have exam tables that will lower so that you can transfer from a wheelchair. Or they don't provide ASL interpreters, either in person or by video phone or other system. Or they don't permit you to be seen right away if you have autism or an anxiety disorder, or a developmental disability – that make it very, very difficult for you to remain seated quietly in a waiting area. They don't give you longer times for your appointment if it's going to take you a long time to dress and undress...Our system is being redirected towards community care. And yet the community care that is available is more inaccessible to people with disabilities than the institution-based care.*

*And there is no consideration being given to the implications of that or how those facilities will use the billions of dollars now flooding into the system, to become more civil rights law compliant. Because all of these barriers I'm telling you about are actually violations of federal civil rights law. The barriers faced at hospitals, these exist as well. For example, if you are seated in a wheelchair, you are diabetic, you are obese, you want to lose weight. Where could you go be weighed? You have to have a weight scale that can use seated in your chair. Where are those scales?*

*So we have people who avoid health practitioners because they are routinely stigmatized and humiliated. The No. 1 problem people with disabilities have cited to us in studies is that they're dealing with practitioners who do not understand their disability, and who do not treat them with respect. People will go to the health practitioner, and if there's an aide with them, the health practitioners will address themselves entirely to the aide. As if the person sitting with a disability in front of them is not the person to whom they should be directing their comment, is not in charge of themselves, is not able to communicate, is not a thinking person. People with disabilities that are physical often complain that people treat them as if they have a low IQ. People with speech disabilities are often treated as if they're stupid. Similarly, people who are deaf or people who are blind.*

## Medicaid

There are approximately 1.3 million Medicaid beneficiaries living in Brooklyn, which is 1 out of 5 (21.1%) of all Medicaid beneficiaries in New York State and more than one-third (34.3%) of all Medicaid beneficiaries in New York City. The percentage of the Brooklyn population who are Medicaid Beneficiaries varies across zip codes from 11.8% to 84.9% (See Appendix A, Map 1). The highest



proportion of the population who are Medicaid Beneficiaries are in two large clusters, one in the northeast part of the borough from Williamsburg through Bushwick, Bedford-Stuyvesant, Brownsville, and East New York; and the other in southwest and south central Brooklyn, from Sunset Park to Borough Park, Flatbush, East Flatbush, and Bensonhurst.

#### Older Adults/ Dual Eligible Beneficiaries

Older adults covered by Medicare alone are not a focus for the DSRIP program which is primarily focused on Medicaid and uninsured populations, however there are a number of low income adults who are dually-eligible for Medicaid and Medicare in Brooklyn. Approximately half (52%) of the Brooklyn older adult population of 290.7 thousand is dually eligible for Medicaid and Medicare.<sup>237</sup> Brooklyn “duals” account for nearly one-third (32.9%) of all dually eligible individuals in NYC, and 18.1% in NYS.<sup>238</sup> Dual eligible individuals live in many parts of the borough with the highest numbers in Coney Island-Sheepshead Bay. (See Appendix A, Map 2.)

Older adults have specific concerns, primarily regarding care coordination and access to care, including mental health care. Isolation is seen as an issue that could negatively impact both physical and mental health for this population.

*“In Brooklyn, [there are] no mental health services for old people that are easily accessible. ....There are a few providers, but they don't do home visits or they can't do it in a major way. What else can I tell you about Brooklyn? You know, again, social isolation and loneliness, people are not living near their families.” (key informant interview)*

*“This silo specialization in medicine is a problem for everybody, but it's a particular problem for the geriatric population with, you know, 12 medications and four presenting conditions. So that anything that can happen to not just coordinate but actually integrate care across specialties so that when you do need the interaction of the medical institution for it to deal with a whole person as a whole person, not by its individually coded and billed body parts would be really important. Anything that could happen along those lines would help everybody, but it would particularly help our guys.” (key informant interview)*

#### Uninsured

In Brooklyn, according to the latest available data, approximately 344,000 people are uninsured, accounting for approximately 16% of all the uninsured individuals in New York State.<sup>239</sup> Adults over the age of 18 account for the largest proportion of the uninsured in Brooklyn, with a rate of 16.9%, versus approximately 2% among those aged 65 and older, and 4.1% among children aged 0-17. (See Appendix B, Table 22.) Within the borough, the highest number of uninsured are clustered in the zip codes of 11220 Sunset Park and 11226 East Flatbush, with high numbers in Williamsburg-Bushwick, East New York, and East Flatbush-Flatbush. (See Appendix A, Map 3.)

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<sup>237</sup> New York State Department of Health, 2012 data. Note, it is possible to be dually eligible for Medicare and Medicaid if you have a low income and are long term disabled, without being over the age of 65.

<sup>238</sup> Ibid.

<sup>239</sup> Note these figures were estimated prior to the implementation of the Affordable Care Act (ACA) insurance exchange in New York State, and may have changed. Data Source: US Census, American Community Survey, 5 year data, 2008-2012.

The 2008-2012 five-year American Community Survey estimated that 207,094 (or 60.0%) of the total number of 344,916 uninsured Brooklyn residents were foreign born. Of these 207,094 foreign-born uninsured residents, the largest number were born in Latin American countries (75,577 / 36.5%), followed by those born in non-Hispanic Caribbean countries (48,893 / 23.6%), China (24,494 / 11.8%), Russia (6,051 / 2.9%), Poland (5,665 / 2.7%), South Asian countries (5,532 / 2.7%), and Arab countries (2,220 / 1.1%). (See Appendix B, Table 22b.)

Uninsured foreign born Latinos are concentrated primarily in Community District (CD) 4, Bushwick, and CD 7, Sunset Park and Windsor Terrace. Those uninsured born in Caribbean countries reside primarily in CD 17, East Flatbush, Farragut, and Rugby; CD 18, Canarsie and Flatlands; and CD 9, Crown Heights South, Prospect Lefferts, and Wingate. The Chinese-born uninsured are found mostly in CD 7, Sunset Park and Windsor Terrace and CD 11, Bensonhurst and Bath Beach. Those from Russia are more dispersed with some concentration in CD 13, Brighton Beach and Coney Island and CD 15, Sheepshead Bay, Gerritsen Beach, and Homecrest. Those from Poland are concentrated in CD1, Greenpoint and Williamsburg. The South Asian and Arab foreign born uninsured are fairly evenly dispersed throughout Brooklyn.

A significant portion of the uninsured in Brooklyn may be undocumented.<sup>240</sup> Despite health reform, data suggest insurance coverage also remained problematic (or was increasingly problematic) even for those eligible.<sup>241</sup> Income restrictions for Medicaid were considered unrealistically low, and self-purchased coverage was repeatedly described as too expensive, given the difficulties of paying for basic necessities including food and housing. Lack of health insurance was reported to result in reduced use of preventive and community based care and increased emergency department use.<sup>242</sup>

*I go to emergency room. That's where most people have to go if they don't have a doctor. That's where everybody has to go if you don't have health insurance. [Flatbush focus group]*

### Housing: Types and Environment

Approximately one in five (20.3%) households in Brooklyn is a family household with an unmarried female householder, accounting for 17% of all such households in NYS.<sup>243</sup> More than one-quarter (28.7%) of all households in Brooklyn are comprised of a single person living alone, accounting for approximately 12% of such households in NYS.<sup>244</sup> (See Appendix B, Table 19.)

### Serious Housing Violations

For lower income New York City residents, housing is often a challenge.<sup>245</sup> Particularly in Brooklyn, where neighborhoods continue to gentrify, housing options are restricted.<sup>246</sup> As explained by key informants and focus group participants include:

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<sup>240</sup> NYAM primary data findings, as of September 15, 2014.

<sup>241</sup> Ibid.

<sup>242</sup> Ibid.

<sup>243</sup> US Census American Community Survey, 5 year data table, 2008-2012.

<sup>244</sup> Ibid.

<sup>245</sup> NYAM primary data findings, as of September 15, 2014.

<sup>246</sup> Ibid.

*[In Bushwick] here are so many buy-outs and so many landlords that are just trying to get rid of those people that resided for years in these very affordable units. And now, they find that if they can move them out any which way, they can actually raise the rents and bring in the new people.*

Thus, crowding is considered to be significantly higher than what would be reported in the census, meaning that sleeping arrangements—including for children—are substandard from a health perspective. Household composition, where there are significant income stresses, was also described as problematic as there might be adults living in close quarters with unrelated children.<sup>247</sup>

Many lower income populations live in apartments with poor maintenance, but given the restricted options (and landlords hope for gentrification), they have little leverage when advocating for repairs. High rates of serious housing violations per 1,000 units are found in Bushwick, Bedford-Stuyvesant, Crown Heights, East New York, East Flatbush, and Brownsville.<sup>248</sup> (See Appendix A, Map 15.) Poor housing conditions are reported to contribute to a high prevalence of asthma in particular communities, including Bushwick. Concerns about housing, including high rents and poor conditions, are a significant source of stress for lower income residents.

Key informants noted the lack of funding for rental vouchers (Section 8 housing) for low income people. Indeed, NYCHA – the city’s largest administrator of Section 8 housing – has not processed new applications for this housing assistance since 2009, due to federal budget cuts.<sup>249</sup>

*“When there was a possibility of obtaining Section 8, we helped people apply for Section 8. We help people apply for waiting lists for housing because that’s pretty much all there is for extremely low income people.”*

### Crime and Jail Admissions

While crime has been declining overall in NYC for the past 15 years, the issue persists in parts of Brooklyn where crime, including gun violence, is cited as a serious barrier to accessing services due to personal safety concerns.<sup>250</sup> Data suggests that the highest rates of serious crime in the borough are in parts of Downtown-Heights-Slope, Williamsburg-Bushwick, Bedford-Stuyvesant-Crown Heights, and Canarsie-Flatlands. (See Appendix A, Maps 13-14.) Violent crime affected communities at large, as CNA participants described fear for children at certain playgrounds and fear for themselves. As described in the quotes below, CNA participants attributed the violence to young people who were increasingly disconnected from adults in their communities, had too few opportunities to be productive, and were exposed to numerous negative influences.

*From September through June they have afterschool programs in some of the schools but during the summer there’s nothing. During the summer is when you have the gangsters and the gun*

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<sup>247</sup> Ibid.

<sup>248</sup> *State of New York City’s Housing and Neighborhoods in 2013: Brooklyn*. NY: NYU Furman Center; 2013:22.

<sup>249</sup> As per the New York City Housing Authority website on Section 8 applications, <http://www.nyc.gov/html/nycha/html/section8/applicant-info.shtml>, accessed September 15, 2014. See also the NYC Department of Housing and Development, a Section 8 administrator, at <http://www.nyc.gov/html/hpd/downloads/pdf/Section-8-Policy-Changes-FAQ.pdf>

<sup>250</sup> Brennan Center “How NYC Reduced Mass Incarceration”. Accessed August, 2014 at [http://www.brennancenter.org/sites/default/files/publications/How\\_NYC\\_Reduced\\_Mass\\_Incarceration.pdf](http://www.brennancenter.org/sites/default/files/publications/How_NYC_Reduced_Mass_Incarceration.pdf)

*violence. Now we have an anti-violence initiative. The only thing it does is when someone gets killed or something they'll go and acknowledge it but there's no program in place. No conflict resolution initiative to address the needs of these students.*

*The problem exists among the young people – black and Hispanic – who don't have anything to do. They're out there, they're standing at the corners. They're gathering in various groups with nothing positive. No direction to go in. When I listen to some of the information coming out of Kings County. Starting on Friday nights through Sunday, the emergency room is like a battleground because they're coming in with all kinds of injuries: guns, bottles, knives. You name it. This is what happens on the emergency room in weekends. This is a direct result of what's going on – or isn't going on in a positive nature ... the hospitals can play a part in terms of opening some programs. The City of NY really has to step up, particularly where NYCHA is involved... All of that spills into the health care area because now hospitals are forced to give care in certain areas that came out of not a disease situation but because of economic or underprivileged situation.*

Along with a declining crime rate and Rockefeller drug law reforms in 2009, the number of new NYC Jail and NYS Prison admissions has been steadily declining over the past 15 years.<sup>251</sup> The map of NYC DOC Jail admissions shows very similar clustering of high rates as the household poverty map. (See Appendix A, Maps 5 and 13.) As exemplified by the statement of a key informant, despite the reductions in crime and incarceration, concerns around aggressive policing practices—though diminished with the new mayoral administration—persist.<sup>252</sup>

*With stop-and-frisk, it's also just like what we see with our youth [in Bushwick, Brownsville, Bed-Stuy], right, the constant getting stopped, the constant being harassed by the police. That has a really strong emotional effect...those young people are feeling just kind of like "screw it all" kind of mentality of like, "I live in this neighborhood, and I'm not welcome." That kind of feeling is prevalent.*

Respondents emphasized the diminished life chances resulting from involvement in the criminal justice system and the need to place a greater emphasis on reducing that involvement through alternative to incarceration and disincentives for inappropriate guilty pleas, particularly for crimes, like sex work, that may be motivated primarily by the need to survive rather than by criminal intention.<sup>253</sup>

Rikers Island houses approximately 12,000 people on a given day. Engaging this population in care requires nonjudgmental staff that are familiar with the practical (e.g., Medicaid deactivations, parole regulations), medical, and psychosocial issues faced. According to a key informant that works in correctional health, this population is comprised of:

*The sickest people in the city, who are the most socioeconomically disadvantaged, the most stigmatized and the least likely to access care in a way that would be, exclusive of using the emergency room and that sort of thing.*

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<sup>251</sup> Brennan Center for Justice at New York University School of Law "How NYC Reduced Mass Incarceration".

<sup>252</sup> NYAM primary data findings, as of September 15, 2014.

<sup>253</sup> Ibid.

*People think that [Rikers] is filled with violent criminals, which not that there are none, but primarily what we're dealing with is people who can't afford bail, people who are unstably housed, people who have chemical dependence that is turning their life topsy-turvy, who have engaged in sex work because they told someone about being sexually abused and they didn't listen.... I think, honestly, with the state emptying the psychiatric facilities, which nobody liked, but I'm not sure that jail is a better alternative. And right now we're talking about 40% of [the Rikers] population are mentally ill. And about 60 to 80% have some kind of behavioral health issue. And then we're talking about, you know, folks with chronic health conditions and the population in jails is aging, so now we've got diabetes and heart disease at much higher rates.... we also have folks who live [at Rikers], honestly, because they'd rather be [there] than in homeless shelters. And so we won't see the same kind of aging that the prisons will, just because people are released, but remember that people are also chronically - in the same way that folks are chronically homeless, they're chronically involved in our jail system.*

A key informant knowledgeable in this field recommends bridging connections directly from jails/prisons to community based organizations and providers upon re-entry, to avoid emergency department use post-release:

*[There are] increased rates of hospitalization and emergency department visits post release. We've shown both those things. So anything that we do to try to systematically reduce hospitalizations would definitely benefit from partnering with local jails to help facilitate what I call warm transitions to primary care for medical and to behavioral health treatment, including drug treatment, substance use treatment so that we can avoid people coming to the emergency room 'cause that's what they're gonna do if they don't have - if they don't have a plan. I think it's kind of a no-brainer.*

### Domestic Violence

Domestic violence is a topic that resonated with several interviewees and focus group participants as a significant community concern that has received inadequate attention. Of Brooklyn survey respondents, 31% reported that health education or programs on domestic violence are needed in their community. Although not necessarily more prevalent, domestic violence issues were particularly relevant in immigrant communities, due to possibly different standards in their home country as compared to the US, stigma, lack of linguistically and culturally appropriate resources, and fear of deportation—particularly in mixed immigration status families. Examples of comments from key informants and focus group participants include:

*Now, when they come here, they don't know the law of the land – the whole community, they don't know the law of the land. They didn't know, like there is no domestic violence here, there is no child abuse here.*

*Some people are afraid to let people know they're undocumented. If they let people know about [abuse by] their husband or brother, that means they're putting themselves at risk for deportation. Sometimes I believe people are afraid to make that step because of the fear that they're going to be sent back.*

A key informant working with older adults described the significance of elder abuse, which may be physical, emotional and/or financial, in nature.

*People come to us in sometimes very dire situations of being physically abused, certainly emotionally abused. I would say that emotional abuse is the accompanier of any type of abuse because people feel vulnerable and at risk. One major type of abuse is financial abuse, and that could be from strangers, as well as, family members. But in our experience, unfortunately family is over 50, over 50% of our cases tends to be the abuser. ... Elder abuse is not just domestic violence grown old in our world, because it can be perpetrated by someone other than domestic partner, etc. And beyond that, it is sometimes very clearly related to the changes that happen when you're getting older, whether it's your financial need or some isolation, social isolation.*

### Homeless Population

The NYC Department of Homeless Services houses approximately 55,000 people per night through its shelter system; there are an estimated 3,000 people living on the street in NY. In addition, there are 2,500 domestic violence units in the City, administered by HRA. The homeless population includes single adults and families with and without children. Although many are people that have come into the system due to particular interpersonal or economic difficulties, others have behavioral health issues that make it difficult to remain housed—and then may be exacerbated by homelessness. According to a key informant that works with the homeless:

*A lot of clients have very significant mental illness; very significant substance use – largely, alcohol, but ... a lot of opioids. ... Our clients are not different than the highest poverty clients.*

*I think on the Families with Children side, there is a very significant proportion of our families coming in because they are domestic violence victims. And, they may not qualify for a DV shelter. That's something that's determined at our intake center. Or, they may decline going to a DV shelter – even though they qualify for it. Of course, the psychological and sometimes physical ramifications of having been a DV victim – for both the Head of Household – the responsible parent – and for the kids is very, very significant.*

Homeless New Yorkers tend to be disconnected from primary care and a medical home and are reportedly frequent users of emergency departments. According to the key informant cited above:

*Our clients use EMS all the time for things that – if one were confident that they had a medical home – they would be calling. A child has a 102 degree fever – this is not a newborn. We would call our pediatrician and ask what to do. But, they are not calling pediatricians.... I think, often feel disconnected. Maybe they've been placed in a borough that is not their home borough, and they're not connected to the doctor who was across the street.*

She attributes a portion of this lack of coordination to hospital and provider practice:

*If I'm hospitalized at Hospital X, and I have an outpatient service – the expectation ... is that: You've had them on your inpatient service for two weeks. Have this institutional transference and pop them into your outpatient service – whether it be psych or medical. It's not happening. They're being sent to walk-in clinics. If it's a voluntary hospital, we're not seeing them take ownership. Sometimes they're sent to an HHC hospital.... The hospitals – and I say this not only about our psychiatrically ill populations but even about our Family shelters: They have no clue,*

*for the most part, as to where these homeless people are landing, what services are in the shelters, what connection they have to medical services, what they're able and not able to do. You can't give a single adult or a street homeless person an appointment for a colonoscopy three weeks from now. You can't. If you think that somebody needs a colonoscopy – you have to do it while you have them inpatient.*

Recommendations for improved coordination of care, more efficient use of services, and improved health focus on targeted outreach and care coordination involving multiple hospital staff persons, including social workers in the emergency department and on the inpatient service. In addition, key informants in multiple fields emphasized the importance of supportive housing for high need homeless populations.

## Section ii: Health Status

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According to Brooklyn residents completing the CNA survey, the greatest health concerns in their community are diabetes (51.5%), drug and alcohol use (44.1%), high blood pressure (40.7%), obesity (35.2%), asthma (30.9%), and cancer (30.5%). The most common self-reported health problems were high blood pressure (27.7%), depression or anxiety (22.2%), high cholesterol (21.6%), chronic pain (19.1%), asthma (18.6%), and diabetes (14.4%). Approximately 33% of respondents were overweight and 30% were obese; 29% described their health as fair or poor.

### Leading Causes of Death and Premature Death

'Diseases of the heart' is the leading cause of death among White, Black and Hispanic populations in Brooklyn.<sup>254</sup> The top ten causes in order are: diseases of the heart, cancer, influenza and pneumonia, diabetes, chronic lower respiratory disease, cerebrovascular disease (stroke), essential hypertension and renal diseases, accidents except drug poisoning, HIV, mental and behavioral disorders due to accidental poisoning and other psychoactive substance use, and all other or censored causes. The leading causes of death in the borough are closely aligned to those in NYC and NYS. (See Appendix B, Table 26.)

The top five causes of premature death in Brooklyn are cancer, heart disease, unintentional injury, diabetes and AIDS.<sup>255</sup> This aligns with the top five causes of premature death in NYC, and matches the top three causes of death in NYS, for the same time period.<sup>256</sup> (See Appendix B, Table 27.)

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<sup>254</sup> New York City Vital Statistics, "Top Ten Leading Causes of Mortality 2012," Brooklyn, accessed via the EpiQuery interactive tool, August, 2014.

<sup>255</sup> Premature deaths (< age 75) for the three years 2010-2012. Vital Statistics Data as of March, 2014, New York State Department of Health - Bureau of Biometrics and Health Statistics.

<sup>256</sup> The number 4 cause of premature death in NYS for the same time period is Lower Respiratory Disease, and the 5<sup>th</sup> cause is Diabetes.



Leading causes of hospitalization and preventable hospitalization

**Potentially Preventable Admissions (PQI), ER Visits (PPV), and Readmissions (PPR)**

Overall, the rate of PQI Admissions in Brooklyn has been declining since 2009, but are above the expected rate.<sup>257</sup> The majority of PQI admissions in Brooklyn are for chronic conditions, which have also declined since 2009 but remain above the expected rate. Examining the zip code level data, the highest Observed / Expected PQI ratios are consistently found in north-central Brooklyn, a cluster of zip codes from Downtown in the west to Bedford-Stuyvesant and Bushwick in the east, and in Coney Island. Turning to absolute numbers of PQI admissions, the geographic areas of concern extend south and further east from these areas to Crown Heights and Brownsville and East New York. (See Appendix A, Maps 35-52, and table below.)

	PQI S01 Diabetes composite		PQI S02 Circulatory Composite		PQI S03 Respiratory Composite	
	PQI admissions	O/E ratio	PQI admissions	O/E ratio	PQI admissions	O/E ratio
<b>Brooklyn</b>	3,072	1.00	3,694	1.04	3,686	0.94
<b>NYC</b>	9,289	1.01	11,116	1.06	12,216	1.02
<b>NYS</b>	14,121	1.00	15,795	1.00	18,654	1.00

The conditions that vary from this general pattern are for the Circulatory Composite and the Hypertension PQI, which is part of the Circulatory Composite, with additional areas with high Observed / Expected ratios and numbers of cases in Flatbush, East Flatbush, and Sheepshead Bay; and the Asthma in Younger Adults PQI with the largest number of cases and highest Observed / Expected ratios clustered in Bushwick, Crown Heights, and Brownsville. (See Appendix A, Maps 39, 44, 51.)

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<sup>257</sup> The Observed/Expected ratio is a measure of how well each geographic region is doing, taking into account basic demographic differences. A ratio less than 1.00 denotes performance that is better than expected; a ratio greater than 1.00 denotes performance that is worse than expected.

**All PQI Indicators, Data Source: New York State Dept of Health, 2012**

PQI Indicator	# of Medicaid PQI Hospitalizations, Brooklyn	# of Medicaid PQI Hospitalizations, NYC	# of Medicaid PQI Hospitalizations, NYS	PQI Observed / Expected ratio		
				Brooklyn	NYC	NYS
Adult Overall Conditions Composite (PQI 90)	14,175	44,943	69,084	0.97	1.02	1.00
Adult Chronic Conditions Composite (PQI 92)	10,451	32,619	48,568	0.99	1.03	1.00
Adult All Diabetes Composite (PQI S01)	3,072	9,289	14,121	1.00	1.01	1.00
Adult Diabetes Short-term Complications (PQI 01)	838	2,533	4,506	0.87	0.91	1.00
Adult Diabetes Long Term Complications (PQI 03)	1,732	5,357	7,572	1.05	1.07	1.00
Adult Uncontrolled Diabetes (PQI 14)	428	1,178	1,679	1.15	1.04	1.00
Lower Extremity Amputation among Adults with Diabetes (PQI 16)	148	432	699	0.96	0.97	1.00
Adult All Circulatory Conditions Composite (PQI S02)	3,694	11,116	15,795	1.04	1.06	1.00
Adult Hypertension (PQI 07)	862	2,991	3,938	0.95	1.10	1.00
Adult Heart Failure (PQI 08)	2,598	7,426	10,902	1.07	1.04	1.00
Adult Angina Without Procedure (PQI 13)	234	699	955	1.13	1.09	1.00

PQI Indicator	# of Medicaid PQI Hospitalizations, Brooklyn	# of Medicaid PQI Hospitalizations, NYC	# of Medicaid PQI Hospitalizations, NYS	PQI Observed / Expected ratio		
				Brooklyn	NYC	NYS
All Adult Respiratory Conditions Composite (PQI S03)	3,686	12,216	18,653	0.94	1.02	1.00
COPD and Asthma in Older Adults (PQI 05)	3,236	10,486	16,244	0.95	1.01	1.00
Asthma in Younger Adults (PQI 15)	450	1,730	2,410	0.88	1.11	1.00
Adult Acute Conditions Composite (PQI 91)	3,727	12,328	20,521	0.90	0.99	1.00
Adult Dehydration (PQI 10)	732	2,403	3,958	0.89	0.98	1.00
Adult Bacterial Pneumonia (PQI 11)	1,620	5,353	9,347	0.86	0.96	1.00
Adult Urinary Tract Infection (PQI 12)	1,375	4,572	7,216	0.96	1.04	1.00
Pediatric Overall Conditions Composite (PDI 90): ages 6-17 years	926	2,909	3,774	1.13	1.19	1.00
Pediatric Chronic Conditions Composite (PDI 92): ages 6-17 years	708	2,255	2,903	1.11	1.19	1.00
Pediatric Asthma (PDI 14): ages 2-17 years	1,278	4,282	5,384	1.08	1.73	1.00
Pediatric Diabetes Short-term Complications (PDI 15): ages 6-17 years	74	234	380	1.16	1.04	1.00

PQI Indicator	# of Medicaid PQI Hospitalizations, Brooklyn	# of Medicaid PQI Hospitalizations, NYC	# of Medicaid PQI Hospitalizations, NYS	PQI Observed / Expected ratio		
				Brooklyn	NYC	NYS
Pediatric Acute Conditions Composite (PDI 91): 6 - 17 years	218	654	871	1.21	1.16	1.00
Pediatric Gastroenteritis (PDI 16): ages 3 months - 17 years	558	1,758	2,333	1.31	1.18	1.00
Pediatric UTI (PDI 18): ages 3 months - 17 years	134	602	929	0.80	1.04	1.00

### **Potentially Preventable ER Visits (PPV)**

Brooklyn has fewer potentially avoidable emergency room visits (PPV) per 100 Beneficiaries than does NYC or NYS. Despite this, the proportion of Emergency Visits that are considered potentially preventable is quite high: 74.5% for Brooklyn as a whole and ranging from 64.6% - 80.4% among zip code areas. (See Appendix A, Map 53.) The same areas of the borough with elevated PQI Observed / Expected rates, a north central swath extending from downtown in the west to East New York in the east, has the highest proportions of Emergency Department visits designated as potentially preventable, with the addition of Flatbush and Canarsie south of the central and eastern part of this area. (See Appendix A, Map 53, and table below.) There were reported to be a number of factors that contributed to non-emergent use of hospital emergency departments. Among them were wait times for appointments, wait times on the day of the visit, and the potential need for multiple visits (e.g., for test not available on site). Even long waits in the ER are believed to represent a more efficient use of time:

*If I get sick today, and I don't want to go the emergency room. And, so I try to consult with my primary physician, and there they give me an appointment for a month or two months. I say to myself 'for what? If I am sick now and I need a doctor now' [Bushwick focus group]*

Among survey respondents using emergency rooms in the past year, 17% reported that they did so because they “did not have insurance,” and approximately 13% reported that they used the ER because “the doctor’s office or clinic was not opened.”<sup>258</sup>

<b>PPV</b>	<b>NYS</b>	<b>NYC</b>	<b>Brooklyn</b>	<b># of Admissions, Brooklyn</b>
Emergency Dept. Visits for Ambulatory Sensitive Conditions (PPV), per 100 Beneficiaries	36	34	29	690,782

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<sup>258</sup> NYAM primary data findings, as of September 2014.

**Potentially Preventable Readmissions (PPR)**

The Observed / Expected ratios range from 0.87 to 1.17, with an overall ratio of 1.04. (See table below.)

**Potentially Preventable Readmissions, Brooklyn Hospitals, 2012**

Facility Name	At Risk Admissions	Observed PPR Chains	Observed / Expected PPR	Observed PPR Rate	Expected PPR Rate	Expected PPR Chains
BETH ISRAEL MED CTR KINGSHWY DIVISION	2,367	119	0.94	5.03	5.33	126
BROOKDALE HOSPITAL MEDICAL CENTER	8,084	533	0.95	6.59	6.95	562
BROOKLYN HOSPITAL CENTER	7,281	480	1.15	6.59	5.74	418
CONEY ISLAND HOSPITAL	6,995	427	0.93	6.1	6.56	459
INTERFAITH MEDICAL CENTER	5,179	709	1.17	13.69	11.73	607
KINGS COUNTY HOSPITAL CENTER	13,680	1,075	1.08	7.86	7.29	997
KINGSBROOK JEWISH MEDICAL CENTER	3,627	299	1.12	8.24	7.35	267
LUTHERAN MEDICAL CENTER	1,610*	103	1.11	6.4	5.78	93
MAIMONIDES MEDICAL CENTER	17,816	681	0.87	3.82	4.37	779
NEW YORK METHODIST HOSPITAL	11,125	575	1.00	5.17	5.15	573
NY COMMUNITY HOSP OF BROOKLYN	3,060	138	0.79	4.51	5.71	175
UNIVERSITY HOSP OF BROOKLYN	11,362	795	1.13	7	6.2	704
WOODHULL MED & MNTL HLTH CTR	8,209	647	1.11	7.88	7.1	583
WYCKOFF HEIGHTS MEDICAL CTR	8,986	500	1.11	5.56	5.03	452

<b>Facility Name</b>	<b>At Risk Admissions</b>	<b>Observed PPR Chains</b>	<b>Observed / Expected PPR</b>	<b>Observed PPR Rate</b>	<b>Expected PPR Rate</b>	<b>Expected PPR Chains</b>
<b>BROOKLYN HOSPITALS TOTAL</b>	<b>109,381</b>	<b>7,081</b>	<b>1.04</b>			<b>6,795</b>

\*Lutheran Medical Center is working with the New York State Department of Health to revise this number, and expects the figure to be closer to 15,000.

Source: New York State Department of Health, 2012 data.

### Mental Health

Among the Brooklyn population as a whole, the age-adjusted percentage of adults with poor mental health for 14 or more days of 7.4%, as well as the age-adjusted suicide rate of 4.6%, were lower than the state and city rates.<sup>259</sup> 6.1% of all people in Brooklyn report experiencing serious psychological distress, compared to 5.5% in NYC overall. In NYC, people who are currently experiencing psychological distress are more likely to report binge drinking in the last 30 days than people who did not report psychological stress and are more than twice as likely to report being a current smoker. Coney Island, in particular, appears to be disproportionately impacted by psychological distress with 12% of residents reporting it, nearly double the rate for the Borough (6.1%). Those in Bay Ridge-Bensonhurst and Williamsburg-Bushwick also report high rates of psychological distress, with approximately one in ten residents surveyed reporting it. Rates in the remainder of the borough range from approximately 8.5% in Greenpoint to a minimum of 1.6% in Sunset Park. (See Appendix B, Table 33.)

Approximately 17.7% of Medicaid beneficiaries in Brooklyn had weighted, behavioral health-related service utilization (including pharmacy) in 2012.<sup>260</sup> Within Brooklyn, the beneficiaries utilizing behavioral health services the most appear to be located in a cluster from Williamsburg and Bushwick through Crown Heights, Brownsville, and East New York; and in a cluster from Sunset Park and Borough Park, extending north to Flatbush and south to Coney Island and Sheepshead Bay.<sup>261</sup> (See Appendix A, Map 31.)

The myriad of stresses on lower income Brooklyn residents were considered overwhelming to some and resulted in high levels of depression.<sup>262</sup>

*A major cause of that is the amount of economic pressure that people are under right now. People are losing their jobs; as a result of losing their job, there goes the resources you could have utilized for certain expenses. As a result of not meeting those expenses, you have pressure. It breaks you down in other areas. If you're a father and you have your household that you're responsible for, you're not able to meet the needs, then your wife is under the pressure of how she's working. Everything is on her; there goes your manhood. Now you're being beaten on the street because you're targeted. And some people, maybe there's not that strong family foundation, so there's no one to talk to about it. [Flatbush focus group]*

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<sup>259</sup> 2008-2009 Behavioral Risk Factor Surveillance Survey (BRFSS) and Expanded BRFSS data as reported on the NYS Prevention Agenda 2013-2017 State and County Dashboard, accessed September, 2014.

<sup>260</sup> These numbers and rates reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories (e.g., hypertension and congestive heart failure) within a single Major Diagnostic Category (e.g., Diseases and Disorders of the Cardiovascular System). Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Department of Health, 2012 data.

<sup>261</sup> Ibid.

<sup>262</sup> NYAM primary data findings, as of September 15, 2014.



Low-income immigrant populations—whether they be Latino, Arab, African or Caribbean—may have additional stressors, as well as poorer access to care, due to insurance and language issues.<sup>263</sup> As described by key informant working with Latino immigrants:

*There's really such a lack of mental health services, and combined with the fact that people just have really, really difficult lives. Sometimes they've left behind even more difficult lives in their countries. I think there's just kind of a lot of trauma about kind of what they've left, and then the process of trying to integrate here. And to some extent, a good amount of isolation. When you're working so much, you don't really have as much time to seek out other things that are not hard work. So we've seen that as kind of crisis moments where people come in and they're like, "I can't take this anymore," and we help them connect to something. And often it's not great. It's like they have to go to the emergency room.*

Another key informant noted:

*Because of the political problems in the Middle East, they feel unsafe, unprotected. They are scared all the time. They are afraid to go anywhere or speak out. All these issues, it doesn't help them financially, psychologically, and other problems like mental health issues are on the rise in our community because they can't provide food for their children. They take it out on their wife and their kids, and on themselves, they feel depressed. (Key informant, immigrant focused CBO)*

*So, Asian-American young women have the highest rate of suicidal ideation among all racial ethnic groups. And we find something similar, not just with the young people, but senior – Asian-American women who are seniors as well. (Key informant, immigrant focused CBO)*

Bangladeshi focus group participants also noted the particular stresses of immigration:

*From day one in the United States there is mental pressure. There is depression and frustration because my experiences qualification and education from back home is not compatible with the demands here. There is no job satisfaction. We aspire to do well in this country but the realization of not being able to is frustrating.*

While the geographic distribution of behavioral health resources (Appendix A, Map 86) appears to match the widespread distribution of behavioral health conditions among beneficiaries as indicated by service utilization,<sup>264</sup> community members raised questions as to the adequacy of these resources in terms of capacity. Access to mental health services is reported to be limited, although it might be the case that community organizations and residents are not aware of available services or how to access them. In addition, behavioral health issues generally carry greater stigma than other health concerns, which tends to limit use of services. Key informants and focus group participants both reported that

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<sup>263</sup> Ibid.

<sup>264</sup> As noted above, these numbers and rates reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories (e.g., hypertension and congestive heart failure) within a single Major Diagnostic Category (e.g., Diseases and Disorders of the Cardiovascular System). Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Department of Health, 2012 data

many affected families try to address problems internally.<sup>265</sup>

*There's a lot of stigma across the board of getting services. Some things that we hear are even the parents who understand that there are young people that could really benefit from getting treatment and services, it's like, "let's just keep it in the family" (Key informant, immigrant focused CBO)*

*I will say that they are sometimes, first of all, people have an aversion to it. There's a cultural aversion to it. There's a cultural stigma and misunderstanding about mental healthcare and behavioral healthcare. People are not motivated in the way they perhaps should be to seek it, but it's not like there are clinics around [Crown Heights].*

Per the DSRIP Project Toolkit, integration of behavioral health specialists into primary care clinics may help address access issues if it means a net increase of behavioral health resources. Integration with primary care services may also facilitate utilization among some beneficiaries who may avoid seeking treatment due to a stigma associated with doing so at a behavioral health services provider location. Conversely, the integration of primary care services into existing behavioral health services settings addresses the high rates of co-morbidity between behavioral health and chronic physical health conditions for those currently utilizing behavioral health services.

According to providers themselves, the system is fragmented, with possibly poorer integration within behavioral health services themselves than between physical and behavioral health. Behavioral health services are reported to be highly regulated by multiple agencies: Office for People with Developmental Disabilities (OPWDD), Office for Alcoholism and Substance Abuse Services (OASAS), and Office of Mental Health (OMH) with patient care being restricted according to the funding and regulatory agency—despite the frequency of co-occurring disorders. Thus, a mental health provider might be limited in the severity of illness that can be treated, the age of the patient, and other factors.<sup>266</sup>

*Historically, your systems like OMH and OASAS, up until very recently, they really worked in silos. So if you came into a mental health clinic and in your intake appointment, you said, "You know, I smoke pot a couple times a week," a red flag would go up. You talk to your supervisor and they say, "They have to go to substance abuse." So until those doors really become integrated, I mean really become integrated in treatment and acceptance and a model of care, we're going to continue to run into these types of challenges because it's very fragmented. (key informant, multiservice organization.)*

Although we do not have data specific to Brooklyn, in NYS, approximately half (53%) of Medicaid Managed Care beneficiaries who were prescribed antidepressant medications continued to use the medication for the entirety of the 12-week acute treatment phase, and only 37% remained on the medication for at least 6 months (QARR, 2012). In NYS, only 57% of children enrolled in Medicaid Managed Care who were prescribed medication for ADHD completed a follow-up visit with a practitioner within 30 days of starting the medication (the initiation phase), only 63% of whom also received two additional follow-up visits in the 9 month period after the initiation phase ended (QARR, 2012). In NYS, only 65% of adults enrolled in Medicaid Managed Care were hospitalized who for a

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<sup>265</sup> Ibid.

<sup>266</sup> Ibid.

mental illness received a follow up within 7 days of discharge; 79% received a follow-up within 30 days (QARR, 2012)

*Additional behavioral health measures for provider systems implementing the Behavioral Interventions Paradigm in Nursing Homes (BIPNH) project:*

Among Medicaid beneficiaries in Brooklyn, the observed PPR rate was 6.47%, compared to 7.04% in NYC and 6.73% in NYS (Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates)

Among all long-stay residents in nursing homes in NYS, 12.23% exhibit depressive symptoms.<sup>267</sup> Overall mental health services utilization data is available from NYS OMH by county of provider and, through the OMH Patient Characteristics Survey, county of client residence. See table in appendix B. for an overview of 2012 behavioral health services utilization and costs by Medicaid beneficiaries through Brooklyn providers. See also Appendix B, Table 31 for data on readmissions within 30 days of a psychiatric discharge across Brooklyn hospitals, for all payor categories (not only Medicaid).

### Alcohol/Drug Use

About 4.8% of Medicaid beneficiaries in Brooklyn had alcohol/drug use-related service utilization (including pharmacy) in 2012, compared to 6.2% in NYC and 6.4% in NYS.<sup>268</sup> These service utilization rates range considerably throughout the borough, with the highest rates clustered in Downtown, Bedford-Stuyvesant, and Crown Heights.<sup>269</sup> (See Appendix A, Map 33.) The age-adjusted percentage of adult binge drinking among the total population during the past month for the borough, 16.4 %, was also lower than the state and city rates of 18.1% and 19.6%, respectively. (See Appendix B, Table 36.) While information is not available at the borough level, in 2011, the rate of emergency room visits for non-alcohol illicit drug use in NYC was 639.2 per 100,000.<sup>270</sup>

Medicaid beneficiaries with alcohol/drug use related service utilization are located in many of the same neighborhoods with high numbers of beneficiaries utilizing behavioral health services: Williamsburg and Bushwick through Crown Heights, Brownsville, and East New York; with the addition of Bedford-Stuyvesant.<sup>271</sup> (See Appendix A, Map 33.) The availability of resources appear to align fairly well

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<sup>267</sup> Nursing Home Quality Initiative 2013

<sup>268</sup> These numbers and rates reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories (e.g., hypertension and congestive heart failure) within a single Major Diagnostic Category (e.g., Diseases and Disorders of the Cardiovascular System). Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Department of Health, 2012 data.

<sup>269</sup> Ibid.

<sup>270</sup> Drug Abuse Warning Network, 2011: New York City – 5 Boros: Drug-Related Emergency Department Visits, 2004-2011 - Illicits (excluding alcohol) Rockville, MD: Center for Behavioral Health Statistics and Quality, SAMHSA, 2013.

<sup>271</sup> These numbers and rates reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories (e.g., hypertension and congestive heart failure) within a single Major Diagnostic Category (e.g., Diseases and Disorders of the Cardiovascular System). Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-

geographically with need (see Appendix A, Map 62), providing a foundation for the implementation of community-based detoxification and withdrawal management services as outlined in the DSRIP Project Toolkit.

Behavioral health and substance abuse issues were also described by CNA participants:

*[In Crown Heights] the mental health issues are many, and addiction to me is a mental health issue. And that's rampant in the neighborhood, and just depression. I mean, I don't know about today, but in this block alone you can just walk up and down the street and see guys sitting around, sitting in front of the liquor store down there or just, all day they'll be out there, from the time I come to work at around 9:00 a.m. or 10:00 a.m., and they'll be out there until I leave... if you take a look at them and that life, underneath that there's probably some real depression setting in. Poverty kind of breeds that.*

### Comorbidities with physical health

Many patients with behavioral health conditions also have chronic physical health conditions. According to data from the NYS Office of Mental Health (OMH), approximately 54.8% (13,141/23,994) of Brooklyn clients served had at least one chronic medical condition. (See Appendix B, Table 32 and Chart 35.) The 2011 OMH Patient Characteristics Survey found that 51.5% of Brooklyn adults surveyed had cardiac or metabolic illnesses; and 10.4% of Brooklyn children surveyed had a pulmonary condition.<sup>272</sup> In 2012, of the 219,347 Brooklyn Medicaid beneficiaries who had a behavioral health-related service utilization (including pharmacy) throughout the calendar year, nearly one in three (31.2% or 68,604/219,347) had an inpatient admission during the year, for any reason, i.e., the admission was not necessarily related to behavioral health.<sup>273</sup> These 68,604 beneficiaries represent 5.5% of all Brooklyn Medicaid beneficiaries, and they accounted for a total of 162,820 inpatient admissions in 2012.<sup>274</sup> They were concentrated in north central Brooklyn, from Bedford-Stuyvesant through Crown Heights, Brownsville, to East New York. (See Appendix A, Maps 32.)

An analysis of Brooklyn inpatient hospital admissions by zip code for beneficiaries who have utilized some mental health services in the 2012 calendar year, including behavioral health prescription medicines (See Appendix A, Map 32), suggests a geographic pattern of hospital admissions very similar to those for chronic diseases.<sup>275</sup> (See Appendix A, Map 37.) This is consistent with the literature noting that the majority of inpatient admissions for beneficiaries with a behavioral health condition are for physical health conditions.

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Related Utilization, and the rates reflect the Weighted Condition Prevalence among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Department of Health, 2012 data.

<sup>272</sup> NYS OMH Patient Characteristics Survey, 2011

<sup>273</sup> These numbers and rates reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories (e.g., hypertension and congestive heart failure) within a single Major Diagnostic Category (e.g., Diseases and Disorders of the Cardiovascular System). Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Department of Health, 2012 data.

<sup>274</sup> Ibid.

<sup>275</sup> Ibid.

## ASTHMA/RESPIRATORY CONDITIONS

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Approximately 6.0% of Medicaid beneficiaries in Brooklyn had asthma-related service utilization (including pharmacy) in 2012, which is approximately on par with both the NYC (6.7%) and NYS (6.4%) figures. Within Brooklyn, these rates range from 3.0% to 10.0% and the highest rates are clustered in Downtown, Red Hook, Coney Island, Williamsburg/Bushwick, East New York, and Sunset Park. (See Appendix A, Map 23.) While the observed rate of potentially preventable inpatient stays for Medicaid beneficiaries for respiratory conditions (PQI 05, PQI 15) has declined in Brooklyn since 2009, it remains at or above the expected rate, with significant variability among zip codes. The areas of Brooklyn with the highest PQI respiratory composite hospitalizations are located in North/Central Brooklyn, with especially high numbers in Bushwick and Crown Heights, and in the south in Coney Island. (See Appendix A, Map 40.) These are also the areas with the highest concentration of potentially preventable hospitalizations for older adults for asthma or COPD (PQI 05) (See Appendix A, Map 43.) Notably, while Sunset Park has high numbers of beneficiaries with asthma and other respiratory conditions, it has low numbers of asthma and respiratory-related PQI hospitalizations. Among “younger adult” (aged 18-39) Medicaid beneficiaries, potentially preventable hospitalizations for asthma (PQI 15) are most heavily concentrated in Bushwick and Brownsville. (See Appendix A, Map 51.)

Yet, looking at the Brooklyn population as a whole, the asthma ED visit rate in 2012 was higher in Brooklyn than for the city and state at a rate of 143.9 per 10,000 compared to 139.6 per 10,000 and 88.6 per 10,000, respectively. (See Appendix B, Table 70.)

Regarding environmental triggers, limited data is available. However, data on the rate of serious housing violations by Community District, i.e., housing code violations that are considered “immediately hazardous or serious,” show prevalence in many of the same neighborhoods with high numbers of preventable respiratory PQI hospitalizations: Bedford-Stuyvesant, Crown Heights, Williamsburg, Bushwick, Brownsville, and East New York; plus Flatbush and East Flatbush. (See Appendix A, Map 15.) In Bushwick, community members consider the prevalence of asthma to be “huge” and largely attribute it to indoor and outdoor environmental conditions, including poor housing conditions, traffic, and the historic industrial base of the community, with likely persistent toxic chemicals.<sup>276</sup> In Sunset Park, there is also a history of toxic environments due to ‘brownfields,’ especially along the waterfront where there is a historically industrial area.

When looking at the location of asthma health care resources in relation to Respiratory Composite PQI hospitalizations (See Appendix A, Map 72), there appears to be fairly good alignment of health care resources to need; however, as noted above in regard to Sunset Park compared to other areas with high numbers of beneficiaries with respiratory conditions, the relationship of these resources to the prevention of PQI hospitalizations varies and is uncertain, especially when considering additional socio-demographic variables that may be influencing the PQI hospitalization outcome. Whatever the current efficacy of these resources in preventing asthma-related hospitalizations, they provide a foundation to implement the DSRIP clinical improvement projects around medication adherence and home-based self-management, which includes a focus on reducing home environmental triggers.

### Asthma in younger adults and children

Among 18-39 year-old Medicaid beneficiaries in Brooklyn, there were 118.4 PQI discharges per 100,000, which is lower than the city and state rate of 160.82 per 100,000 and 134.52, respectively. However,

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<sup>276</sup> NYAM primary data findings, as of September 15, 2014.

there is great variability among neighborhoods with rates that range from 15.36 per 100,000 in Sunset Park to 219.55 per 100,000 in Bed Stuy/Crown Heights.<sup>277</sup> The highest total Medicaid PQI hospitalizations among young adults occurs in Williamsburg-Bushwick and Bed Stuy/Crown Heights. (See Appendix A, Map 51.)

Among children in Brooklyn who are Medicaid beneficiaries, the asthma rate of 310.87 per 100,000 is lower than the NYC overall rate of 426.91 per 100,000 but higher than the NYS overall rate of 210.39 per 100,000.<sup>278</sup> Childhood asthma rates in the borough range from 85.31 per 100,000 in Borough Park to 666.92 per 100,000 in Bed Stuy/Crown Heights. Additionally, DOH data suggests the majority of asthma PQI visits are among very young children, aged 2-5. (See Appendix B. detailed tables, and Appendix A, Map 51.)

The asthma ED visit rate of 297.3 per 10,000 for Brooklyn children is also higher than the state rate of 225.1 per 10,000, but lower than the city rate of 348.4 per 10,000. (See Appendix B, Table 70 and detailed tables.)

#### Asthma in Older Adults

Among older adults in Brooklyn, COPD or asthma in older adults PQI rate is lower than the state and city, at 758 per 100,000 recipients, as opposed to 814 per 100,000 and 822 per 100,000, respectively. Consistent with other asthma indicators, the highest observed rates and total number of Medicaid PQI hospitalizations for COPD and asthma in older adults are clustered in North and Central Brooklyn, and in the South in Coney Island. (See Appendix A, Map 43, and Appendix B, Table 62.)

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<sup>277</sup> Medicaid Prevention Quality Indicators, 2012.

<sup>278</sup> Ibid.

## CARDIOVASCULAR DISEASE

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The rate of age-adjusted heart attacks is higher in Brooklyn (15.9 per 10,000) than in the city (13.5 per 10,000) or the state (15.1 per 10,000). (See Appendix B, Table 70.)

In 2012, the number of potentially preventable hospitalizations among Medicaid beneficiaries for circulatory conditions (PQI S02 Circulatory Composite) in Brooklyn was 3,694, accounting for more than one in five (23.3%) of all such admissions in the State. However, the ratio of observed/expected (O/E) admissions in Brooklyn (1.04) was lower than the ratio for NYC (1.06) for the same time period. Although the overall Observed/Expected ratio for the borough was 1.04 for Circulatory Composite PQI hospitalizations, the range across zip code areas was 0.34 to 1.47, with 22 of the 37 zip code areas having an O/E ratio over 1.00, indicating relatively broad prevalence across the borough. The highest Observed / Expected PQI ratios for Circulatory Composite are in north-central Brooklyn, a cluster of zip codes from Downtown in the west to Bedford-Stuyvesant and Bushwick in the east, and in Flatbush, East Flatbush, and Coney Island - Sheepshead Bay. (See Appendix A, Map 39.)

The highest rates of cardiovascular-related service utilization (including pharmacy) were found in south Brooklyn, in Coney Island and Sheepshead Bay, extending northward to Borough Park.<sup>279</sup> That the north central Brooklyn neighborhoods noted above, with high numbers and O/E ratios for PQI hospitalizations, have relatively lower rates of cardiovascular-related utilization suggests opportunities for greater service utilization in those communities aimed at the DSRIP clinical improvement project objectives of implementing primary and secondary prevention strategies, more efficacious patient self-management, and enhanced clinical disease management.

In regard to disease information and support services, much of Brooklyn including the north central high needs areas, appear to have those services available; however, in the high need south Brooklyn area, those services appear to be lacking. Specialty cardiovascular services similarly do not appear to be located in the areas of greatest need. (See Appendix A, Map 70.)

From 2009-2012, the rate of potentially preventable (PQI) hospital discharges related to hypertension in Brooklyn declined from more than 120 per 100,000 to approximately 106 per 100,000, but remained above expected rates. (See Appendix B, Chart 53.) These rates were better than equivalent rates in NYC (124 per 100,000) but on par for those in NYS (105.5 per 100,000) in the same time period.<sup>280</sup> There is great variation in the number of PQI hypertension discharges among Brooklyn neighborhoods, ranging from 0-6 in areas of Greenpoint, Sunset Park and Bensonhurst-Bay Ridge, to 39-54 in parts of Williamsburg-Bushwick, Bedford Stuyvesant-Crown Heights, and high numbers (24-38) in East New York, East Flatbush-Flatbush, and Coney Island-Sheepshead Bay. (See Appendix A, Map 44.) The largest number of beneficiaries with hypertension-related utilization (including pharmacy) were in these same areas, with the addition of Sunset Park.

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<sup>279</sup> These numbers and rates reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories (e.g., hypertension and congestive heart failure) within a single Major Diagnostic Category (e.g., Diseases and Disorders of the Cardiovascular System). Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Department of Health, 2012 data

<sup>280</sup> NYS DOH, 2012

In 2012, among Medicaid beneficiaries participating in managed care plans, approximately 64.8% had controlled high blood pressure, fewer than comparable figures in NYC (67%) and NYS (63%).<sup>281</sup> (See Appendix B, Table 58.)

## DIABETES

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Diabetes is considered by many residents and key informants to be the most significant health issue in Brooklyn. The diabetes composite PQI (S01) for Brooklyn (1.00) is overall the same as for New York City (1.01) and New York State (1.00). But, within Brooklyn, the range for PQI S01 observed / expected ratios is 0.30 to 1.69. (See Appendix A, Map 38.) Across New York State, only 51% of Medicaid Managed Care beneficiaries with diabetes received all recommended tests in the last year, and 33% of Medicaid Managed Care beneficiaries in NYS with diabetes have poorly controlled HbA1c (>9%).<sup>282</sup>

### Hospitalizations

The Diabetes Composite PQI (PQI S01) suggests there are a large cluster of potentially preventable hospitalizations in northern and central Brooklyn, extending from Bedford-Stuyvesant and Williamsburg-Bushwick through Crown Heights and Brownsville to East New York; and in Coney Island. Additional areas with significant numbers of Diabetes Composite PQI hospitalizations, if not an O/E ratio over 1.00, can be found in Flatbush and East Flatbush. (See Appendix A, Map 38).

Rates of Medicaid avoidable hospitalizations in Brooklyn for short-term diabetes complications are comparable to those for New York City and New York State. The rate of hospitalizations for short-term diabetes complications (PQI 01) among Medicaid beneficiaries is 2% lower in Brooklyn (103.12 per 100,000) than in the city overall (105.03 per 100,000), and 7% lower than the state overall (110.31 per 100,000). Brooklyn, overall, had 838 Diabetes short-term complications (PQI 1) hospitalizations and a PQI O/E ratio of 0.87. Thirteen zip code areas with O/E ratio greater than 1.00 account for 546 of these hospitalizations. These 546 PQI hospitalizations are found in a large cluster in north central Brooklyn, extending from Bedford-Stuyvesant and Williamsburg-Bushwick through Crown Heights and Brownsville to East New York; and in Coney Island. (See Appendix A, Map 41.)

Long-term diabetes hospitalization rates among Medicaid beneficiaries in Brooklyn (PQI 03) vary by neighborhood. Rates of such hospitalizations are highest in Williamsburg-Bushwick, East New York, Bedford Stuyvesant-Crown Heights, and Flatbush. (See Appendix A, Map 42.)

As compared to New York State, hospitalization rates among Medicaid beneficiaries in Brooklyn with uncontrolled diabetes were two to three times higher in the Downtown-Heights-Slope neighborhood, and slightly lower differences were found in Bedford Stuyvesant-Crown Heights, East New York, and Coney Island-Sheepshead Bay. The PQI (14) for Medicaid hospitalizations for uncontrolled diabetes is highest in East New York, Bedford Stuyvesant-Crown Heights, and Flatbush. (See Appendix A, Map 50.) Lower extremity amputation rates for Medicaid Beneficiaries with diabetes are largely concentrated in the north of Brooklyn.

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<sup>281</sup> City and County data from NYC DOHMH Community Health Survey, 2012. State data from QARR, 2012

<sup>282</sup> QARR, 2011



The geographic concentration of PQI hospitalizations makes the return on investments in practice reforms and personnel potentially high in terms of incentive payments for reduced PQI admissions and overall improved disease management. However, the available data suggests there may be a geographic misalignment of diabetes care management resources with need (as shown in terms of Diabetes Composite PQI S01 hospitalizations).<sup>283</sup> (See Appendix A, Map 71.)

### HIV/AIDS and STDs

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Brooklyn is similar to New York City as a whole in its incidence rates of HIV and chlamydia, but has significantly lower rates of gonorrhea.<sup>284</sup> However, stark disparities exist between communities in their rates of HIV and STDs. The neighborhoods of Bedford Stuyvesant/ Crown Heights, Williamsburg/ Bushwick, East New York, and Flatbush present the greatest need for intervention to reduce the spread of these conditions and level their impact across communities.

The largest number, and highest rate per 100,000 population, of People Living with HIV/AIDS (PLWHA) in Brooklyn are found in the UHF neighborhoods of Bedford Stuyvesant–Crown Heights (6,786 PLWHA, which is 2,128 PLWHA per 100,000 population) and East Flatbush–Flatbush (4,661 PLWHA, which is 1,563 PLWHA per 100,000 population). This is consistent with information on Medicaid beneficiaries with HIV/AIDS-related service utilization, with Sunset Park also standing out as an area with relatively high numbers of beneficiaries with HIV/AIDS-related service utilization. (See Appendix A, Map 29.)

The HIV/AIDS Resources map shows an apparent good geographic alignment between Medicaid Beneficiaries with an HIV/AIDS service utilization in the Calendar Year and the location of HIV/AIDS resources. (See Appendix A, Map 74.) The existing health care and ancillary services structure provides an apparent strong foundation for implementing both the HIV/AIDS clinical improvement project and the core components of the HIV/AIDS population-wide project listed in the DSRIP Toolkit.

#### Prevalence

Although the prevalence rate for Brooklyn is lower than the NYC overall prevalence rate, five of the ten UHF neighborhood districts in Brooklyn have higher prevalence than the city as a whole, with Bedford-Stuyvesant the highest at double the Brooklyn-wide rate, followed by Williamsburg-Bushwick, East Flatbush-Flatbush, and East New York. (See Appendix B, Table 38.)

#### Incidence

The incidence of HIV in Brooklyn is 6% lower than the incidence for New York City as a whole, but wide disparities exist within the borough. Neighborhoods with the highest incidence of HIV also have proportionately higher rates on concurrent HIV/AIDS diagnoses. Neighborhoods with the highest incidence of HIV also have proportionately higher rates on concurrent HIV/AIDS diagnoses, and are the same neighborhoods with the highest prevalence: Bedford-Stuyvesant, Williamsburg-Bushwick, East Flatbush-Flatbush, and East New York. Brooklyn residents who are HIV positive or have been diagnosed with AIDS have slightly lower rates of viral load suppression (58.3%) compared to New York City (61.2%) and New York State (62.2%).<sup>285</sup> Among Medicaid Managed Care Beneficiaries in New York State who are HIV positive, or who have been diagnosed with AIDS, 83% are engaged in care, with 72% received

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<sup>283</sup> The list of diabetes resources are from the GNYHA HITE SITE providers who list “diabetes” among their services or programs, plus a list of FQHCs and Community Health Centers servicing the area.

<sup>284</sup> Insert source

<sup>285</sup> HIV Ambulatory Care Performance, 2011

appropriate viral load monitoring, and 71% of those 19 or older received syphilis screening.<sup>286</sup> Viral load suppression is a key factor in reducing transmission of HIV. (See Appendix B, Chart 42.)

According to key informants, a portion of the HIV-infected population continue to struggle with stability and access to resources to meet basic needs. Yet as treatments improved, HIV funding has shifted to medical management, with diminished resources available for supportive services.

*We still have the state ADAP program that covers immigrants, the undocumented and uninsured. So the system of care for HIV is well-built. What's peeling away are some of the supportive services that keep people in care or bring them to care in the first place. I mean, I think substance use treatment services and mental health services have blossomed finally. ... Community-based programs that used to provide supportive services for HIV ... have been pared down, and there's more of a funder focus on medical [unclear] HIV care, putting more funding in the hospital setting for case management, HIV case management. ... I think that 70 AIDS service organizations in New York City have closed or merged with another organization since 2009 (key informant, HIV focused CBO)<sup>287</sup>*

*The focus being on medication management more than anything and making sure that people are taking their meds. I don't know that we've necessarily seen an incredible change in terms of people's ability to become stable and go back to work and no longer be dealing with the key determinants of poverty, let's say, they're still struggling with major issues that impact their lives and that impact their stability. That's still pretty constant. Access to housing and ... access to appropriate care. Things like access to appropriate entitlements. (key informant, multiservice organization)*

In addition, individuals taking HIV medications have increasing risk of medical complications from the drugs themselves.

The rate of new Chlamydia diagnoses in Brooklyn is similar the rate for the city overall, with only a 4.7% difference between the two. Among Medicaid Managed Care Beneficiaries in New York State, 72% of sexually active women between 16 and 24 years of age received a Chlamydia screening.<sup>288</sup>

In Brooklyn, the incidence of gonorrhea is 134% lower than it is for the city as a whole. Within the borough, there is a 184% difference between the neighborhoods with the highest and lowest incidence rates.

## Disparities

### *Racial/ Ethnic*

The rate of new HIV diagnoses among black/African American people living in Brooklyn is more than five times the rate among whites in the borough (79.9 compared to 14.0 cases per 100,000 people).<sup>289</sup> The

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<sup>286</sup> QARR, 2012

<sup>287</sup> NYAM primary data findings, as of September 15, 2014.

<sup>288</sup> QARR, 2012

<sup>289</sup> New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System - [HIV/AIDS Surveillance Data 2011]. [1 August 2014]. <http://nyc.gov/health/epiquery>.

rate of new HIV diagnoses among Latinos living in Brooklyn is over 2.5 times that of whites (36.6 compared to 14.0 cases per 100,000 people).<sup>290</sup> (See Appendix B, Chart 41.)

### *Gender*

Rates of other STDs such as gonorrhea, chlamydia and syphilis in Brooklyn outpace corresponding rates in NYS. In 2012, the rate of gonorrhea among women aged 15-44 years in Brooklyn was 1.3 times the State rate, and, among men, the Brooklyn rate was 1.4 times the State rate. The chlamydia rate among Brooklyn women was 1.3 times the State rate in the same time period.<sup>291</sup> Among Brooklyn men, the primary and secondary syphilis case rate was 1.7 times the State rate for 2012, and, among women, the rate was 1.4 times the State rate.<sup>292</sup>

The neighborhoods of Bedford Stuyvesant/ Crown Heights, Williamsburg/ Bushwick, East New York, Flatbush, and Flatlands experience the greatest burden from disparities in HIV and STDs. (See Appendix B, Tables 38-46.)

### MATERNAL/CHILD HEALTH

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Over the period 2010-2012, Brooklyn averaged 41,969 live births per year, representing 35.5% of the births in New York City and 17.5% of the births in the state. The highest fertility rates are found in Bay Ridge, Borough Park, and Williamsburg. The percentage of all births in Brooklyn that were Medicaid or self-pay was 65.9%, compared to 59.7% in NYC and 50.1% in the state; the percentage of Medicaid or self-pay births across Brooklyn zip codes ranged from 12.5% to 91.2%. The highest rates and numbers of Medicaid or self-pay births were in Sunset Park and Brownsville. (See Appendix A, Map 8.)

The overall Low Birth Weight (LBW) rate for Brooklyn over the same time period was 8.2%, compared to 8.5% for NYC and 8.1% for the state.<sup>293</sup> Across zip codes, the LBW rates ranged from 5.2% to 13.4%, with the highest rates found in a large cluster of zip codes extending through the north central, central, and eastern parts of the borough in the neighborhoods of Bedford-Stuyvesant, Crown Heights, Flatbush, Brownsville, East New York, and Canarsie.<sup>294</sup> These neighborhoods also experience the highest rates of infant mortality. (See Appendix A, Map 6 and Appendix B, Tables 65 & 72.) It appears that the focus of the DSRIP perinatal care clinical improvement project, if chosen to be implemented, would be on these communities.

### OBESITY

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The prevalence of obesity in Brooklyn is higher than in NYC or NYS, with just over one-quarter (27%) of all adults in Brooklyn obese, versus 24.2% in NYC and 23.6% in the state.<sup>295</sup> (See Appendix B, Table 46.) The obesity rate varies widely within Brooklyn with the highest rates in East New York (37.6%), high rates in Canarsie-Flatlands (30.1%) and Coney Island- Sheepshead Bay (30.5%) and Williamsburg-

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<sup>290</sup> New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System - [HIV/AIDS Surveillance Data 2011]. [1 August 2014]. <http://nyc.gov/health/epiquery>.

<sup>291</sup> Data for 2012 is not reported for men on the NYS Prevention Agenda 2013-2017 State and County Dashboard.

<sup>292</sup> 2012 data reported on the NYS Prevention Agenda 2013-2017 State and County Dashboard.

<sup>293</sup> New York State Vital Statistics Data 2010-2012, available at

<http://www.health.ny.gov/statistics/chac/perinatal/county/kings.htm#kings>, accessed September, 2014

<sup>294</sup> Ibid.

<sup>295</sup> Community Health Survey, 2012. New York State Department of Health, 2012.

Bushwick (29.5%) and the lowest rates in the borough in Downtown-Heights-Slope at 16.2%, where the fewest number of Medicaid beneficiaries reside in the Borough.<sup>296</sup> (See Appendix A, Maps 17-18, and Appendix B, Table 46.) Among children and adolescents, approximately one in five is obese (21.7%), on par with NYC, but higher than NYS (17.6%, excluding NYC) for the same time period.<sup>297</sup> (See Appendix B, Table 70.) Community members and key informants recognized the high rates of obesity in Brooklyn, seeing it as a significant health concern: *“Obesity. Obesity. Obesity. That’s number one.” [Flatbush focus group]* They attributed obesity to dietary behavior, which in turn were attributed to food availability, as well as lack of knowledge, lack of time, lack of money, and ingrained habits. Across lower income neighborhoods and communities, respondents described poor access to fruit and vegetables; if supermarkets were present, quality was considered inferior. Although many communities did have farmers markets, they were often held just once a week and operating during regular business hours so were not accessible to working people. Price was also a concern, particularly in neighborhoods that were gentrifying or for participants that felt that only organic produce was healthy. In contrast, fast food and bodegas were abundant, as described by multiple CNA participants. For example:

*If you really look at East New York or like, a lot of neighborhoods where there’s like, people like us, if you look at the stores in walking distance it’s like McDonalds or Burger King or Chinese food. The farmers markets and stuff like that, you have to get on a train or bus to get access to those places. So obviously a lot of people would be tempted to go to get junk food, like Chinese food or fried chicken, stuff like that, and get fat. [Flatbush focus group]*

*On that [2.5 block] walk [in Bushwick] you pass a White Castle, McDonald’s, KFC, Dunkin’ Donuts, and a bodega with lots of candy and chips, right? So it’s just amazing. It’s so prevalent. .... There’s like five [fast food establishments] within two blocks. So, yes, kids are obese. (Bushwick key informant)*

Focus group participants appeared to know which foods were healthy and which were not, and consistently emphasized the importance of fresh fruit and vegetables. Many described dietary changes they had made in recent years. There was a common interest in organic foods and complaints regarding the price of organic products. In general, there were concerns about the cost of fresh produce relative to other foods.

*That’s where we [Haitians] probably, we have made the least progress in – in diet and exercise – because it’s only there for the people who can afford it.*

*You can get a huge thing of rice, and a pretty good supply of like beans, or chicken, or something like that, for like a fraction of the price of what like a thing of kale would cost*

Dietary issues went beyond access: participants described the difficulty of changing cultural patterns and related behavior. CNA participants across populations described consistent themes:

*I think, from a West Indian type of background, food is comfort. It’s a huge part of culture. You go to any birthday, funeral, whatever, there’s going to be food. ... We’re raised where you have*

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<sup>296</sup> It should be noted these rates are by UHF neighborhood, as rates are not available at the zip code level, so there could be variation within these UHF neighborhoods that is not captured here.

<sup>297</sup> Data years 2010-2011.

*to eat everything on your plate, even if you're full. That's just the way we're raised. And combined with food that's unhealthy, that leads to a lot of the reasons why people have health issues.*

*I'm Peruvian. So, we have some dishes that involve probably 80% carbohydrates, and maybe like a salad that's like not really a salad. So a lot of it is cultural stuff where folks are just used to eating certain things,*

Working parents had little or energy time to shop and cook, so offered their children fast food as the inexpensive, easy, and likely to please, alternative. Such patterns were considered ingrained, although the expanded healthful choices at fast food restaurants was seen as potentially impacting these negative patterns. For individuals in poverty—particularly if they had health related dietary restrictions—food access was considered especially problematic. Typical focus group and key informant comments include:

*One of the biggest problems of the community is diabetes. And when we talk of diabetes and nutrition, we see that many people know that they should eat certain foods, but for economic reasons, they always buy the cheapest pasta, the cheapest bread, not that kind that will be nutritious.*

*The example is the woman who's got a couple of kids and has to get up and take three buses to work. By the time she gets home at night, it's 8:00 and she has no time to go and pick up fresh vegetables and cook them. So it's not necessarily that people don't want to consume the right food. It's that they're not able to prepare it.*

## **TOBACCO USE/CESSATION**

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The percentage of cigarette smoking among adults in Brooklyn is roughly on par with NYC and NYS rates (16.0% in Brooklyn versus 15.5% in NYC and 16.2% in NYS in 2012), but rates vary widely by neighborhood. Nearly one-quarter (23%) of Coney Island residents report being a current smoker. High rates are also found in Williamsburg/Bushwick, Greenpoint, Bay Ridge/Bensonhurst, East New York/New Lots and Bedford Stuyvesant/Crown Heights, where rates range from approximately 16-19%. (Appendix B, Table 37.)

Smoking was considered problematic among particular populations, including Chinese and Arab immigrants. Among Arab populations, smoking is considered an indicator of maturity and offering cigarettes a common courtesy. In addition the increasing number of hookah bars in Arab neighborhoods, was also an issue of concern.

*Another cultural thing, the hookah bars, the hookah smoking in the community. It's a culture thing. It's getting very bad in the community. I start to see it here in downtown Brooklyn, and they are planning to open one here, one of the hookah bars here, and there are about 20 of them in the Village area... one hour of the hookah stuff is like you're smoking a whole pack in one hour. (Key informant, immigrant service CBO)*

### Section iii: Domain 3 and 4 Metrics

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#### Domain 3 Metrics: Clinical Improvement

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See attached Appendix B.

#### Domain 4 Metrics: Improve Health Status and Reduce Health Disparities

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See attached Appendix B.

### SECTION C: IDENTIFICATION OF THE MAIN HEALTH AND HEALTH SERVICES CHALLENGES

Brooklyn is a diverse borough, rich in culture, commerce and open space, including parks, gardens and beaches. However, disparities are pronounced, given its mix of high, medium and low income neighborhoods, and significant populations from diverse racial and ethnic groups including—but not limited to— African American and Caribbean populations, Latinos (originating from multiple countries), and Chinese, Russian, Polish, South Asian, and Arab populations, including immigrants.<sup>298</sup> Each of these communities has unique needs related to culture, language, education, and economics, as well as unique strengths.<sup>299</sup>

A number of Brooklyn neighborhoods have high concentrations of public housing. These areas, which often have concentrated poverty, are described by many residents as neglected neighborhoods, without appropriate services for meeting even basic needs.<sup>300</sup> In contrast, rapid gentrification is evident in many traditionally lower income and minority Brooklyn neighborhoods, having consequences that are described by some in positive terms, including increased access to healthy foods.<sup>301</sup> More commonly, the negative consequences of gentrification are noted, including reduced affordable housing and higher prices at local businesses.<sup>302</sup>

In Brooklyn, the greatest proportion of potentially preventable admissions (PQI) is for chronic conditions including respiratory conditions (asthma, COPD), cardiovascular conditions (heart failure, hypertension), and diabetes; thus, these conditions and diseases represent the areas of greatest opportunity for reducing preventable inpatient stays.<sup>303,304</sup> A focus on these conditions is consistent with findings from

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<sup>298</sup> NYAM primary data findings, as of September 15, 2014.

<sup>299</sup> Ibid.

<sup>300</sup> Ibid.

<sup>301</sup> Ibid.

<sup>302</sup> Ibid.

<sup>303</sup> New York State Department of Health DSRIP Performance data, 2012, [http://www.health.ny.gov/health\\_care/medicaid/redesign/dsrp\\_performance\\_data/](http://www.health.ny.gov/health_care/medicaid/redesign/dsrp_performance_data/), accessed September, 2014.

<sup>304</sup> Note the rate of potentially preventable inpatient admissions for chronic conditions (PQI 92) is 1,283 per 100,000 Medicaid beneficiaries in Brooklyn versus 480 per 100,000 beneficiaries for acute conditions (PQI 91) for

the primary data, which also pointed to diabetes, hypertension and asthma as areas of great concern. Many community members were also concerned about obesity and behavioral health—including anxiety, depression, substance abuse and violence—and clearly recognized the link between behavioral and physical health conditions.<sup>305</sup>

The Medicaid beneficiaries that account for the largest number of preventable admissions are concentrated in the areas of northern/central Brooklyn and Coney Island-Sheepshead Bay, though pockets of high concentration may exist at sub-zip code levels in other neighborhoods throughout the borough.<sup>306,307</sup> Medicaid beneficiaries in northern/central Brooklyn also account for the highest number of potentially preventable emergency room visits (PPV), though PPV rates are high throughout the county, with approximately 65% to 80% of all emergency visits considered potentially preventable.<sup>308</sup> It should be noted that there are a large number of Medicaid beneficiaries living in the Sunset Park neighborhood, though the number of PQI admissions and rate of PPV visits (per 100 beneficiaries) are lower there than in northern and central Brooklyn and Coney Island–Sheepshead Bay. These areas of the borough rank consistently poorly in markers of socioeconomic determinants of health such as household poverty, unemployment, lack of health insurance<sup>309</sup>, low levels of education, as well as high prevalence of disease. In addition, there are a large number of immigrants—including many undocumented—in a number of Brooklyn neighborhoods with access barriers (e.g., linguistic, eligibility for insurance, familiarity with the US healthcare system) that go beyond those of other populations and reportedly result in delayed care.<sup>310</sup>

As explained by key informants and focus group participant:

*Arab community: That's why sometimes I feel that colon cancer, breast cancer are on the rise in the community because they've never been screened before. Some people, they have colon cancer for a long time. They discover it too late. Breast cancer. Sometimes it's too late. You can't survive because it's already spread. Why? Because they didn't get their mammograms. So our community back home, they never had these screenings, so when they come here, they never ask for it. Sometimes it takes two or three years to have their annual checkup.*

A key component of the DSRIP program is to reduce avoidable services by bolstering primary care providers and community based organizations (CBOs) to enhance coordination of care, prevention and disease management, particularly for those with chronic conditions. Yet, we find the distribution of primary care providers uneven in Brooklyn, with sparse numbers in certain low-income neighborhoods. In addition, while community providers have made myriad efforts over the years to improve outreach to

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the combined years 2011-2012 (NYS DOH DSRIP Chartbook, using data from the NYS DOH Office of Quality and Patient Safety, 2014). However, this measure does not assess length of stay or cost for these admission types.

<sup>305</sup> NYAM primary data findings, as of September 15, 2014.

<sup>306</sup> New York State Department of Health DSRIP Performance data, 2012, released 2014.

<sup>307</sup> NYAM data analysis is at the zip code level, the smallest boundary level for which data is available. The neighborhood names cited are United Hospital Fund (UHF) neighborhood designations, commonly used by the New York City Department of Health and Mental Hygiene, including as the reporting boundaries for their Community Health Survey. For more information, see [http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf\\_map\\_100604](http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf_map_100604)

<sup>308</sup> New York State Department of Health DSRIP Performance data, 2012, released 2014.

<sup>309</sup> Excepting Coney Island where the population is older and thus more likely to be eligible for Medicare.

<sup>310</sup> NYAM primary data findings, as of September 15, 2014.

both community members and hospital providers,<sup>311</sup> concerns remain within the community regarding the adequacy and accessibility of outpatient care.<sup>312</sup> According to CNA participants, ambulatory care providers' capacity, perceived quality, linkages to broader health care delivery systems, and insufficient evening and weekend service, exacerbates access issues in some high need areas, for example in northern and central Brooklyn.<sup>313</sup> The data, including responses from large numbers of key informants and focus group participants, also suggest there is a lack of culturally and linguistically competent specialists<sup>314</sup> and multi-specialty centers that could provide a 'one-stop shopping' experience that many patients seek. For example:

*When you look at specialty care, say around mental health, for example, if an individual wants to go to someone who's culturally competent, we don't have a lot of Asian-Americans who are going into fields like mental health or behavioral health issues.*

From the community perspective, the costs incurred— in both time and money — in seeking medical care remains very problematic and acts as a barrier for low income populations to effectively use prevention and disease management services. The income criteria for Medicaid are described as unrealistic, given the cost of living in New York City, and the working poor who do not qualify for Medicaid — according to many focus group participants — cannot afford the premiums of insurance offered through the Exchange.<sup>315</sup> Community members (and providers) consistently describe long wait times for visits and long wait times at the time of a visit. Typical of these comments:

*I just walked out. I was there for like, 4 hours. I mean, I can't do that. I've been here since 10 AM. Why am I not seen yet? People get frustrated. (focus group participant)*

Furthermore, the possible need for multiple visits (e.g., for tests), discourages timely use of services and makes the emergency department a rational choice for "one stop shopping".<sup>316</sup>

*I played it smart. I had an emergency and I went to the emergency room. They took care of me so quick. I was there for like 30 minutes. When you go to see a doctor, you must have an appointment with the doctor. That's my beef. Two weeks, or two months. It depends. (focus group participant)*

*People say it's not rational to go to the emergency room for care, but when we talk to people, they would say things like, "Well, I tried to make an appointment with my doctor, and it's like four months in advance." What rational person is going to wait four months rather than go [to the ER?]* (key informant)

The brief amount of time doctors spend with patients, and a perception that providers do not have the best interests of patients in mind (i.e., they will do what is expedient rather than what represents highest quality care) also present a challenge. Such concerns have an impact on acceptance of services:

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<sup>311</sup> See, for example, IPA factsheets provided by AW Medical Offices and referenced in Section A(i) of this report.

<sup>312</sup> NYAM primary data findings, as of September 15, 2014

<sup>313</sup> NYAM primary data findings, as of September 15, 2014. Brooklyn Healthcare Improvement Project (B-HIP) "Final Report: Making the Connection to Care in Northern and Central Brooklyn," August, 2012.

<sup>314</sup> Ibid.

<sup>315</sup> NYAM primary data findings, as of September 15, 2014

<sup>316</sup> NYAM primary data findings, as of September 15, 2014. B-HIP Report, August, 2012.



*First, for preventive care you have to be aware that there's benefit to being screened for a disease that you may have no symptoms of and show no signs of. And you have to trust the provider is going to use the information you give them in a way that won't be to your detriment and ....you need to know that if you are diagnosed with something you are screened for, that there is a route to access to treatment that you can afford (Key informant, CBO)<sup>317</sup>*

The policy environment reportedly presented a number of challenges to residents and providers. Varying funding and regulatory agencies had differing requirements: 1) limiting continuity of care for patients with multiple healthcare needs and 2) putting excessive demands on provider organizations that worked with multiple systems. Resources for increasingly valued services, such as care coordination, were limited meaning that salaries for the positions were relatively low. Low salaries make hiring difficult and may necessitate selection of candidates that are under-qualified, particularly considering the expectations of the job. These expectations may include familiarity with multiple services (e.g., medical services, housing service, insurance information, etc.); ability to work with relatively difficult populations, including clients with behavioral health issues; and ability to use multiple electronic record systems, because of the multiple partner organizations. Lack of trust or engagement (or possibly time) in care coordination on the part of medical providers also was considered to limit the potential effectiveness of care coordination models.<sup>318</sup>

*What's missing is...saying to individual providers that this is important, and you need to be responsive, and you need to talk to people, and you need to interact with care coordinators. One of the biggest problems and flaws in the system is that in all of our contracts... we're required to go to providers, individual PCP's and psychiatrists, and get information from them both about their care that they're providing to our client or their patient or the lab work that's been done, tests, reports, anything that they're doing with our patient. We need to get access to that information so that we can help to provide better care and to guide that person along in the care that they're getting. So if they get prescribed a specific medication, we can say, "Are you taking that medication? Where are you at with it? Have you filled the prescription?" Those kinds of things. The problem is, on the provider's side, they don't get paid. No one's telling them – no one's saying to them from the funder level ... "You must communicate with these people."... so the providers ignore us. We have a requirement to do that, and so we're constantly doing it, but we're constantly getting rebuffed. And it's simply because there's no structure for them to respond. If, for example, you paid them to have a case conference, and that was part of their payment structure around a complicated expensive case, somebody who was costing Medicaid tens of thousands of dollars a year and, "Oh, let's pay the doctor \$500 to have a case conference"...They have to be incentivized, and I think this DSRIP is an opportunity to do that. (Key informant, multiservice organization)*

In addition, insurance regulations and the structure of care necessitate increasing travel to access care. Visits and tests might be at separate locations and/or providers accepting a particular insurance might be far from the home of the patient.

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<sup>317</sup> NYAM primary data findings, as of September 15, 2014.

<sup>318</sup> Ibid.

Overall, community members and providers that participated in the CNA clearly recognized the impact that poverty and lack of community resources have on health and well-being.<sup>319</sup> Low-income Brooklyn residents describe very stressful lives, with concerns that include, but are not limited to, employment, housing (which is in increasingly short supply with the gentrification of many Brooklyn neighborhoods), safety, access to healthy food, and appropriate resources for children and teens. A number of African American communities report poor access to services. Immigrant communities reported workdays may be 16 hours or more, and the pressures of assimilation are persistent.<sup>320</sup> Across populations, community members attribute high rates of diabetes, hypertension, obesity, depression and others illnesses, to their daily stresses.<sup>321</sup> They hope for community programming and other resources to assist with their basic needs.<sup>322</sup> A common complaint heard in focus groups is that providers fail to recognize or address these connections, consistently looking instead to the quick but possibly ineffective medical solution.

*I feel like when it comes to health and the services that are being provided, providers need to start looking at underlying issues as to why people are doing certain behaviors. Like, dig deeper. Don't just prescribe a medication to subside the pain or whatever. Dig deeper. See why the person is choosing to have an unhealthy diet. Maybe it's mental issues. And address those things. Don't just see a patient and give him medication.*

In addition, primary data suggest that there are particular very high need populations, including the chronically street homeless, those with severe alcohol dependence and/or serious mental illness, victims and survivors of domestic violence, individuals coming out of jails and prisons, and individuals with particular disabilities. These would likely benefit from more targeted and intensive services to ensure that a wide range of needs are addressed and systemic barriers are ameliorated.<sup>323</sup>

#### Northern/Central Brooklyn

Within northern and central Brooklyn, the highest number of avoidable inpatient admissions for chronic conditions are concentrated in the United Hospital Fund (UHF) neighborhoods of East New York, Williamsburg-Bushwick, Bedford Stuyvesant-Crown Heights and East Flatbush-Flatbush.<sup>324</sup> The highest ratio of observed/expected admissions for these conditions are in some of these neighborhoods as well as Downtown-Heights-Slope, and range as high as 1.28-1.55 across a large swath of this region. (See Appendix A, Maps 35- 37). Similarly, the highest number of potentially preventable emergency room visits (PPV) are also clustered in these areas. (See Appendix A, Map 53).

Residents of northern and central Brooklyn neighborhoods tend to have low incomes, especially in areas with large public housing structures, and report concerns about securing basic needs like housing, food (including healthy food), and employment, and resources needed to appropriately care for children.<sup>325</sup> According to a key informant that both lives and works in Crown Heights:

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<sup>319</sup> NYAM primary data findings, as of September 15, 2014.

<sup>320</sup> Ibid.

<sup>321</sup> Ibid.

<sup>322</sup> Ibid.

<sup>323</sup> Ibid.

<sup>324</sup> These are UHF neighborhood designations. For more information, see [http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf\\_map\\_100604](http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf_map_100604).

<sup>325</sup> NYAM primary data findings, as of September 15, 2014.

*So I know that nutrition is an issue, I know that prenatal care is an issue, alcoholism is an issue, and if not alcoholism then over use and over abuse of alcohol is an issue, coupled with smoking pot ... Given my ... work is in treatment, they're medicating. They walk around for all the world looking like people who are depressed. Mental health issues are many and subtle. Ignorance about health issues and about the healthcare delivery system.*

In addition to the stressors mentioned above - such as securing basic needs like housing, food, and employment – crime, including gun violence, and perceived threats to personal safety in some neighborhoods of northern and central Brooklyn, including East New York, Brownsville, Flatbush, may impact health seeking behaviors as well as the availability of health care providers, as providers are reluctant to open or stay open after-hours in unsafe places.<sup>326</sup> According to a Brooklyn-based key informant social service provider:

*You get into poor neighborhoods like Brownsville and East New York, and even Bed-Stuy is probably underserved. There's not a lot of services there for people, everyday-type services, so I think that's probably the biggest problem that – one of the biggest problems that needs to be addressed is getting people access to better quality care in the community that's more easily accessible so that they don't – and then retraining people so that they don't feel like they have to go to the emergency room to treat a cold, that they can actually go to their doctor and get an appointment and go get seen by a doctor in the community. That's a tough one, though, because doctors don't want to come [there].*

Residents and key informants alike spoke about a lack of services in these communities leading to poor environmental conditions (e.g., rodents, snow-filled streets) that discourage engagement within the community. (See Appendix A, Map 16 for rat sightings.)

#### Coney Island – Sheepshead Bay

Compared to Brooklyn as a whole, the population in Coney Island-Sheepshead Bay is older and disproportionately white (European).<sup>327</sup> There is a high concentration of dual-eligible individuals.<sup>328</sup> Approximately 18% of the population in the primary service area of the southern Brooklyn public hospital, Coney Island Hospital (CIH), is aged 65 or older, compared to approximately 11% in NYC and 12% in NYS.<sup>329</sup> Language presents a challenge in serving this community; approximately 36% of the population in CIH's primary service area speak European languages (primarily Russian) at home, 14% speak Asian languages (Chinese, Urdu), and 8% speak Spanish.<sup>330</sup> Chronic diseases and conditions such as diabetes, cardiovascular disease, behavioral health, asthma and obesity are the primary health needs in the area.<sup>331</sup>

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<sup>326</sup> NYAM primary data findings, as of September 15, 2014. B-HIP Report.

<sup>327</sup> US Census American Community Survey 5 year, 2008-2012.

<sup>328</sup> NYS Department of Health, 2012 data posted in 2012 to the DSRIP Performance Data site at [http://www.health.ny.gov/health\\_care/medicaid/redesign/dsrrip\\_performance\\_data/](http://www.health.ny.gov/health_care/medicaid/redesign/dsrrip_performance_data/), accessed September 15, 2014.

<sup>329</sup> "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," New York City Health and Hospitals Corporation, 2013.

<sup>330</sup> Ibid.

<sup>331</sup> NYAM primary data findings, as of September 15, 2014.

CIH was severely impacted by Super Storm Sandy, and its extension clinic, the Ida G. Israel Community Health Center, was completely destroyed and has not yet reopened, reducing the currently available outpatient care in the area.<sup>332</sup> There are a number of facilities dedicated to serving the older population in this area, including 15 nursing homes and Assisted Living Residences with a total of 3,500 (2431 + 1069) beds<sup>333</sup> and 23 senior centers, and 6 Naturally Occurring Retirement Communities (NORCs) in CIH's service area.<sup>334</sup> While CIH regularly partners with these providers and support services, more is needed to ensure coordination of care and disease management for the older population in the area, particularly the provision of culturally appropriate care for those who require care in languages other than English.<sup>335</sup>

Focus group participants reported described great needs in Coney Island, in particular<sup>336</sup>:

*Coney Island is the group that suffers greatly economically. We have a high rate of unemployment in Coney Island. High rate of high school drop outs. Lots of senior citizens. Lots of young mothers.... Some of the medical needs that we have are obesity, asthma, hypertension and heart disease. HIV and mental illness too, but the first five are really kind of rampant, in terms of our medical needs... We probably have the most [public housing] in New York City....Coney Island has been like a warehouse. That's why Coney Island has so many problems and so many needs. For about 30 years, no money had been invested in Coney Island, so what it had been used for—for a long time—was just to warehouse people. And now they're trying to turn it back around to its glory days.*

Community resources are described as increasingly limited, as the City apparently closed cooling centers and community centers, resulting in gaps for older adults and teens, in particular.<sup>337</sup> As described by one focus group participant:

*You have some many teenagers living in NYCHA buildings and there is no place to go for them. I can speak to Coney Island in particular. There is nowhere for young people to go. It's about a year and a half now, they built a YMCA. But, the YMCA is for people that can afford the YMCA. So there is still that segment out there that has no direction at all. So they're left to be out on the street. So even if you have community centers, those centers are locked up.*

#### Sunset Park

The Sunset Park population includes a high number of Medicaid beneficiaries, but the rate of avoidable admissions, readmissions and emergency visits is lower here than in other parts of the borough with similar proportions of Medicaid beneficiaries and populations with a similar socio-economic status.

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<sup>332</sup> Coney Island Hospital is working to rebuild outpatient services in a shorefront location. "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," NYC Health and Hospitals Corporation, 2013.

<sup>333</sup> Data is for facilities in the zip codes 11214, 11224 and 11235. Source: New York State Department of Health Nursing Home Profiles and Assisted Living Residence data, accessed September 2014.

<sup>334</sup> "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," NYC Health and Hospitals Corporation, 2013.

<sup>335</sup> "Coney Island Hospital 2013 Community Health Needs Assessment and Implementation Strategy," New York City Health and Hospitals Corporation, 2013 and NYAM primary data findings, as of September 15, 2014.

<sup>336</sup> NYAM primary data findings, as of September 15, 2014.

<sup>337</sup> Ibid.

Notably, nearly half of the population in the Sunset Park service area is foreign-born, with notably large Asian (Chinese) and Latino communities.<sup>338</sup>

The Chinese community of Sunset Park has been growing rapidly.<sup>339</sup> The diversity within it has also grown, and includes populations from multiple provinces, each with its own dialect and perceptions.<sup>340</sup> Health concerns among participants from the Chinese community are similar to those of other populations, and diabetes is considered to be common.<sup>341</sup> However, diet is generally considered healthy, obesity rates are lower than other communities, and physical activity is relatively common (e.g., walking, biking, Tai Chi).<sup>342</sup> Smoking is a main concern, with rates reported to be higher in the Chinese community than among other populations, resulting in high rates of asthma, lung cancer, and other respiratory problems.<sup>343</sup> CNA participants reported that cultural beliefs and access to health information impacted utilization of health care services within the Chinese community, particularly among older adults and recent immigrants.<sup>344</sup> Cultural beliefs discouraged some individuals from seeking medical care, particularly non-urgent or preventive services. In addition, stigma associated with serious illnesses can prevent open dialog around health and health care, both for patient and in the larger community. Furthermore, there is a lack of knowledge of preventive services among some residents, and language barriers limit access to health information, from the media, government, and providers, that is readily available to English speakers. Residents were reported to seek treatment through practitioners of Chinese medicine, which may limit use of Western medicine when necessary. Providers discussed the need to balance Western and Chinese medicine, and insure and patients are receiving safe treatment. Participants reported that community members were receptive to outreach efforts of medical providers, but also expressed the need for more health education within the community to address stigma associated with some illnesses and increase knowledge of preventive services. Participants emphasized that information must be provided in the appropriate language and be culturally sensitive. They cited the success of past Tai Chi programming that incorporated information regarding depression, a subject that would otherwise be avoided.<sup>345</sup>

Latino residents in Sunset Park report many of the same health issues as other populations, such as obesity (including among children), diabetes, and depression.<sup>346</sup> Several report concerted efforts to eat a healthy diet and to engage in physical activity—or to encourage their children to do so. However, lack of time and budget constraints, as well as some ingrained habits, serve as barriers to healthy choices -- one focus group participant reports that Latino residents regularly work 16 hours per day. Lack of insurance is reported to be more common in the Latino community than among other groups, and

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<sup>338</sup> Lutheran Healthcare “Community Health Needs Assessment and Community Service Plan” Conducted in 2013. “Maimonides Comprehensive Community Service Plan and Community Health Needs Assessment (2014-2016),” Maimonides Medical Center, 2013.

<sup>339</sup> NYAM primary data findings, as of September 15, 2014.

<sup>340</sup> Ibid.

<sup>341</sup> Ibid.

<sup>342</sup> Ibid.

<sup>343</sup> Ibid.

<sup>344</sup> Ibid.

<sup>345</sup> Unpublished NYAM primary data findings, 2013.

<sup>346</sup> Ibid.

results in high out of pocket costs, neglect of primary care and preventive services, and use of emergency care for non-urgent issues.<sup>347</sup>

Sunset Park's history as a first stop for immigrants along a waterfront in a historically manufacturing and industrial center brings with it environmental factors that may impact health, such as overcrowding in housing and environmentally toxic brownfields.<sup>348</sup> Sunset Park has high numbers of beneficiaries with asthma and other respiratory conditions, yet has low numbers of asthma and respiratory-related PQI hospitalizations.<sup>349</sup>

## SECTION D: SUMMARY OF THE ASSETS AND RESOURCES THAT CAN BE MOBILIZED

As noted above, the highest number of potentially preventable admissions (PQI) in Brooklyn is for chronic conditions including respiratory conditions such as asthma, cardiovascular conditions such as hypertension, and diabetes, and these tend to be concentrated in the low-income neighborhoods throughout the borough. Some of these same neighborhoods tend to account for the largest proportion of potentially preventable emergency room visits (PPV), though PPV rates are high throughout the county, with approximately 65% to 80% of all emergency visits considered potentially preventable.<sup>350</sup>

Also, as noted above, bolstering primary care providers and community based organizations (CBOs) to enhance targeted care coordination, prevention and disease management, particularly for those with chronic conditions, is a potential route to reduce these avoidable services. Within Brooklyn, better capacity, quality, linkages to broader health care delivery systems, and operating hours are needed for primary care providers in some high need areas, for example in northern and central Brooklyn.<sup>351</sup> Multi-specialty centers could potentially provide a 'one-stop shopping' experience that many patients seek and reroute non-emergent ER use.<sup>352</sup>

Given the diversity of Brooklyn, and the high number of new immigrants, improved cultural and language competency is considered essential. While more culturally and linguistically competent specialists could potentially close gaps in care for immigrant groups and others who require care in languages other than English, it was recognized that it would be difficult to identify and recruit providers representing all the relevant ethnic groups. However, supportive staff, which might be peers, community health workers, health navigators, or peers were considered effective for addressing a range of language and cultural issues.<sup>353</sup>

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<sup>347</sup> Ibid.

<sup>348</sup> Lutheran Community Health Needs Assessment, 2013. Also, UPROSE, which notes on its web site: "In Sunset Park, as in many communities that have been home to manufacturing for the past hundred years, brownfield properties can present a major challenge to realizing the ultimate vision for revitalizing a neighborhood. A "brownfield" or "brownfield site" is defined as any real property whose redevelopment or reuse may be complicated by the potential presence of a contaminant."

<sup>349</sup> NYS Department of Health, 2012 data.

<sup>350</sup> The rate of potentially preventable inpatient admissions for chronic conditions (PQI 92) is 1,283 per 100,000 Medicaid beneficiaries in Brooklyn versus 480 per 100,000 beneficiaries for acute conditions (PQI 91). However, this measure does not assess length of stay or cost for these admission types.

<sup>351</sup> NYAM primary data findings, as of September 15, 2014. Brooklyn Healthcare Improvement Project (B-HIP) "Final Report: Making the Connection to Care in Northern and Central Brooklyn," August, 2012.

<sup>352</sup> Ibid.

<sup>353</sup> NYAM primary data findings, as of September 15, 2014.

Also, while there are a number of CBOs in Brooklyn, the data suggest more resources are needed to equip them with staff and capability, including a structured and adequate funding stream for case managers, navigators, counselors, health educators and/or community health workers placed at CBOs or in the field, as well as effective linkages – both interpersonal and electronic – between the CBOs and the medical providers.<sup>354</sup>

In addition to CBOs, the local department of health – the New York City Department of Health and Mental Hygiene (NYC DOHMH) – is a resource for population health programming and technical assistance, including its Brooklyn District Public Health Office, which has a special focus on maternal child health and obesity prevention and its new Center for Health Equity, which will focus on reducing health disparities citywide. A new community health worker program is being piloted in East Harlem as a centerpiece of the new NYC DOHMH Center for Health Equity. This effort is worth tracking for potential replication in Brooklyn. Overall, there may be greater opportunities for synergies between the NYC DOHMH and the health systems in Brooklyn.

### **Implications for Project Selection:**

#### **Domain 2 System Transformation Projects**

The high number of potentially preventable inpatient admissions, emergency visits, and potentially preventable readmissions in this area, suggests that systems transformation is needed to reduce these. Thus, for the county as a whole, the needs assessment suggests that any of the DSRIP domain 2 projects could be appropriate. For an individual Performing Provider System, a specific project may be more appropriate dependent on ongoing initiatives, current infrastructure, payor mix, partners, and service area.

In addition to the DSRIP Domain 2 projects focused on creating integrated delivery systems (Domain 2A), implementation of care coordination and transitional care programs (Domain 2B), and connecting settings (Domain 2C), the New York State Department of Health has announced it is adding a new project (Domain 2D) focused specifically on the uninsured, as well as low- and non-utilizing Medicaid beneficiaries.

#### **Uninsured**

In Brooklyn, according to the latest available data, approximately 344,000 people are uninsured, accounting for approximately 16% of all the uninsured individuals in New York State.<sup>355</sup> Adults over the age of 18 account for the largest proportion of the uninsured in Brooklyn, with a rate of 16.9%, versus approximately 2% among those aged 65 and older, and 4.5% among children aged 0-17.<sup>356</sup> Within the borough, the highest number of uninsured appear to be clustered in the zip codes of 11220 Sunset Park and 11226 East Flatbush, with high numbers in Williamsburg-Bushwick, East New York, and East Flatbush-Flatbush. (See Appendix A, Map 3.)

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<sup>354</sup> NYAM primary data findings, as of September 15, 2014.

<sup>355</sup> Note these figures were estimated prior to the implementation of the Affordable Care Act (ACA) insurance exchange in New York State, and may have changed. Data Source: US Census, American Community Survey, 5 year data, 2008-2012.

<sup>356</sup> Ibid.

The 2008-2012 5-year American Community Survey estimated that 207,094 (or 60.0%) of the total number of 344,916 uninsured Brooklyn residents were foreign born. Of these 207,094 foreign-born uninsured residents, the largest number were born in Latin American countries (75,577, 36.5%), followed by those born in non-Hispanic Caribbean countries (48,893, 23.6%), China (24,494, 11.8%), Russia (6,051, 2.9%), Poland (5,665, 2.7%), South Asian countries (5,532, 2.7%), and Arab countries (2,220, 1.1%).

Uninsured foreign born Latinos are concentrated primarily in Community District (CD) 4, Bushwick, and CD 7, Sunset Park and Windsor Terrace. Those uninsured born in Caribbean countries reside primarily in CD 17, East Flatbush, Farragut, and Rugby; CD 18, Canarsie and Flatlands; and CD 9, Crown Heights South, Prospect Lefferts, and Wingate. The Chinese-born uninsured are found mostly in CD 7, Sunset Park and Windsor Terrace and CD 11, Bensonhurst and Bath Beach. Those from Russia are more dispersed with some concentration in CD 13, Brighton Beach and Coney Island and CD 15, Sheepshead Bay, Gerritsen Beach, and Homecrest. Those from Poland are concentrated in CD1, Greenpoint and Williamsburg. The South Asian and Arab foreign born uninsured are fairly evenly dispersed throughout Brooklyn.

A significant portion of the uninsured in Brooklyn may be undocumented.<sup>357</sup> Despite health reform, data suggest insurance coverage also remains problematic (or is increasingly problematic) even for those eligible.<sup>358</sup> As mentioned above, income restrictions for Medicaid are considered unrealistically low, and self-purchased coverage is repeatedly described as too expensive, given the difficulties of paying for basic necessities including food and housing.<sup>359</sup> Lack of health insurance is reported to result in reduced use of preventive and community based care and increased emergency department use.<sup>360</sup>

*I go to emergency room. That's where most people have to go if they don't have a doctor. That's where everybody has to go if you don't have health insurance. [Flatbush focus group]*

### **Domain 3 Clinical Improvement Projects**

As noted above, the greatest proportion of potentially preventable admissions (PQI) in Brooklyn are for chronic conditions including respiratory conditions, cardiovascular conditions, and diabetes.<sup>361</sup> Thus, these conditions and diseases also represent the areas of opportunity for reducing preventable inpatient stays. Also, as noted above, the Medicaid beneficiaries that account for the largest proportion of these preventable admissions are concentrated in the areas of northern/central Brooklyn and Coney Island-Sheepshead Bay. These areas also account for the highest rates of potentially preventable emergency room visits (PPV), though PPV rates are high throughout the county, with approximately 65% to 80% of all emergency visits considered potentially preventable. Implementing clinical improvement projects that galvanize or build upon current resources could improve coordination of care, prevention and disease management and thus reduce avoidable admissions and emergency visits.

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<sup>357</sup> NYAM primary data findings, as of September 15, 2014.

<sup>358</sup> Ibid.

<sup>359</sup> Ibid.

<sup>360</sup> Ibid.

<sup>361</sup> Ibid.



## Behavioral Health Comorbidities with Physical Health

Many patients with behavioral health conditions also have chronic physical health conditions. According to data from the NYS Office of Mental Health (OMH), approximately 54.8% (13,141/23,994) of Brooklyn clients served had at least one chronic medical condition. (See Appendix B, Table 32 and Chart 35.) The 2011 OMH Patient Characteristics Survey states that 51.5% of Brooklyn adults surveyed had cardiac or metabolic illnesses, and 10.4% of Brooklyn children surveyed had a pulmonary condition.<sup>362</sup>

Medicaid beneficiaries appear with a behavioral health utilization appear to be concentrated in north central Brooklyn, from Bedford-Stuyvesant through Crown Heights, Brownsville, to East New York.<sup>363</sup> (See Appendix A, Maps 31-32.)

## Asthma/Respiratory Conditions

Approximately 6.0% of Medicaid beneficiaries in Brooklyn had asthma-related service utilization (including pharmacy) in 2012, compared to 6.7% in NYC overall and 6.4% in NYS. Within Brooklyn, these rates range from 3.0% to 10.0% and the highest rates are clustered in Downtown, Red Hook, Coney Island, Williamsburg/Bushwick, East New York, and Sunset Park. (See Appendix A, Map 23.) While the observed rate of potentially preventable inpatient stays for Medicaid beneficiaries for respiratory conditions (PQI 05 and PQI 15) has declined in Brooklyn since 2009, it remains at or above the expected rate, with significant variability among zip codes. The areas of Brooklyn with the highest PQI respiratory composite hospitalizations are located in North/Central Brooklyn, with especially high numbers in Bushwick and Crown Heights, and in the south in Coney Island. (See Appendix A, Map 40.) These are also the areas with the highest concentration of potentially preventable hospitalizations for older adults for asthma or COPD (PQI 05) (See Appendix A, Map 43.) Notably, while Sunset Park has high numbers of beneficiaries with asthma and other respiratory conditions, it has low numbers of asthma and respiratory-related PQI hospitalizations. Among “younger adult” (aged 18-39) Medicaid beneficiaries, potentially preventable hospitalizations for asthma (PQI 15) are most heavily concentrated in Bushwick and Brownsville. (See Appendix A, Map 51.)

Regarding environmental triggers, limited data is available. However, data on the rate of serious housing violations by Community District, i.e., housing code violations that are considered “immediately hazardous or serious,” show prevalence in many of the same neighborhoods with high numbers of preventable respiratory PQI hospitalizations: Bedford-Stuyvesant, Crown Heights, Williamsburg, Bushwick, Brownsville, and East New York; plus Flatbush and East Flatbush. (See Appendix A, Map 15.) In Bushwick, community members consider the prevalence of asthma to be “huge” and largely attribute it to indoor and outdoor environmental conditions, including poor housing conditions, traffic, and the historic industrial base of the community, with likely persistent toxic chemicals.<sup>364</sup> Also, as noted above, in Sunset Park there is a history of toxic environments due to ‘brownfields,’ especially along the waterfront where there is a historically industrial area.

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<sup>362</sup> NYS OMH Patient Characteristics Survey, 2011

<sup>363</sup> These numbers reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories within a single Major Diagnostic Category. Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence Among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Dept of Health Data, 2012.

<sup>364</sup> NYAM primary data findings, as of September 15, 2014.

When looking at the location of asthma health care resources in relation to Respiratory Composite PQI hospitalizations (Appendix A, Map 72), there appears to be fairly good alignment of health care resources to need; however, as noted above in regard to Sunset Park compared to other areas with high numbers of beneficiaries with respiratory conditions, the relationship of these resources to the prevention of PQI hospitalizations varies and is uncertain, especially when considering additional socio-demographic variables that may be influencing the PQI hospitalization outcome. Whatever the current efficacy of these resources in preventing asthma-related hospitalizations, they provide a foundation to implement the DSRIP clinical improvement projects around medication adherence and home-based self-management, which includes a focus on reducing home environmental triggers. There are effective models for reducing household environmental triggers that can be implemented in Brooklyn, including those promulgated in the State's Prevention Agenda.<sup>365</sup>

### Cardiovascular Disease

In 2012, the number of potentially preventable hospitalizations among Medicaid beneficiaries for circulatory conditions (PQI S02 Circulatory Composite) in Brooklyn was 3,694, accounting for more than one in five (23.3%) of all such admissions in the State. However, the ratio of observed/expected (O/E) admissions in Brooklyn (1.04) was lower than the ratio for NYC (1.06) for the same time period. Although the overall Observed/Expected ratio for the borough was 1.04 for Circulatory Composite PQI hospitalizations, the range across zip code areas was 0.34 to 1.47, with 22 of the 37 zip code areas having an O/E ratio over 1.00, indicating relatively broad prevalence across the borough. The highest Observed / Expected PQI ratios for Circulatory Composite are in north-central Brooklyn, a cluster of zip codes from Downtown in the west to Bedford-Stuyvesant and Bushwick in the east, and in Flatbush, East Flatbush, and Coney Island - Sheepshead Bay. (See Appendix A, Map 39.)

The highest rates of cardiovascular-related service utilization (including pharmacy) were found in south Brooklyn, in Coney Island and Sheepshead Bay, extending northward to Borough Park.<sup>366</sup> The north central Brooklyn neighborhoods noted above, with high numbers and O/E ratios for PQI hospitalizations, have relatively low rates of cardiovascular-related utilization. This suggests opportunities for greater patient education and outpatient service utilization in those communities aimed at the DSRIP clinical improvement project objectives of implementing primary and secondary prevention strategies, more efficacious patient self-management, and enhanced clinical disease management. In regard to disease information and support services, much of Brooklyn including the north central high needs areas, appear to have these services available; however, in the high need south Brooklyn areas, these services appear to be lacking. (See Appendix A, Maps 67-68.) Specialty cardiovascular services similarly do not appear to be located in the areas of greatest need. (See Appendix A, Map 70.)

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<sup>365</sup> [https://www.health.ny.gov/prevention/prevention\\_agenda/2013-2017/](https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/)

<sup>366</sup> These numbers reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories within a single Major Diagnostic Category. Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence Among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Dept of Health Data, 2012.

## Diabetes

Diabetes is considered by many residents and key informants to be the most significant health issue in Brooklyn.<sup>367</sup> The diabetes composite PQI (S01) for Brooklyn (1.00) is overall the same as for New York City (1.01) and New York State (1.00).<sup>368</sup> But, within Brooklyn, the range for PQI S01 observed / expected ratios is 0.30 to 1.69. (See Appendix A, Map 38.) Across New York State, only 51% of Medicaid Managed Care beneficiaries with diabetes received all recommended tests in the last year, and 33% of Medicaid Managed Care beneficiaries in NYS with diabetes have poorly controlled HbA1c (>9%).<sup>369</sup>

The Diabetes Composite PQI (PQI S01) suggests there are a large cluster of potentially preventable hospitalizations in northern and central Brooklyn, extending from Bedford-Stuyvesant and Williamsburg-Bushwick through Crown Heights and Brownsville to East New York; and in Coney Island. Additional areas with significant numbers of Diabetes Composite PQI hospitalizations, if not an O/E ratio over 1.00, can be found in Flatbush and East Flatbush. (See Appendix A, Map 38.) Rates of Medicaid avoidable hospitalizations in Brooklyn for short-term diabetes complications are comparable to those for New York City and New York State.<sup>370</sup> Brooklyn, overall, had 838 Diabetes short-term complications (PQI 01) hospitalizations and a PQI O/E ratio of 0.87. Thirteen zip code areas have an observed/expected (O/E) ratio greater than 1.00 and account for 546 of these hospitalizations; these are found in a large cluster in north central Brooklyn, extending from Bedford-Stuyvesant and Williamsburg-Bushwick through Crown Heights and Brownsville to East New York, and in Coney Island. (See Appendix A, Map 41.)

The geographic concentration of PQI hospitalizations makes the potential return on investments in practice reforms and personnel high in terms of incentive payments for reduced PQI admissions and overall improved disease management. However, the available data suggests there may be a geographic misalignment of diabetes care management resources with need (as shown in terms of Diabetes Composite PQI S01 hospitalizations).<sup>371</sup> (See Appendix A, Map 71.)

## Obesity and Healthy Food Access

In addition to bolstering community providers and community based organizations to improve coordination of care and disease management, reducing the obesity rate in the population will be a key factor in controlling the incidence and prevalence of non-congenital cardiovascular disease and Type II diabetes. This will require a multi-faceted approach that includes changes to the built environment, changes in food access and availability, and traditional community-based obesity prevention efforts. The problem is more complicated by differing perceptions of 'healthy' weight among the diverse cultures represented in Brooklyn.<sup>372</sup>

As noted in the NYS Prevention Agenda<sup>373</sup>, health care systems and community actors can work together to create environments that promote good health including access to fresh, affordable healthy foods

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<sup>367</sup> NYAM primary data findings, as of September 15, 2014.

<sup>368</sup> Ibid.

<sup>369</sup> QARR, 2011

<sup>370</sup> NYS Department of Health, 2012 data.

<sup>371</sup> The list of diabetes resources are from the GNYHA HITE SITE providers who list "diabetes" among their services or programs, plus a list of FQHCs and Community Health Centers servicing the area.

<sup>372</sup> NYAM primary data findings, as of September 15, 2014.

<sup>373</sup> [https://www.health.ny.gov/prevention/prevention\\_agenda/2013-2017/plan/chronic\\_diseases/focus\\_area\\_1.htm#sector](https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/plan/chronic_diseases/focus_area_1.htm#sector)

and safe, accessible places for exercise. It will be important to align these interventions with the areas of greatest need throughout the borough. (See Appendix A, Map 69 for the current healthy and active living resources by neighborhood and Map 71 for the current diabetes care resources by neighborhood.)

#### Integrating Care to Address Co-Morbidities

As noted above, many patients that have a chronic disease may suffer from multiple physical- and behavioral health co-morbidities. Thus, co-locating and integrating behavioral health and primary care services may help promote more seamless coordination of care for these patients. Within the medical health realm, patients with a chronic health illness often need multiple services and tests. Thus, integrating care into multi-service centers, for example that include primary care providers, specialists, lab and radiology services, may provide a 'one-stop' shopping location that is desired by patients who may currently use the ED to obtain this experience.

#### Domain 4 Population Health Projects

Domain 4 projects are intended promote population health and reduce health risks. Specifically, these projects are to: (1) promote mental health and prevent substance abuse, (2) prevent chronic disease, including promoting tobacco use cessation and improving preventive care and disease management for chronic diseases not covered in Domain 3b, such as cancer, (3) prevent HIV and STDs, and (4) promote healthy women, infants and children.

##### (1) Promote Mental Health and Prevent Substance Abuse

Among the Brooklyn population as a whole, the age-adjusted percentage of adults with poor mental health for 14 or more days of 7.4%, as well as the age-adjusted suicide rate of 4.6%, were lower than the state and city rates.<sup>374</sup> 6.1% of all people in Brooklyn report experiencing serious psychological distress, compared to 5.5% in NYC overall. In NYC, people who are currently experiencing psychological distress are more likely to report binge drinking in the last 30 days than people who did not report psychological stress and are more than twice as likely to report being a current smoker. Coney Island, in particular, appears to be disproportionately impacted by psychological distress with 12% of residents reporting it, nearly double the rate for the Borough (6.1%). Those in Bay Ridge-Bensonhurst and Williamsburg-Bushwick also report high rates of psychological distress, with approximately one in ten residents surveyed reporting it. Rates in the remainder of the borough range from approximately 8.5% in Greenpoint to a minimum of 1.6% in Sunset Park. (See Appendix B, Table 33.)

The myriad of stresses on lower income Brooklyn residents were considered overwhelming to some and resulted in high levels of depression.<sup>375</sup> Low-income immigrant populations—whether they be Latino, Arab, African, Asian or Caribbean—may have additional stressors, as well as poorer access to care, due to insurance and language issues.<sup>376</sup>

While the geographic distribution of behavioral health resources (Appendix A, Map 86) appears to

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<sup>374</sup> 2008-2009 Behavioral Risk Factor Surveillance Survey (BRFSS) and Expanded BRFSS data as reported on the NYS Prevention Agenda 2013-2017 State and County Dashboard, accessed September, 2014.

<sup>375</sup> NYAM primary data findings, as of September 15, 2014.

<sup>376</sup> Ibid.

match the widespread distribution of behavioral health conditions among beneficiaries as indicated by service utilization,<sup>377</sup> questions as to the adequacy of these resources in terms of capacity were raised in focus groups and key informant interviews. Access to mental health services is reported to be limited, although it might be the case that community organizations and residents are not aware of available services or how to access them. In addition, behavioral health issues generally carry greater stigma than other health concerns, which tends to limit use of services. Key informants and focus group participants both reported that many affected families try to address problems internally – or not at all.<sup>378</sup>

According to providers themselves, the system is fragmented, with possibly poorer integration within behavioral health services themselves than between physical and behavioral health. Behavioral health services are reported to be highly regulated by multiple agencies: Office for People with Developmental Disabilities (OPWDD), Office for Alcoholism and Substance Abuse Services (OASAS), and Office of Mental Health (OMH) with patient care being restricted according to the funding and regulatory agency—despite the frequency of co-occurring disorders. Thus, a mental health provider might be limited in the severity of illness that can be treated, the age of the patient, and other factors.<sup>379</sup>

## (2) Prevent Chronic Disease

### a. Promoting tobacco use cessation

The percentage of cigarette smoking among adults in Brooklyn is roughly on par with NYC and NYS rates (16.0% in Brooklyn versus 15.5% in NYC and 16.2% in NYS in 2012), but rates vary widely by neighborhood. (See Appendix B., Tables 37 and 47.) Nearly one-quarter (23%) of Coney Island residents report being a current smoker. High rates are also found in Williamsburg-Bushwick, Greenpoint, Bay Ridge-Bensonhurst, East New York-New Lots and Bedford Stuyvesant-Crown Heights, where rates range from approximately 16-19%.

Culturally appropriate messaging and interventions will likely be important to achieve cessation among certain groups, including some immigrant groups. According to interviews with key informants and focus groups, smoking was considered problematic among particular populations, including Chinese and Arab immigrants.<sup>380</sup> Among Arab populations (living largely in Bay Ridge and Bensonhurst), smoking is considered an indicator of maturity and offering cigarettes a common courtesy. In addition the increasing number of hookah bars in Arab neighborhoods, was also an issue of concern.

### b. Preventive care and disease management for chronic diseases not covered in Domain 3b

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<sup>377</sup> These numbers reflect possible duplicated counts of beneficiaries if a beneficiary's calendar year utilization was found by NYS DOH to occur across multiple Episode Disease Categories within a single Major Diagnostic Category. Therefore, the numbers reflect the Weighted Number of Beneficiaries with Condition-Related Utilization, and the rates reflect the Weighted Condition Prevalence Among Beneficiaries, by multiple counting beneficiaries for utilization across multiple co-morbidity Episode Disease Categories within a Major Diagnostic Category. NYS Dept of Health Data, 2012

<sup>378</sup> Ibid.

<sup>379</sup> Ibid.

<sup>380</sup> NYAM primary data findings, as of September 15, 2014.

The leading cause of premature death in the borough is cancer.<sup>381</sup> Rates for some preventive screening measures in Brooklyn are on par with NYC and NYS, e.g., approximately half of adults aged 50-75 years received a colorectal cancer screening in the borough, compared to 52%% in NYC and 49% in NYS in 2012, the latest year for which data is available.<sup>382</sup> However, the borough lags in other related risk factors, such as obesity: the prevalence of obesity in Brooklyn is higher than in NYC or NYS, with just over one-quarter (27%) of all adults in Brooklyn obese, versus 24.2% in NYC and 23.6% in the state.<sup>383</sup> (See Appendix B, Table 46.) The obesity rate varies widely within Brooklyn with the highest rates in East New York 37.6%), high rates in Canarsie-Flatlands, Coney Island- Sheepshead Bay and Williamsburg-Bushwick (28.5% - 30.5%) and the lowest rates in the borough in Downtown-Heights-Slope at 16.2%, where the fewest number of Medicaid beneficiaries reside in the Borough.<sup>384</sup> (See Appendix A, Maps 17-18.) Among children and adolescents, approximately one in five is obese (21.7%), on par with NYC, but higher than NYS (17.6%, excluding NYC) for the same time period.<sup>385</sup> (See Appendix B, Table 70.)

Community members and key informants recognized the high rates of obesity in Brooklyn, seeing it as a significant health concern: “*Obesity. Obesity. Obesity. That’s number one.*” [Flatbush focus group] They attributed obesity to dietary behavior, which in turn were attributed to food availability, as well as lack of knowledge, lack of time, lack of money, and ingrained habits. Across lower income neighborhoods and communities, respondents described poor access to fruit and vegetables. Fast food and bodegas were abundant; in many communities if supermarkets were present quality was considered inferior. Although many communities did have farmers markets, they were often held just once a week and operating during regular business hours so were not accessible to working people. Price was also a concern, particularly in neighborhoods that were gentrifying or for participants that felt that only organic produce was healthy.

### (3) Prevent HIV and Sexually Transmitted Diseases (STDs)

The fifth leading cause of premature death in the borough is AIDS. In fact, premature deaths in Brooklyn due to AIDS account for approximately one-third of all such deaths in NYC.<sup>386</sup> Among new cases of HIV, the virus causing AIDS, there are stark disparities in Brooklyn: the rate of new HIV diagnoses among black/African American people living in Brooklyn is more than five times the rate among whites in the borough (79.9 compared to 14.0 cases per 100,000 people).<sup>387</sup> The rate of new HIV diagnoses among Latinos living in Brooklyn is over 2.5 times that of whites (36.6 compared to 14.0 cases per 100,000

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<sup>381</sup> Premature deaths (< age 75) for the three years 2010-2012. Vital Statistics Data as of March, 2014, New York State Department of Health - Bureau of Biometrics and Health Statistics.

<sup>382</sup> Healthcare Effectiveness Data & Information Set (HEDIS), Medicaid Recipients, 2012, as presented by the New York State Department of Health, Office of Health Systems Management

<sup>383</sup> Community Health Survey, 2012. New York State Department of Health, 2012.

<sup>384</sup> It should be noted these rates are by UHF neighborhood, as rates are not available at the zip code level, so there could be variation within these UHF neighborhoods that is not captured here.

<sup>385</sup> Data years 2010-2011.

<sup>386</sup> The number 4 cause of premature death in NYS for the same time period is Lower Respiratory Disease, and the number 5 cause is Diabetes. Premature deaths (< age 75) for the three years 2010-2012. Vital Statistics Data as of March, 2014, New York State Department of Health - Bureau of Biometrics and Health Statistics.

<sup>387</sup> New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System - [HIV/AIDS Surveillance Data 2011]. [1 August 2014]. <http://nyc.gov/health/epiquery>.

people).<sup>388</sup> In addition, primary data suggests many of the same populations that historically struggled with HIV are now facing a new challenge with Hepatitis C incidence and prevalence.<sup>389</sup>

Rates of other STDs such as gonorrhea, chlamydia and syphilis in Brooklyn outpace corresponding rates in NYS. In 2012, the rate of gonorrhea among women aged 15-44 years in Brooklyn was 1.3 times the State rate, and, among men, the Brooklyn rate was 1.4 times the State rate. The chlamydia rate among Brooklyn women was 1.3 times the State rate in the same time period.<sup>390</sup> Among Brooklyn men, the primary and secondary syphilis case rate was 1.7 times the State rate for 2012, and, among women, the rate was 1.4 times the State rate.<sup>391</sup> The neighborhoods of Bedford Stuyvesant-Crown Heights, Williamsburg-Bushwick, East New York, Flatbush, and Flatlands experience the greatest burden from disparities in HIV and STDs.

#### (4) Promote Healthy Women, Infants and Children

The domain 4 project for this topic is specifically focused on reducing premature births. Low birth weight is correlated with premature birth and poor health outcomes. Over the period 2010-2012, the latest years for which data is available, the overall Low Birth Weight (LBW) rate for Brooklyn was 8.2%, compared to 8.5% for NYC and 8.1% for the state.<sup>392</sup> Across zip codes, the LBW rates ranged from 5.2% to 13.4%, with the highest rates found in a large cluster of zip codes extending through the north central, central, and eastern parts of the borough in the neighborhoods of Bedford-Stuyvesant, Crown Heights, Flatbush, Brownsville, East New York, and Canarsie.<sup>393</sup> These neighborhoods also experience the highest rates of infant mortality. (See Appendix A, Map 6.)

Over the same period, the number of live births per year averaged 41,969 in Brooklyn, representing 35.5% of the births in New York City and 17.5% of the births in the state. The percentage of all births in Brooklyn that were Medicaid or self-pay was 65.9%, compared to 59.7% in NYC and 50.1% in the state; the percentage of Medicaid or self-pay births across Brooklyn zip codes ranged from 12.5% to 91.2%. (See Appendix A, Map 8.) The highest fertility rates are found in Bay Ridge, Borough Park, and Williamsburg.

#### Synergies with the Local Department of Health

As noted above, a possible source for alignment of resources and efforts to address both health care access and the determinants of poor health may be the new NYC DOHMH Center for Health Equity. DOHMH will launch the Center in 2015 “to address health disparities that result in an excess burden of ill health and premature mortality in New York City’s communities of color. The Center will focus on three key areas: leveraging policy changes to better integrate primary care and public health to serve the health needs of communities, building interagency collaboration to address the root causes of health disparities, and increasing access to care by making services more accessible in neighborhoods with the worst health outcomes.”

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<sup>388</sup> New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System - [HIV/AIDS Surveillance Data 2011]. [1 August 2014]. <http://nyc.gov/health/epiquery>.

<sup>389</sup> NYAM primary data findings, as of September 15, 2014.

<sup>390</sup> Data for 2012 is not reported for men on the NYS Prevention Agenda 2013-2017 State and County Dashboard.

<sup>391</sup> 2012 data reported on the NYS Prevention Agenda 2013-2017 State and County Dashboard.

<sup>392</sup> New York State Vital Statistics Data 2010-2012, available at <http://www.health.ny.gov/statistics/chac/perinatal/county/kings.htm#kings>, accessed September, 2014

<sup>393</sup> Ibid.

**SECTION E: SUMMARY CHART OF THE PROJECTS TO BE IMPLEMENTED (NOT APPLICABLE)**

Guided by the findings of this borough-wide CNA report, and the additional analysis that is available in the detailed data tables in Appendix B., each PPS will be selecting their own projects based on their service area within the borough, their particular patient demography, and the existing infrastructure of the PPS partners. See Appendix B for the currently available DSRIP Domain Metrics.





## SECTION F: DOCUMENTATION OF THE PROCESS AND METHODS

### Methods: Primary Data

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In support of the overall aims of the CNAs, primary data were collected and analyzed to ensure the perspective of community members and stakeholders was incorporated into the reported findings and to respond to specific questions that could not be sufficiently addressed through secondary source data alone. In addressing these questions, we were particularly interested in the perspectives of Medicaid and other low income populations, as well as the uninsured.

- To what extent are community and environmental conditions conducive to health promotion and disease prevention?
- What are the primary health concerns and health needs of residents, overall and according to neighborhood and socio-demographic characteristics?
- What are the health related programming and services available to community residents, what organizations are providing the services, and what are the service gaps?
- Are there differences in access, use and perceptions of health related programming and services according to neighborhood and according to ethnic, racial, and language groups?
- In what ways can health promotion and health care needs be better addressed, overall and for distinct populations?

The protocol for primary data collection, including the instruments and outreach, was developed in collaboration with the PPS's at the start of the CNA process.

### Instruments and Data Collection

Data were collected through key informant interviews, focus groups, and surveys as described below.

- *Resident Surveys:* Approximately 681 surveys were completed by Brooklyn residents, ages 18 and older. Survey questions focused on basic demographics, health concerns (individual and community-wide), health care utilization, barriers to care, and use of community and other services (see appendix for Resident Survey). Survey respondents were identified and recruited by local organizations, including community based organizations, senior centers, social service and health providers, and through NYAM initiated street outreach—at street fairs, subway stops, and other places where people congregate—in targeted neighborhoods where CBO recruitment was seemingly insufficient, including downtown Brooklyn, Fort Greene, Williamsburg, East New York, Brownsville, Sunset Park and Coney Island. Although the sample cannot be considered representative of the borough in a statistical sense, and gaps are unavoidable, the combination of street and organizational outreach facilitated engagement of a targeted yet diverse population, including both individuals connected and unconnected to services. Survey respondents came from all Brooklyn neighborhoods; socio-demographic characteristics included: 44.3% Black/African American, 31.8% Latino, 13.7% Asian, 53.7% foreign born, 26.3% limited English proficient, 82.4% living below the poverty line, 53.4% enrolled in Medicaid and 13.0% uninsured. The mean age of respondents was 44, with a range of 18 to 88. Surveys were self-administered or administered by NYAM staff or staff or volunteers at community organizations (see Partnering with Community-based Organizations section below), who were trained and supported in survey administration by NYAM staff. The

surveys were translated into 10 languages: Arabic, Bangla, Chinese (simplified and traditional), Haitian Creole, French, Hindi, Korean, Polish, Russian and Spanish. Participants received a Metrocard valued at \$10 for completing the survey.

- *Key Informant Interviews:* Twenty-eight key informant interviews were conducted, including 35 individuals. Key informants were selected with input from the PPS's. A portion had population specific expertise, including particular immigrant groups, older adults, children and adolescents. Others had expertise in specific issues, including, substance abuse, supportive housing, care coordination, corrections, and homelessness. All key informant interviews were conducted by NYAM staff using an interview guide (see attached Key Informant Interview Guide). All key informants were asked about perceptions of health issues in the community, barriers and facilitators to good health, health care and other service needs, and recommendations for services and activities that may benefit the local population. Follow-up questions, asked on ad hoc basis, probed more deeply into the specific areas of expertise of key informants. The interview guide was designed for a discussion lasting 60 minutes; in fact, interviews ranged from 45 to 120+ minutes. All key informant interviews were audiotaped and professionally transcribed to ensure an accurate record and to allow for verbatim quotations. (See Appendix C for the list of Key Informants by name, position, and organization)

*Focus Groups:* Twenty-four focus groups were conducted for the Brooklyn Community Needs Assessment. Most of the focus groups were with community members, including residents from low income neighborhoods and residents identified as having unique health and service needs, including individuals with behavioral health issues, older adults, LGBTQ, and immigrants and/or other limited English proficient (LEP) individuals. Focus group participants were recruited by local organizations, community based organizations, senior centers, social service providers, tenant associations, and health providers. Community member interest in the focus groups was high, with some groups including up to 30 individuals. In addition to the resident groups, we conducted a small number of focus groups with community leaders, as well as providers, including behavioral health providers, care coordinators, and physicians. These groups were coordinated by collaborating PPS's, so as to ensure that the perspective of key stakeholders was incorporated into the findings.

Focus groups lasted approximately 90 minutes and were conducted using a semi-structured guide (see attached Focus Group Guide), with questions that included, but were not limited to: perceptions of health issues in the community, access to resources that might promote health (e.g., fresh fruit and vegetables, gyms), use of health services, access to medical and behavioral health care, domestic violence, and recommendations for change (see Appendix C. for focus group guide). Follow-up questions were asked on ad hoc basis, based on responses heard. Focus groups were conducted by CEAR staff members and consultants retained by CEAR, experienced in qualitative data collection and focus group facilitation. Many of the resident focus groups were co-facilitated by representatives of community based organizations that were trained by CEAR on focus group facilitation and the specific focus group protocol. Focus groups in languages other than English, Spanish and French were conducted solely by trained community partners (see Partnering with Community-based Organizations section below). Participants received a \$25 honorarium, in appreciation of their time and insights. All focus groups were audio recorded, so that transcriptions and/or detailed reports could be developed for each, and to allow for verbatim quotations.

## Data Management and Analysis

Surveys: Survey data were entered using Qualtrics, a web-based survey platform. They were analyzed according to standard statistical methods, using SAS. Means and proportions were generated. As appropriate, bivariate analyses was conducted to better understand the association between health indicators and geographic, demographic, and socioeconomic characteristics.

Interviews and Focus Groups: Transcripts and focus group reports were maintained and analyzed in NVivo, a software package for qualitative research. Data were coded according to pre-identified themes relevant to health, community needs, and DSRIP, as well as themes emerging from the data themselves (see Appendix C. for code list). Analysts utilized standard qualitative techniques, involving repeated reviews of the data and consultation between multiple members of the research team. Analyses focused on 1) common perceptions regarding issues, populations, recommendations, etc., 2) the unique knowledge and expertise of particular individuals or groups and 3) explanatory information that facilitated interpretation of primary and secondary source data.

## Partnering with Community-based Organizations

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Consistent with DSRIP CNA guidance, NYAM conducted primary data collection in collaboration with numerous community organizations. Community organizations were identified in collaboration with PPS representatives, and represented a range of populations (e.g., older adults, immigrant populations) and neighborhoods.

As described above, community organizations assisted in recruitment for and administration of focus groups and surveys. All organizations assisting with survey administration or focus group facilitation were provided with written guidelines including information on data collection and the general research protocol, the voluntary nature of research, and confidentiality. Organizations also participated in an in-person or phone training on data collection conducted by NYAM staff. Community organizations partnering in the research received an agency honorarium consistent with their level of responsibility

## Methods: Secondary Data

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The secondary data analyses followed the recommendations and guidelines set forth in the *Guidance for Conducting Community Needs Assessment* provided by the New York State Department of Health: ([http://www.health.ny.gov/health\\_care/medicaid/redesign/docs/community\\_needs\\_assessment\\_guidance.pdf](http://www.health.ny.gov/health_care/medicaid/redesign/docs/community_needs_assessment_guidance.pdf)). Overall, the analyses started with publicly available, de-identified data to assess health care and community resources, disease prevalence, demographic characteristics, and social determinants of health. The aim of this component of study was to assess preventable emergency room visits and hospitalizations, as well as to develop a set of descriptive analyses on the rates of chronic conditions of the population at county and zip code levels, where available.

Our analyses of publicly available data was supplemented with review of the available literature, including reports prepared by the participating providers, the NYS Department of Health, NYC Departments of Health and City Planning, academic institutions, and others. NYAM aggregated, analyzed, and interpreted these data. Quantitative data was summarized first with descriptive statistics. More advanced techniques, including regression analysis, was used to explore relationships between relevant variables. Where possible, data was presented in graphical (charts, line graphs, and maps) format to facilitate ease of communication and comprehension. Below we list and provide brief descriptions of the data sets used:

- **NYS Community Health Indicator Reports**

These data are used to compare rates of chronic disease-specific morbidity, mortality, hospitalization and other indicators of poor health and associated health care utilization in particular communities to the corresponding rates of NYC and NYS.

<http://www.health.ny.gov/statistics/chac/indicators/>

- **Behavioral Risk Factor Surveillance System (BRFSS)**

These data are used to describe the population of New York State, New York City and counties/boroughs in terms of health status (e.g., percentage of the population uninsured, percentage with diabetes or obese, etc.). The BRFSS is a telephone survey and the de-identified, individual level data are publicly available for download from the Centers for Disease Control and Prevention. Individual-level metrics on regular source of care, mental health and chronic conditions will be obtained from BRFSS.

<http://www.cdc.gov/brfss/>

- **Statewide Planning and Research Cooperative (SPARCS)**

Aggregate and individual-level (de-identified) metrics on preventable hospitalizations, emergency department visit rates and hospitalization rates for chronic conditions will be obtained through the publicly available SPARCS data.

<https://health.data.ny.gov/Health/Hospital-Inpatient-Discharges-SPARCS-De-Identified/u4ud-w55t>

- **Prevention Quality Indicators (PQI)**

These data include preventable hospital admission rates, with observed and expected rate per 100,000 by PQI Name, allowing identification of zip code areas with elevated rates and comparison to NYC and NYS.

<https://health.data.ny.gov/Health/Hospital-Inpatient-Prevention-Quality-Indicators-P/igp6-vdi4>

<https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/izyt-3msa?>

- **Pediatric Quality Indicators (PDI)**

These data include preventable hospital admission rates, with observed and expected rate per 100,000 by PQI Name, by county, allowing comparison to NYC and NYS.

<https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce>

- **Potentially Preventable Emergency Visits (PPV)**

These data include potentially preventable hospital emergency department visits, with observed and expected rate per 100,000, allowing identification of zip code areas with elevated rates and comparison to NYC and NYS.

<https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visits-/khkm-zkp2>

- **Hospital-specific profiles of quality of care for selected conditions**

<http://hospitals.nyhealth.gov/index.php?PHPSESSID=8884724aa17728cabe8a127921762546>

- **Medicaid Chronic conditions, Inpatient Admissions, and Emergency Room Visits**

These data are de-identified and publicly available by county and zip code for: Diabetes Mellitus, Diseases and Disorders of the Cardiovascular System, Diseases and Disorders of the Respiratory System, HIV Infection, Mental Diseases and Disorders, Newborn and Neonates, and Substance Abuse. Counts of Medicaid beneficiaries and number of ER visits and inpatient admissions by condition are also available by zip code.

<https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/wybq-m39t>

- **Medicaid hospital inpatient Potentially Preventable Readmission (PPR) Rates**

Listing of the number of at risk admissions, number of observed PPR chains, observed PPR rate, and expected PPR rate to help characterize hospital performance on this metric.

<https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7a-34ka>

- **NYS Prevention Agenda 2013-2017 tracking indicators**

These provide data for counties for a variety of health outcomes including rates of preterm birth, unintended pregnancy, maternal mortality, new HIV cases, new STI cases, immunization rates, obesity, and smoking.

<https://health.data.ny.gov/Health/Prevention-Agenda-2013-2017-Tracking-Indicators-Co/47s5-ehya>

- **American Community Survey 2012 5-year estimates**

These data are used to estimate demographic information by Zip Code Tabulation Area and Community District.

<http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

- **Vital Statistics**

Aggregate metrics on premature deaths, suicide rates, and Low Birth Weight and preterm births are obtained from the NYSDOH Vital Statistics.

[http://www.health.ny.gov/statistics/vital\\_statistics/](http://www.health.ny.gov/statistics/vital_statistics/)

<https://www.health.ny.gov/statistics/chac/perinatal/index.htm>

- **NYS HIV Surveillance System and NYS STD Surveillance System**

We used the latest reports available (2012) to obtain aggregate information on the rates of HIV and STDs for the state, city and boroughs.

[http://www.health.ny.gov/diseases/aids/general/statistics/annual/2010/2010-12\\_annual\\_surveillance\\_report.pdf](http://www.health.ny.gov/diseases/aids/general/statistics/annual/2010/2010-12_annual_surveillance_report.pdf)

- **NYC DOHMH HIV Surveillance System**

Data on the number and rates per 100,000 population of People Living with HIV/AIDS by UHF were obtained from NYC DOHMH

<http://www.nyc.gov/html/doh/html/data/hiv-eq.shtml>

- **NYC DOHMH Community Health Survey**

Data on Obesity, Psychological Distress, Self-Reported Health Status, Binge Drinking and Smoking were obtained from the NYC DOHMH Community Health Survey

<http://www.nyc.gov/html/doh/html/data/survey.shtml>

- **Mental Health Services Utilization and Co-morbidities**

Aggregate data on utilization by service type and co-morbidities are obtained from the NYS Office of Mental Health

<http://bi.omh.ny.gov/cmhp/dashboard>

- **Rat sightings by location**

Geo-coded information on rat sightings called into 311 was obtained from NYC DOHMH  
<https://nycopendata.socrata.com/Social-Services/Rat-Sightings/3q43-55fe>

- **Serious Crime rate per 1,000 residents and Serious Housing Violations per 1,000 rental units**

Rates by Community District and borough obtained from the NYU Furman Center  
<http://furmancenter.org/research/sonychan>

- **NYC Department of Corrections Jail admissions**

New jail admissions data were obtained from the NYC Department of Corrections (DOC) at the zip code level through an article in The Gothamist, and at the NYC level from DOC

[http://gothamist.com/2013/05/01/these\\_interactive\\_charts\\_show\\_you\\_w.php](http://gothamist.com/2013/05/01/these_interactive_charts_show_you_w.php)

<https://data.cityofnewyork.us/City-Government/DOC-Annual-Statistics/wkaa-8g8b>

- **NYS Prison admissions**

New NYS prison admissions data were obtained from the Justice Atlas of Sentencing and Corrections at the borough, NYC, and State level

<http://www.justiceatlas.org/>

- **Health Care Resources and Community Based Resources**

In addition to the data sets listed above, the following publicly available data-sets were inventoried and analyzed to assess the capacity, service area, populations served, areas of expertise and gaps in service for healthcare and community resources in Brooklyn:

Health Care Resources

- New York State Department of Health Safety Net Lists
- New York State Department of Health Dental Providers that Accept Medicare/Medicaid
- New York State Department of Health AIDS Institute. "AIDS Drug Assistance Program Plus Dental Providers
- New York State Department of Health AIDS Institute. "Ryan White Dental Clinics for People Living with HIV/AIDS
- New York State Department of Health Profiles: Hospitals, Nursing Homes, Hospices, Adult Care Facilities and other health care facilities
- New York State Department of Health Division of Managed Care and Program Evaluation Managed Care Plan Directory
- New York State Department of Health Office Based Surgery Practices in New York State
- Health Resources and Services Administration (HRSA) Health Care Service Delivery and Look-Alike Sites
- Health Resources and Services Administration Health Care Facilities (CMS)
- New York City Department of City Planning. Selected Facilities and Program Sites
- Greater New York Hospital Association Health Information Tool for Empowerment (HITE) data
- NYC Department of Education (DOE) Office of School Health School Based Health Centers
- American Academy of Urgent Care Medicine (AAUCM) website
- City MD website
- NYS Office of Mental Health (NYS OMH) Local Mental Health Programs in New York State
- NYS OMH Residential Program Indicators (RPI) Report Tool
- NYS OMH OMH TCM Programs – Location with Program Capacity
- NYS Office of Mental Health (NYS OMH), Office of Performance Measurement and Evaluation. County Capacity and Utilization Data Book, CY 2012 or 2013. April, 2014
- Brooklyn Queens Long Island Area Health Education Center (BQLI-AHEC) website
- New York State Department of Health HCRA Provider List July 2014.
- Center for Health Workforce Studies. 2008-2010 Blended Physician Data: Analysis of Physician Re-registration Data.
- New York State of Health Navigator Agency Site Locations
- Substance Abuse & Mental Health Services Administration Services Administration (SAMHSA) Physicians Certified for Buprenorphine Treatment

## Community Based Resources

- NYC Department of Information Technology and Telecommunications (DoITT) Agency Service Centers
- Administration for Children’s Services (ACS) Community Partners
- NYS Education Department, Office of the Professions New York State Nursing Programs
- NYS Department of Health Community Health Worker Programs
- NYC Department of Health & Mental Hygiene (DOHMH). “Directory of Child Care and Day Care Information Offices
- GROWN NYC Community Gardens
- NYC Department of Transportation (DOT) Daytime Warming Shelters
- NYC Department for the Aging (DFTA) DFTA Contracts
- NYC Department of Probation (DOP) Directory of DOP Office Locations
- Department of Youth and Community Development (DYCD) After-School Programs
- New York State Department of Health AIDS Institute Expanded Syringe Access Programs – Healthcare Facilities
- New York City Department of Health and Mental Hygiene New York City Farmers Markets
- New York State Department of Agriculture & Markets New York State Farmers’ Markets
- New York City Housing Authority (NYCHA) Development Data Book
- NYC Department of Consumer Affairs (DCA) Financial Empowerment Centers
- NYC Department of Education (DOE) GED Plus Locations
- HRSA Ryan White Programs
- NYC DOHMH / Public Health Solutions HIV Care Services Sites
- NYC Department of Homeless Services Homebase Locations
- NYC Mayor’s Office Programs
- National Alliance for Mental Illness (NAMI) Website
- NYC DOE Public High School Programs
- NYC Women’s Resource Network Directory
- NYCHA Summer Meal Locations
- NYC DoITT Office of Adults and Continuing Education (OACE) Sites
- NYC Taxi and Limousine Commission (TLC) Paratransit Bases
- Department of Health Prevention Agenda Contractors
- NYCDOHMH Syringe Access Programs
- Department of Small Business Services Workforce 1 Career Center Locations
- NYC DOE Young Adult Borough Centers

- **Community Health Needs Assessments, Community Service Plans and Community Reports**

We also conducted a systematic review of existing Community Health Needs Assessments and Community Service Plans of the major hospitals in Brooklyn and various community groups. See bibliography for titles of those reports.



## LIST OF APPENDICES

- Appendix A. Maps
- Appendix B. Tables with data by State, NYC, Brooklyn, and zip code, UHF neighborhood or community district, where available
- Appendix C. Primary Data Collection Instruments and Information
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  - Instruments and Guides:
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## GLOSSARY OF KEY TERMS

**Avoidable Hospital Use:** “This term is used to designate all avoidable hospital service use including avoidable emergency department use, avoidable hospital admissions and avoidable hospital readmissions within 30 days. This can be achieved through better aligned primary care and community based services, application of evidence based guidelines for primary and chronic disease care, and more efficient transitions of care through all care settings.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Clinical Improvement Milestones:** “Noted under Domain 3, these milestones focus on a specific disease or service category, e.g., diabetes, palliative care, that is identified as a significant cause of avoidable hospital use by Medicaid beneficiaries. Milestones can either relate to process measures or outcome measures and can be valued either on reporting or progress to goal, depending on the metric. Every Performing Provider System must include one strategy from behavioral health. Payment for performance on these outcome milestones will be based on an objective demonstration of improvement over baseline, using a valid, standardized method.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Community District (CD):** New York City has 59 community districts: 12 in Brooklyn, 12 in the Bronx, 12 in Manhattan, 14 in Queens and three in Staten Island. Each community district appoints a community board, an advisory group that is comprised of 50 volunteers to assist neighborhood residents and to advise on local and city planning, as well as other issues.

**Community Needs Assessment (CNA):** As defined in the NYS DOH CNA guidance, “this process includes a description of the population to be served, an assessment of its health status and clinical care needs, and an assessment of the health care and community wide systems available to address those needs.” (New York State Department of Health, “Guidance for Conducting Community Needs Assessment Required for DSRIP Planning Grant and Final Project Plan Applications,” as of June, 2014).

The specific aims of the CNA process are to:

- Describe health care and community resources,
- Describe communities served by the PPSs,
- Identify the main health and health service challenges facing the community, and
- Summarize the assets, resources, and needs for the DSRIP projects.

**Delivery System Reform Incentive Payment (DSRIP):** As defined by NYS DOH, “DSRIP is the main mechanism by which New York State will implement the Medicaid Redesign Team (MRT) Waiver Amendment. DSRIP’s purpose is to fundamentally restructure the health care delivery system by reinvesting in the Medicaid program, with the primary goal of reducing avoidable hospital use by 25% over 5 years. Up to \$ 6.42 billion dollars are allocated to this program with payouts based upon achieving predefined results in system transformation, clinical management and population health.” (New York State Department of Health, “DSRIP FAQs”)

**District Public Health Office:** Three DPHOs were established by NYC DOHMH in 2002 to reduce health disparities in the highest need neighborhoods of the city. They are located in the following neighborhoods:

- East/Central Harlem
- North/Central Brooklyn
- The South Bronx

**Domain:** “Overarching areas in which DSRIP strategies are categorized. Performing Provider Systems must employ strategies from the domains two through four in support of meeting project plan goals and milestones. Domain one encompasses project process measures and does not contain any strategies. The Domains are:

- Domain 1: Overall Project Progress
- Domain 2: System Transformation
- Domain 3: Clinical Improvement
- Domain 4: Population-wide Strategy Implementation”

(New York State Department of Health, “NYS DSRIP Glossary”)

**DSRIP Project Toolkit:** “A state developed guide that will provide additional information on the core components of each DSRIP strategy, how they are distinct from one another, and the rationale for selecting each strategy (i.e. evidence base for the strategy and it’s relation to community needs for the Medicaid and uninsured population). In addition, the strategy descriptions provided in the toolkit will be used as part of the DSRIP Plan Checklist and can serve as a supplement to assist providers in valuing projects.” (New York State Department of Health, “NYS DSRIP Glossary”)

**MRT Waiver Amendment:** “An amendment allowing New York to reinvest \$8 billion in Medicaid Redesign Team generated federal savings back into NY’s health care delivery system over five years. The Waiver amendment contains three parts: Managed Care, State Plan Amendment and DSRIP. The amendment is essential to implement the MRT action plan as well as prepare for ACA implementation.” (New York State Department of Health, “NYS DSRIP Glossary”)

**New York City Department of Health and Mental Hygiene (NYC DOHMH):** New York City’s local health department responsible for: disease control, mental hygiene, environmental health, epidemiology, health care access and improvement, health promotion, planning and program analysis and disease prevention and emergency preparedness and response.

**Performing Provider Systems (PPS):** “Entities that are responsible for performing a DSRIP project. DSRIP eligible providers, which include both major public general hospitals and safety net providers, collaborating together, with a designated lead provider for the group.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Population-wide Project Implementation Milestones:** “Also known as Domain 4, DSRIP performing provider systems responsible for reporting progress on measures from the New York State Prevention Agenda. These metrics will be measured for a geographical area denominator of all New York State residents, already developed as part of the Prevention Agenda:

[http://www.health.ny.gov/prevention/prevention\\_agenda/2013-2017/index.htm](http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/index.htm)”

(New York State Department of Health, “NYS DSRIP Glossary”)

**Potentially Preventable Emergency Room Visits (PPVs):** “Part of the nationally recognized measures for avoidable hospital use. The measures identify emergency room visits that could have been avoided with adequate ambulatory care.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Potentially Preventable Readmissions (PPRs):** “Part of the nationally recognized measures for avoidable hospital use. PPRs measure readmissions to a hospital following a prior discharge from a

hospital and that is clinically-related to the prior hospital admission.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Prevention Agenda:** “As Part of Domain 4, Population-wide Strategy Implementation Milestones, the Prevention Agenda refers to the “blueprint for state and local action to improve the health of New Yorkers in five priority areas and to reduce health disparities for racial, ethnic, disability, socioeconomic and other groups who experience them”, as part of New York State’s Health Improvement Plan . Further information: [http://www.health.ny.gov/prevention/prevention\\_agenda/2013-2017/index.htm](http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/index.htm)” (New York State Department of Health, “NYS DSRIP Glossary”)

**Prevention Quality Indicators – Adults (PQIs):** “Part of the nationally recognized measures for avoidable hospital use PQIs are a set of measures that can be used with hospital inpatient discharge data to identify quality of care for “ambulatory care sensitive conditions.” These are conditions for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease. The PQIs are population-based and can be adjusted for covariates for comparison purposes. Additionally there are similar potentially preventable hospitalization measures for the pediatric population referred to as PDIs.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Prevention Quality Indicators – Pediatric (PDIs):** “Part of the nationally recognized measures for avoidable hospital use that can be used with hospital inpatient discharge data to provide a perspective on the quality of pediatric healthcare. Specifically, PDIs screen for problems that pediatric patients experience as a result of exposure to the healthcare system and that may be amenable to prevention by changes at the system or provider level. Similarly the PDIs are population based and can be also be adjusted for covariates for evaluation.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Project Progress Milestones:** “Also known as Domain 1, measures the investments in technology, tools, and human resources that strengthen the ability of the performing provider systems (PPS) to serve target populations and pursue DSRIP project goals. The Project Progress milestones include monitoring of the project spending and post-DSRIP sustainability. In addition, submission of quarterly reports on project progress specific to the PPS DSRIP project and it’s Medicaid and low-income uninsured patient population.” (New York State Department of Health, “NYS DSRIP Glossary”)

**Safety Net Provider (SNP):** “Entities that provide care to underserved and vulnerable populations. The term ‘safety net’ is used because for many low-income and vulnerable populations, safety net providers are the ‘invisible net of protection’ for individuals whose lack of health coverage or other social and economic vulnerabilities limits their ability to access mainstream medical care.

Below is the DSRIP specific definition of safety-net provider:

The definition of safety net provider for hospitals will be based on the environment in which the performing provider system operates. Below is the safety net definition:

- A **hospital** must meet one of the three following criteria to participate in a performing provider system:
  1. Must be either a public hospital, Critical Access Hospital or Sole Community Hospital, or
  2. Must pass two conditions:
    - A. At least 35 percent of all patient volume in their outpatient lines of business must be associated with Medicaid, uninsured and Dual Eligible individuals.
    - B. At least 30 percent of inpatient treatment must be associated with Medicaid,

- uninsured and Dual Eligible individuals; or
3. Must serve at least 30 percent of all Medicaid, uninsured and Dual Eligible members in the proposed county or multi-county community. The state will use Medicaid claims and encounter data as well as other sources to verify this claim. The state reserves the right to increase this percentage on a case by case basis so as to ensure that the needs of each community's Medicaid members are met.”
- **Non-hospital based providers**, not participating as part of a state-designated health home, must have at least 35 percent of all patient volume in their primary lines of business associated with Medicaid, uninsured and Dual Eligible individuals.
  - **Vital Access Provider Exception:** The state will consider exceptions to the safety net definition on a case-by-case basis if it is deemed in the best interest of Medicaid members. Any exceptions that are considered must be approved by CMS and must be posted for public comment 30 days prior to application approval. Three allowed reasons for granting an exception are:
    - A community will not be served without granting the exception because no other eligible provider is willing or capable of serving the community.
    - Any hospital is uniquely qualified to serve based on services provided, financial viability, relationships within the community, and/or clear track record of success in reducing avoidable hospital use.
    - Any state-designated health home or group of health homes.
  - **Non-qualifying providers** can participate in Performing Providers Systems. However, non-qualifying providers are eligible to receive DSRIP payments totaling no more than 5 percent of a project's total valuation. CMS can approve payments above this amount if it is deemed in the best interest of Medicaid members attributed to the Performing Provider System. (New York State Department of Health, “NYS DSRIP Glossary”)

**System Transformation Milestones:** “Also known as Domain 2, these are outcomes based on a community needs assessment, which reflect measures of inpatient/outpatient balance, increased primary care/community-based services utilization, rates of global capitation, partial capitation, and bundled payment of providers by Medicaid managed care plans and measures for patient engagement.” (New York State Department of Health, “NYS DSRIP Glossary”)

**United Hospital Fund (UHF) Neighborhood:** There are 42 UHF neighborhoods in NYC, 11 of which are in Brooklyn, and each is comprised of adjoining zip codes to approximate community planning districts. (34 neighborhoods are sometimes used to increase the statistical power of the sample size).

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