Social Determinants of Immigrants' Health in New York City: A Study of Six Neighborhoods in Brooklyn and Queens

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Executive Summary

More than 3.1 million immigrants reside in New York City, comprising more than a third of the city's total population. The boroughs of Brooklyn and Queens are home to nearly 940,000 and more than 1 million immigrants, respectively. According to the New York City Department of Health and Mental Hygiene's (DOHMH) Community Health Survey (CHS), foreign-born New Yorkers have poorer health and less access to healthcare than their US-born counterparts.

For this study, the Center for Migration Studies of New York (CMS) focused on six neighborhoods in these two boroughs whose immigrant residents were identified by a previous CMS study, Virgin and Warren (2021), as most at risk of poor health outcomes:

Brooklyn

- Bay Ridge/Dyker Heights
- Bushwick
- Sunset Park/Windsor Terrace

Queens

- Elmhurst/South Corona
- Flushing/Whitestone/Murray Hill
- Jackson Heights/North Corona

Immigrants comprise between 31 to 63 percent and undocumented immigrants comprise between 5 to 18 percent of the total populations in these neighborhoods. Though many of New York City's health and social service programs are open to all residents, immigrants – especially the undocumented – remain at greater risk of poor health outcomes than US-born residents due to other barriers to access to healthcare.

The CMS research team conducted a survey of 492 immigrants across these six neighborhoods and convened one focus group to collect data on immigrants' health and well-being. CMS also surveyed 24 service providers including community health clinics, health-focused community-based organizations (CBOs), and hospitals that work with immigrants in the studied neighborhoods. Analysis of these data, together with the US Census Bureau's American Community Survey (ACS) and the DOHMH's CHS, provides insight into the factors that affect immigrants' health and well-being across these neighborhoods. This study highlights several social determinants of health that likely contribute to the native-immigrant health gap. Finally, the study describes steps that can be taken to close this gap.

The report offers the following top-line findings:

Self-reported Health:

- Immigrant respondents on average said they were in good health. Respondents from Mexico, Hong Kong, and Bangladesh had the worst self-reported average health. Among the neighborhoods studied, immigrant respondents from Flushing/Whitestone/Murray Hill had the worst self-reported health.

Access to Care:

- Thirty-seven percent of immigrant respondents said they needed to access healthcare[1] in the last 12 months but did not receive it.
- Service providers identified different barriers than did immigrants to accessing healthcare for physical health concerns. The top three reasons immigrants said they did not receive the necessary physical healthcare were:

    1. Lack of health insurance;
    2. Inability to afford care; and
    3. Inability to take time off due to work, childcare, or other responsibilities.

  By contrast, the top three reasons immigrant service providers said immigrants did not receive needed physical healthcare were:

    1. Language barriers;
    2. Fear of revealing documentation status; and
    3. Inability to afford services.
- These findings suggest that service providers overestimate the role culture plays as a barrier to immigrants receiving mental healthcare.
- The top three reasons immigrants reported for not seeking mental health services were:

    1. Inability to take time off due to work, childcare, or other responsibilities;
    2. Lack of health insurance; and
    3. Inability to afford services.

  By contrast, the top three reasons service providers said immigrants do not receive needed mental health services were:

    1. Fear of stigma;
    2. Cultural reasons; and
    3. Language barriers.

Cost was one of the top deterrents for immigrants in seeking medical care. More than half of respondents said the out-of-pocket costs or high-deductibles on their medical insurance plan "sometimes" or "regularly" discouraged them from seeking medical treatment. Twenty-nine percent of respondents said they had reduced spending on food or other essential items to cover the cost of healthcare in the previous year.

Income:

- Citizens, both US-born and naturalized, in New York City have much higher average earnings than legal noncitizens and undocumented immigrants. This large earnings gap between

[1] "healthcare" refers to seeing a general practitioner, specialist doctor, dentist, or mental health professional, or using prescription or over-the-counter drugs.

citizens and noncitizens held across the six neighborhoods with the exception of Elmhurst/South Corona, where the difference in earnings between citizens and noncitizens was smaller than in the other neighborhoods. Overall earnings for workers in Elmhurst/South Corona were the lowest of all the neighborhoods studied.

Occupation:

- Immigrant respondents who were exposed to mental and physical safety hazards at work were more likely to have a long-standing physical or mental illness.

Education:

- Immigrants with a lower level of education are less likely to have health insurance. While the gap in insurance coverage between the high- and low-educated is large among people of all immigration and citizenship statuses, it is especially pronounced among the undocumented. Between 2015 and 2019, 69 percent of undocumented immigrants in New York City with less than a 9th grade education had no health insurance compared to 25 percent of undocumented college graduates.

Limited English Proficiency:

- More than 69 percent of immigrants who speak Spanish and more than 75 percent who speak Chinese[2] at home in the six neighborhoods have limited English proficiency.
- English language proficiency is associated with immigrants' likelihood of seeking out needed care, but it was not reported as a primary barrier among immigrant respondents to receiving healthcare. Some immigrants – especially Cantonese-, Hindi-, and Mandarin-speakers – reported language barriers to be a problem in accessing healthcare. Those immigrant groups, together with Urdu-speakers, were the most likely to report discrimination on the basis of language when seeking care.
- Limited English proficiency may be a barrier to obtaining private health insurance, immigrants with limited English proficiency are more likely to use public health insurance or health insurance alternatives than remain uninsured.

Food Insecurity:

- Cost is the primary barrier which prevents immigrants from healthy eating. Nearly a quarter of immigrants across the six neighborhoods reported being food insecure (defined as going without eating at least once in the past month due to lack of resources) primarily due to a lack of funds to buy food, particularly healthy food.
- Immigrants living in Bushwick and Jackson Heights/North Corona are more likely to live in areas considered "food deserts," or live in areas without access to fresh food within a mile of their house.
- Service providers reported lack of nearby fresh produce to be more of a barrier to healthy eating than did immigrants.

Neighborhood Conditions:

- Immigrants were asked about whether they felt safe in their neighborhoods and whether the following were problems in their neighborhood: access to public transportation, crime, lack of

2 Mandarin or Cantonese.

green spaces, litter, noise, pollution, and traffic. Better neighborhood quality along these metrics, was associated with better self-reported health among immigrants. Traffic was the top-reported problem overall across the neighborhoods, followed by noise, pollution, litter, and crime.

- Distance and lack of transportation were reported as barriers to accessing healthcare among immigrants in Bushwick, Elmhurst/South Corona, and Flushing/Whitestone/Murray Hill.

Discrimination:

- Immigrants reported facing discrimination in their communities, which sometimes prevented them from seeking healthcare. Among those who said they had needed to see a healthcare professional[3] in the previous 12 months but did not, 17 percent said fear of discrimination was one of the reasons they let their ailments go untreated.
- Discrimination on the basis of race in seeking healthcare was the form of discrimination most reported by immigrants, followed by discrimination based on nationality/citizenship.

Use of New York City Services:

- Approximately half of immigrant respondents had heard of NYC Care, a public program that provides low- to no-cost healthcare for residents who do not qualify or cannot afford health insurance. Just over a third of respondents had heard of the Mayor's Office of Community Mental Health (formerly ThriveNYC), a city-led mental health service network, and ActionNYC, a city program providing free immigration legal service, regardless of status. About a quarter of respondents used NYC Care, and less than a fifth of respondents used ThriveNYC and ActionNYC. Those who used these programs were satisfied with them.

Based on these findings, CMS offers the following recommendations to improve immigrants' health outcomes across the six neighborhoods studied:

- The Biden Administration should continue the marketplace provisions of the American Rescue Plan Act of 2021.[4] Part of this Act made Affordable Care Act ("Obamacare") plans more affordable and expanded access to them by reducing the percentage of household income that people must spend on the benchmark for the plan and providing premium tax credits to households meeting more than 400 percent of the federal poverty level.
- Governor Hochul should ensure that New York State proposed legislation which includes "Coverage for All" is enacted. This bill[5] includes a budget of $345 million in funding for a program which would provide healthcare coverage for 150,000 low-income New Yorkers who currently cannot access health insurance due to immigration status.
- New York City Council should pass the pending bill, Int. No. 1674,[6] which would create an Office of the Patient Advocate within the DOHMH.
- New York City should fully fund NYC Care, including providing funding to CBOs to promote

3 "healthcare professional" includes general practitioners, medical or surgical specialists, dentists, and mental health professionals.

4 American Rescue Plan Act of 2021, H.R. Res. 1319, Pub. L. No. 117-2, 117th Cong. (2021) (enacted). https://www.congress.gov/117/plaws/publ2/PLAW-117publ2.pdf.

5 S. Res. S1572A, Reg. Sess. (NY 2021-2022). https://www.nysenate.gov/legislation/bills/2021/s1572/amendment/a.

6 Int. No. 1674, Reg. Sess. (NYC Council 2019). https://legistar.council.nyc.gov/LegislationDetailaspx?ID=4085833&GUID=C2FEBE38-2F3E-4908-8AB3-18394F115B67&Options=&Search=.

and enroll people in the program. Then, city agencies and mayoral offices (including the Office of Citywide Health Insurance Access at the New York City Human Resources Administration/ Department of Social Services (HRA/DSS) and DOHMH), community health clinics, and health-focused and immigrant-serving CBOs should more actively promote NYC Care, ActionNYC, and the services of the Mayor's Office of Community Mental Health (formerly ThriveNYC) in the six selected neighborhoods.

- Health service providers should ensure their personnel are racially, ethnically, and linguistically representative of the communities they serve and receive more training on diversity.
- Health service providers and CBOs that help to connect immigrants to health services and apply for health insurance should make their informational materials accessible to immigrants with a low or medium education level and should assist them with the application process.
- The New York City government should invest more in providing healthy, fresh food to immigrant New Yorkers, especially across the six neighborhoods.
- Health service providers and CBOs should provide additional outreach materials to immigrants from Bangladesh and Mexico across the six neighborhoods.
- The Office of Citywide Health Insurance Access at the HRA/DSS, DOHMH, health service providers, community health clinics, should be paid for providing interpretation and translation services for and accompanying native speakers of certain Asian languages (including Cantonese, Hindi, Mandarin, and Urdu) as they access public services.
- Health service providers should increase the number of offices and clinics in Bushwick, Elmhurst/ South Corona, and Flushing/Whitestone/Murray Hill.

1. Introduction

As of 2019, New York City was home to 3.1 million immigrants, comprising 37 percent of the city's population (Ruggles et al. 2021).[7] Brooklyn and Queens are the city's two most immigrant-dense boroughs, with 36 and 47 percent of their populations born abroad. New York City has inclusive healthcare and social programs, but immigrants remain disadvantaged in accessing healthcare and are at greater risk than US-born Americans for poor health outcomes. This study examines several social determinants of health across select immigrant neighborhoods in New York City to explain factors contributing to the native-immigrant healthcare gap and what might be done to close it.

The report focuses on six neighborhoods in the boroughs of Brooklyn and Queens in New York City where immigrants, especially the undocumented, are at high risk for poor health outcomes due to poverty, education level, overcrowding, limited English proficiency, and lack of health insurance:

Brooklyn

- Bay Ridge/Dyker Heights
- Bushwick
- Sunset Park/Windsor Terrace

Queens

- Elmhurst/South Corona
- Flushing/Whitestone/Murray Hill
- Jackson Heights/North Corona

This report uses data from the US Census Bureau's American Community Survey (ACS), the Department of Health and Mental Hygiene's (DOHMH's) Community Health Survey (CHS), and original data collected by CMS's research team through surveys of immigrants and service providers working with immigrants in the six neighborhoods. The research team also conducted a focus group with immigrants from the areas of interest. Through this work, CMS not only examines immigrants' health, but also the lack of healthy and safe conditions in their neighborhoods. Using these data, CMS identified eight factors that may put immigrant communities at a higher risk of health problems. The final section of the report proposes recommendations to the policymakers and government officials, community health clinics, and immigrant-serving community-based organizations (CBOs).

2. Background Information

2.1. Literature Review

According to past research, immigrants are on average healthier than the US-born. This finding may be due to the fact that healthier, able-bodied people are more likely to migrate (Kennedy, McDonald, and Biddle 2006; Neuman 2014), and immigrants may be likely to return to their home

[7] Throughout the report the Center for Migration Studies of New York (CMS) makes adjustments to the population counts from the American Community Survey data to account for undercounts in the undocumented population per Warren (2021).

countries as they age and their health worsens (Abraído-Lanza et al. 1999; Palloni and Arias 2004). For instance, Aldridge et al. (2018) show that international migrants have a lower mortality rate from most diseases than natives. However, this health advantage starts to diminish over time in the host country, in part due to social factors which place immigrants at a disadvantage to living a healthy lifestyle. Occupational hazards (Guintella and Mazzonna 2014; Orrenius and Zavodny 2009); discrimination (Grove and Zwi 2006); and other barriers such as lack of English langauge proficiency, legal documents, transportation, or access to health insurance have been shown to prevent immigrants from accessing needed care.

Disparities in health due to social factors have been widely researched and gained additional attention in the context of the COVID-19 crisis. Social factors disadvantaging immigrant communities is not a new finding, but the pandemic has further exposed structural factors that put immigrant communities at risk of adverse health outcomes. Worldwide, immigrants have been found to be more vulnerable to the virus and overrepresented in COVID-19 case counts (OECD 2020; Borjas 2020). In New York City, the Mayor's Office of Immigrant Affairs (MOIA) (2020) found that immigrant-dense neighborhoods experienced higher COVID-19 death rates than neighborhoods with relatively fewer immigrants. Benitez, Courtemanche, and Yelowitz (2020) showed that using public transportation in the United States leads to a higher probability of contracting the virus, and McLaren (2021) found that use of public transit during the pandemic led to a higher probability of death. Borjas (2020) and Almagro and Orane-Hutchinson (2022) showed that in neighborhoods with a high prevalence of overcrowding, people were more susceptible to the virus. This research confirms the finding of pre-pandemic research. For example, Acevedo-Garcia (2000) and Agran et al. (1996) showed that overcrowding in neighborhoods leads to the increased spread and contraction of infectious diseases.

Occupation also plays a role in immigrants' health outcomes. Bossavie et al. (2020) and Kerwin and Warren (2020) showed that immigrants are more likely to be employed in essential "frontline" occupations. Sometimes such occupations do not provide employer-sponsored health insurance. Similarly, Borjas and Cassidy (2020) demonstrate that immigrants are less likely to be able to work remotely from home. Virgin and Warren (2021) found that in the six neighborhoods studied, between 72 and 84 percent (depending on the neighborhood) of noncitizens were essential workers.[8] Similarly, between 68 to 89 percent of undocumented immigrant workers were employed in essential occupations, rates much higher than those of US-born workers (48 to 63 percent).[9] Furthermore, in areas with large shares of people working in occupations without sick leave, workers are more prone to exposing others to illnesses (Cook 2011).

Undocumented immigrants are especially at risk of poor health outcomes. Fear of deportation and concerns about immigration for themselves and their family members often discourage undocumented immigrants from seeking out healthcare services (Alulema and Pavilon 2022). These fears and other concerns may lead to poorer mental health outcomes (Gonzales, Suárez-Orozco, and Dedios-Sanguineti 2013; Suárez-Orozco et al. 2011; Sullivan and Rehm 2005; Yoshikawa 2011).

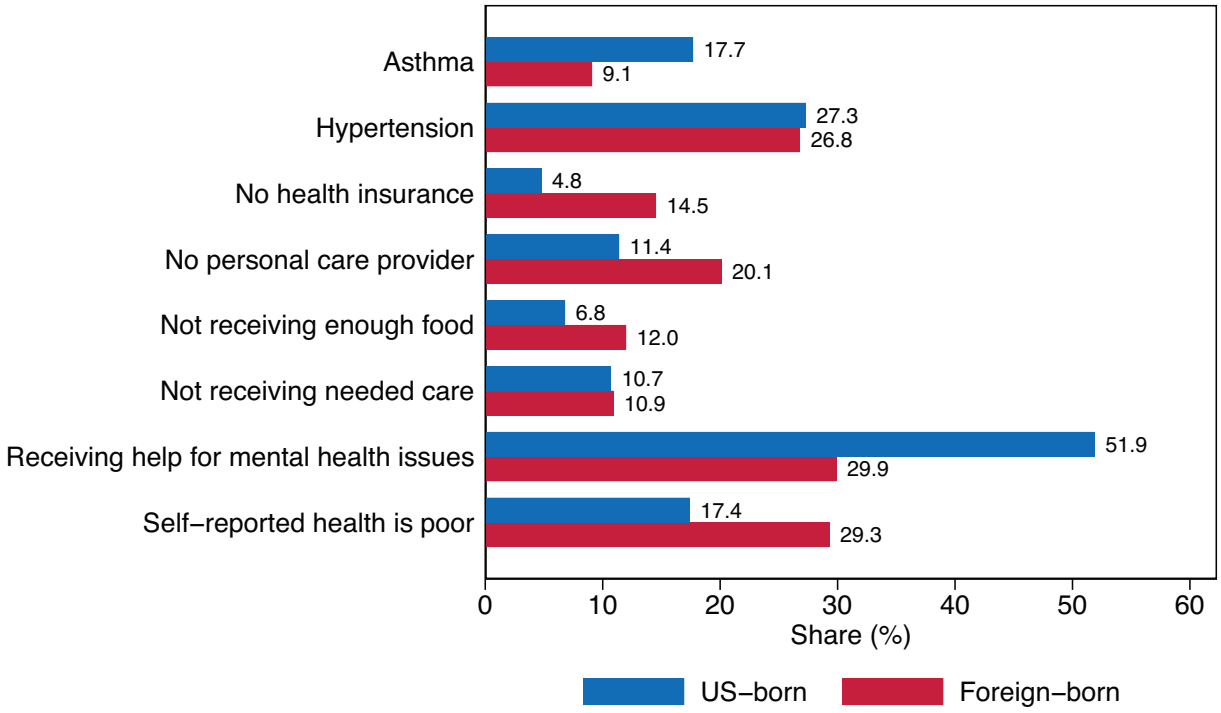
8 The following shares of noncitizens are essential workers by neighborhood: Bay Ridge/Dyker Heights (80 percent); Bushwick (81 percent); Sunset Park/Windsor Terrace (75 percent); Elmhurst/South Corona (84 percent); Flushing/Whitestone/Murray Hill (72 percent); and Jackson Heights/North Corona (78 percent).

9 The following shares of undocumented immigrants are essential workers by neighborhood: Bay Ridge/Dyker Heights (84 percent); Bushwick (81 percent); Sunset Park/Windsor Terrace (81 percent); Elmhurst/South Corona (89 percent); Flushing/Whitestone/Murray Hill (68 percent); and Jackson Heights/North Corona (79 percent). The following shares of US-born citizens are essential workers by neighborhood: Bay Ridge/Dyker Heights (57 percent); Bushwick (48 percent); Sunset Park/Windsor Terrace (52 percent); Elmhurst/South Corona (60 percent); Flushing/Whitestone/Murray Hill (63 percent); and Jackson Heights/North Corona (54 percent).

2.2. Immigrants' Health in New York City

According to the New York City DOHMH Community Health Survey (CHS), compared to US-born New Yorkers, foreign-born residents have poorer health and less access to healthcare (Figure 1). More immigrants reported poor physical health (29 percent) than did the US-born (17 percent). Immigrants were also less likely to have a personal care provider (11 percent compared to 20 percent) and were more likely to experience food insecurity compared to the US-born (12 percent compared to 7 percent). A much smaller share of immigrants reported receiving help for mental health issues (30 percent) than did the US-born (52 percent). In addition, a higher share of the US-born reported having asthma (18 percent) than did immigrants (9 percent). However, because these numbers are self-reported, the results may be subject to measurement error due to bias.

Figure 1: Selected Health Determinants in New York City, by Nativity

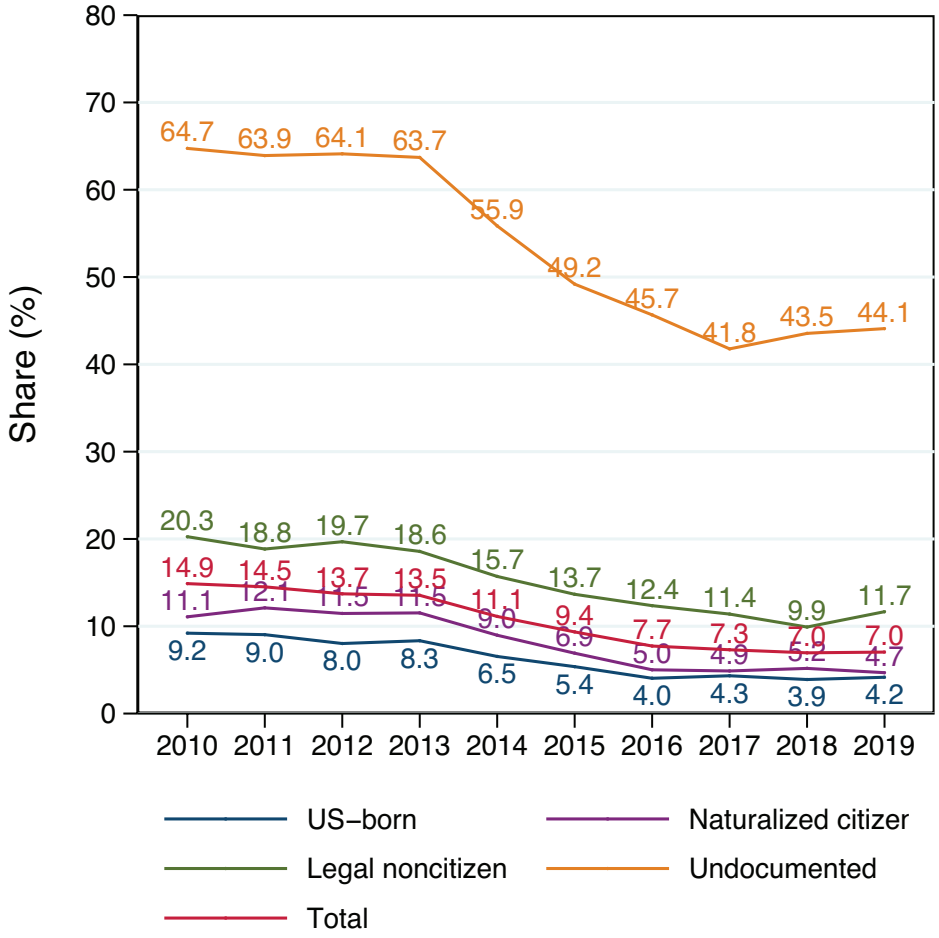


Source: CMS calculations using the NYC DOHMH CHS, 2017-2018 and the five-year ACS 2015-2019 data, Ruggles et. al (2021).

*Note: The share with "**no health insurance"** is derived from CMS calculations using the ACS, while the other metrics come from the CHS. Metrics on health reported by the CHS are reported for adults 18 years and older. "**Self-reported health is poor"** is defined as the prevalence of self-reported poor or very poor health; "**Not receiving needed care"** is defined as the prevalence of not receiving needed care in the previous 12 months; "**Receiving help for mental health issues"** is defined as the prevalence of receiving counseling or prescription medication for a mental health problem in the last 12 months among adults with current depression.*

Undocumented immigrants are much less likely to have health insurance than legal non-citizens and the US citizens, both US-born and naturalized.[10] However, the number of people without health insurance coverage, across all immigration and citizenship statuses, has decreased over time, especially after the implementation of the Affordable Care Act in 2014 (Figure 2). In New York City, the percentage of US-born residents without health insurance dropped by more than half, from 9 percent in 2010, to 4 percent in 2019. That trend was similar for naturalized citizens. Undocumented immigrants were much more likely to be uninsured (44 percent in 2019), but also experienced the greatest increase in coverage (down from 65 percent uninsured in 2010).

Figure 2: Share of People with No Health Insurance, by Immigration and Citizenship Status, 2010-2019



Source: CMS calculations using the one-year ACS data, 2010-2019, Ruggles et. al (2021).

2.3. Immigrants in the Six Neighborhoods of Brooklyn and Queens

New York City brings together diverse populations across the whole city, with the largest immigrant populations residing in Brooklyn and Queens. Queens is home to nearly 1.1 million immigrants,

10 CMS produces annual estimates of the US undocumented population on a sub-state level using the ACS a methodology developed by Warren (2021). All analysis in this paper of immigrants differentiated by immigration status uses these estimates.

the largest immigrant population in the city. The population of Queens is roughly half foreign-born (47 percent). The number of immigrants living in Brooklyn is just under 1 million (937,605). Immigrants account for 36 percent of the borough's population. The six neighborhoods of interest in this study have some of the largest and most ethnically diverse immigrant communities in the city. In the three neighborhoods in Queens, immigrants comprise well over half the population: Elmhurst/South Corona (63 percent), Flushing/Whitestone/Murray Hill (57 percent), and Jackson Heights/North Corona (60 percent). In the Brooklyn neighborhoods, immigrants comprise over a quarter of the population: Bay Ridge/Dyker Heights (39 percent), Bushwick (31 percent), and Sunset Park/Windsor Terrace (46 percent) (Ruggles et al. 2021).

This study focuses on the social determinants of health among immigrants in six selected neighborhoods in Brooklyn and Queens in which poor and working-class immigrants and the US-born have great potential but also great need. The chosen neighborhoods and their corresponding New York City boroughs, community districts (CDs), and US Census Bureau definitions are outlined in Table 1. These neighborhoods were chosen based on a previous CMS study that identified these six areas as the most vulnerable across the two boroughs based on poverty, education level, overcrowding, limited English proficiency, lack of health insurance, and lack of citizenship or legal permanent residency (Virgin and Warren 2021).

Table 1: Selected Neighborhood Definitions

Borough	Community District	Neighborhood Name	PUMA
Brooklyn	10	Bay Ridge/Dyker Heights	4013
	4	Bushwick	4002
	7	Sunset Park/Windsor Terrace	4012
Queens	4	Elmhurst/South Corona	4107
	7	Flushing/Whitestone/Murray Hill	4103
	3	Jackson Heights/North Corona	4102

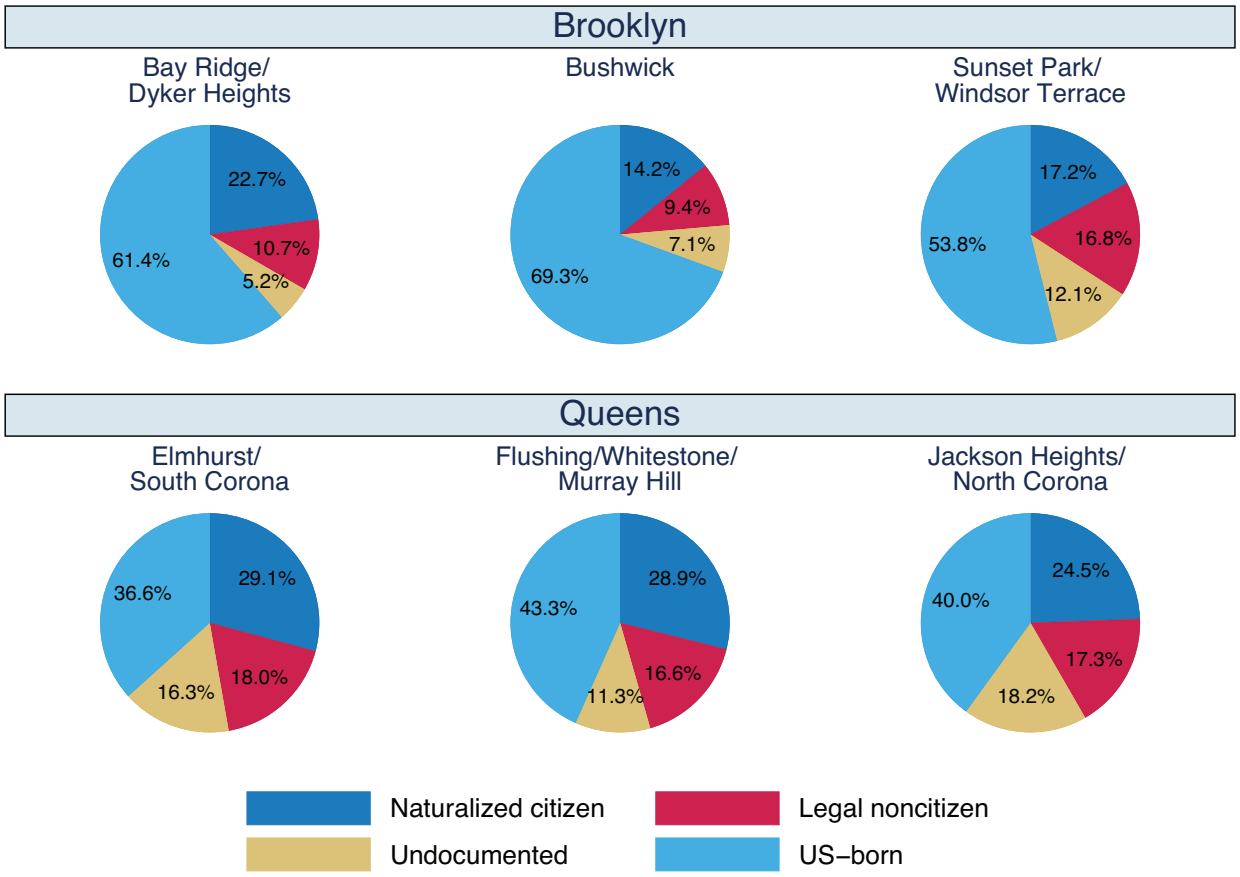
Note: Neighborhoods for this study are defined by Public Use Microdata Areas (PUMAs), statistical geographic areas defined by the US Census Bureau. PUMAs are closely aligned with New York City's geography for community districts (CDs). The naming convention for CDs is designated by the NYC Department of City Planning.

Virgin and Warren (2021) found that across Queens neighborhoods, **Elmhurst/South Corona** has the second-highest percent of noncitizens with no health insurance and percent of undocumented immigrant residents. **Jackson Heights/North Corona** has the highest share of noncitizens with no health insurance, living in overcrowded housing, and without legal status. **Flushing/Whitestone/Murray Hill** has the highest poverty rate for noncitizens, and also a high share of residents without health insurance and legal status. Across Brooklyn neighborhoods, the study found **Bay Ridge/Dyker Heights** had the highest poverty rate, low levels of education, and high rates of overcrowding. **Bushwick** had low levels of health insurance coverage and high levels of poverty among immigrants. **Sunset Park/Windsor Terrace** had the lowest levels of English proficiency and education level, and the largest share of undocumented immigrants.

The share of naturalized citizens in the overall population is relatively smaller in the three selected neighborhoods of Brooklyn than the three selected neighborhoods in Queens.

Naturalized citizens comprise 23 percent of the population in Bay Ridge/Dyker Heights, 14 percent in Bushwick, and 17 percent in Sunset Park/Windsor Terrace. In the Queens neighborhoods, at least a quarter of the population or more are naturalized citizens. Jackson Heights/North Corona had the largest share of undocumented immigrants (18 percent) of the six selected Brooklyn and Queens neighborhoods (Figure 3). Virgin and Warren (2021) found that legal status is an important determinant of health outcomes and that the socioeconomic characteristics of naturalized citizens were more likely to resemble those of the US-born than of other immigrant groups.

Figure 3: Immigration and Citizenship Status of the Population, by Neighborhood

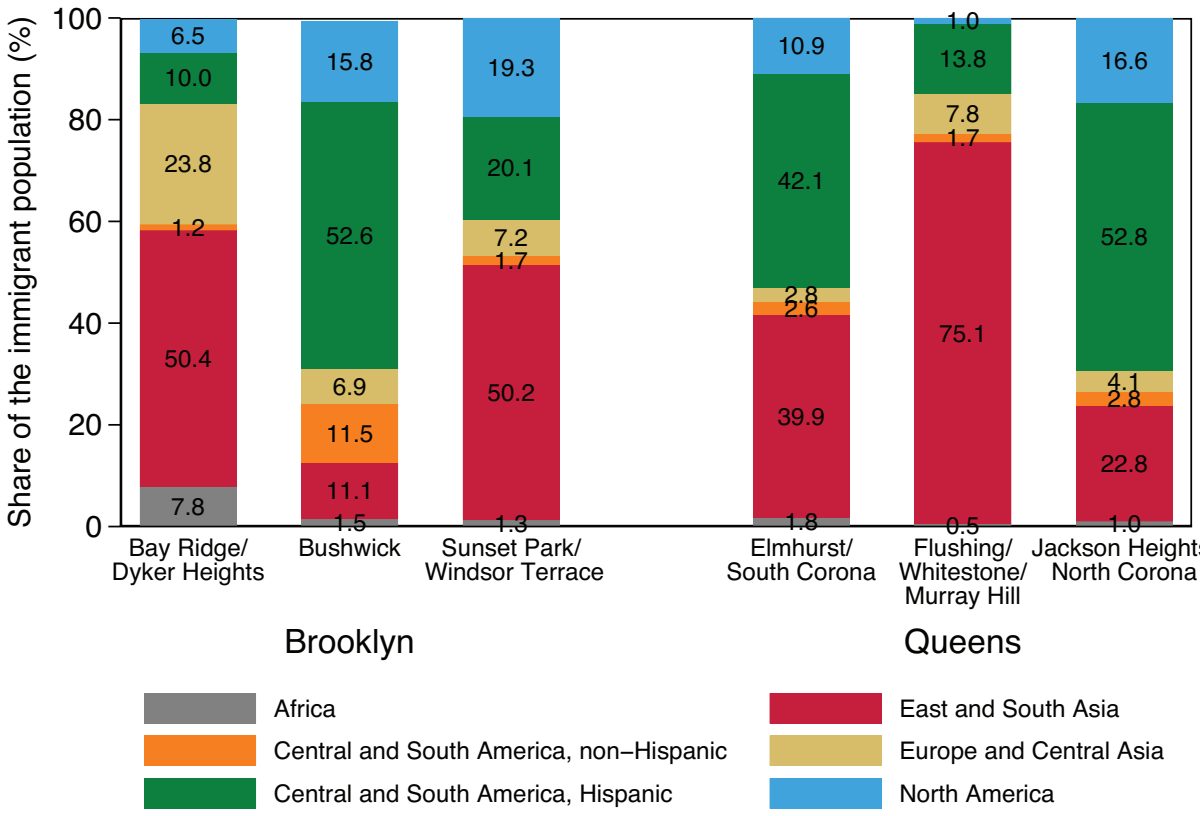


Source: CMS calculations using the five-year ACS 2015-2019 data, Ruggles et. al (2021).

The region of origin of immigrants across these six neighborhoods varies widely (Figure 4). While the majority of immigrants in **Bay Ridge/Dyker Heights** were from East and South Asia, this neighborhood had the largest share of both European and Central Asian and African residents of the six neighborhoods in this study. More than half of the foreign-born population in **Bushwick** were from the Hispanic Central and South American countries (primarily the Dominican Republic and Ecuador), and another 16 percent from North America (primarily Mexico). In **Sunset Park/ Windsor Terrace**, foreign-born residents came largely from East and South Asia (50 percent), with another 39 percent from Hispanic countries in Central and South America (20 percent) and North America (primarily Mexico, 19 percent). The neighborhood of **Elmhurst/South Corona** had roughly equal shares of foreign-born residents from Hispanic Central and South American (42

percent) and East and South Asian (40 percent) countries. The largest concentration of East and South Asians in New York City (three-quarters of the neighborhood's immigrant population) is in **Flushing/Whitestone/Murray Hill**. By contrast, the majority of foreign-born residents in **Jackson Heights/North Corona** were born in Hispanic Central and South American countries (primarily Ecuador, the Dominican Republic, and Colombia), with people from North America (primarily Mexico) also comprising a large share of the immigrant population (17 percent).

Figure 4: Region of Origin of the Immigrant Population, by Neighborhood[11]



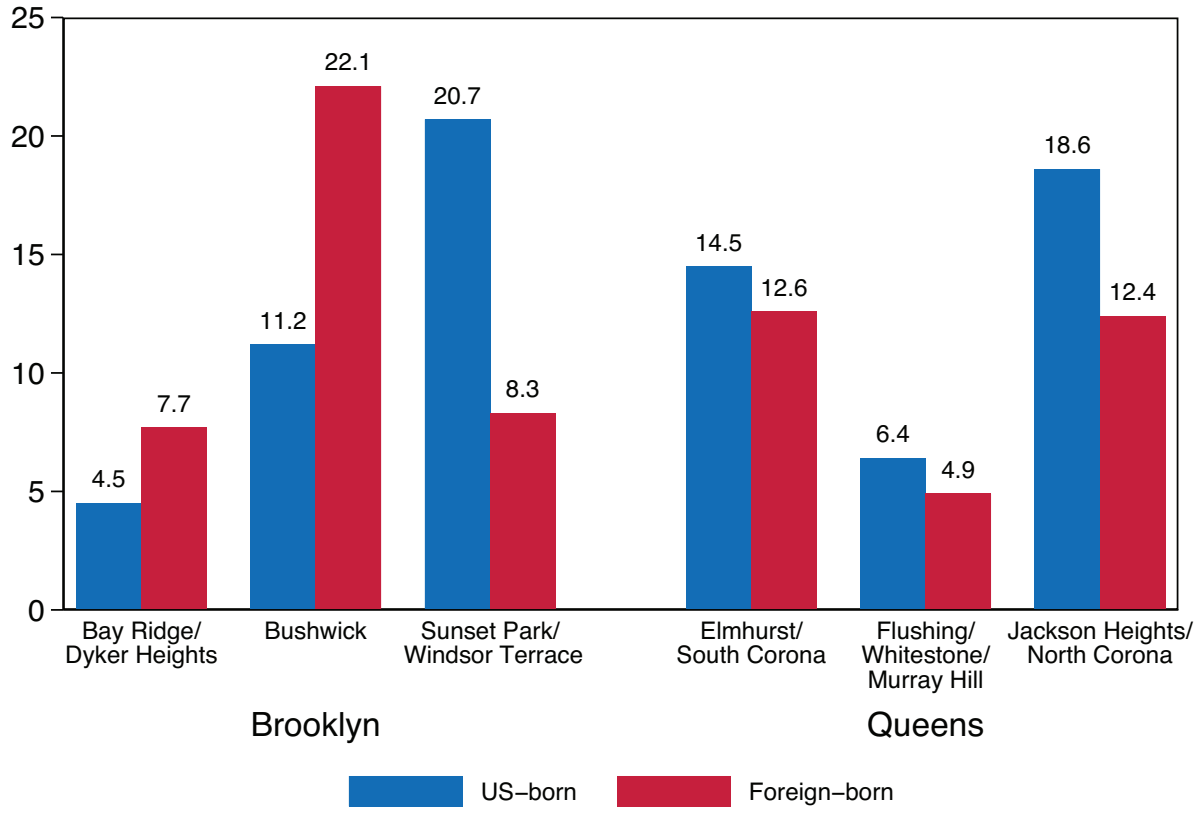
Source: CMS calculations using the five-year ACS 2015-2019 data, Ruggles et. al (2021).

Note: East and South Asia includes the Middle East and the Gulf Cooperation Council countries.

The share of immigrants with unmet health needs in the six neighborhoods (in aggregate) is similar for immigrants and the US-born (11 percent, Figure 1), but immigrant-native health disparities vary significantly by neighborhood (Figure 5). The Brooklyn neighborhood of Bushwick is the neighborhood with the largest share of immigrants (22 percent) reporting unmet health needs. Furthermore, the largest disparity between immigrants and natives reporting unmet health needs was in this neighborhood (11 percentage points). The disparity was reversed in the Sunset Park/Windsor Terrace neighborhood, where a larger share of the US-born population (21 percent) than the immigrant population (8 percent) reported unmet health needs.

11 The regions of origin are defined in Appendix Table A.1.

Figure 5: Share of the Population with Unmet Health Needs, by Nativity and Neighborhood



Source: CMS calculation using the NYC DOHMH CHS, 2017-2018.

Note: Unmet health need is defined as not receiving needed healthcare in the previous 12 months.

3. Data

For this project, in addition to using the ACS and NYC DOHMH CHS data,[12] the CMS research team conducted two surveys (one of immigrants and one of service providers who work with immigrants) and one focus group.

The research team surveyed 492 immigrants from 27 countries across all regions of the world. The survey was administered online in Arabic, Bengali, Chinese (Mandarin), English, Korean, and Spanish. Community health clinics and community-based organizations helped the research team disseminate the survey. The survey participants came from Africa (13 respondents), Hispanic Central and South American countries (59), non-Hispanic Central and South American countries (19), East and South Asia (255), Europe and Central Asia (76), North America (67), and undisclosed (3). The countries of origin of the survey respondents are detailed in Table 2. In

12 The CHS is a cross-sectional telephone survey with an annual sample of approximately 10,000 randomly selected adults aged 18 and older from all five boroughs of New York City. A computer-assisted telephone interviewing system is used to collect survey data from selected respondents with landline telephones and cell phones (since 2009). Interviews are conducted in English, Spanish, Russian, and Chinese (Mandarin and Cantonese). All data collected are self-reported. The survey is conducted by the DOHMH, Division of Epidemiology, Bureau of Epidemiology Services.

order to correct any bias in the sample for over- or under-represented nationalities, the shares of nationalities represented in the ACS data were used together with the share of nationalities represented in the sample data to create survey weights which are used in all of the analysis using the immigrant survey data throughout the report.

Table 2: Countries of Origin of Survey Respondents

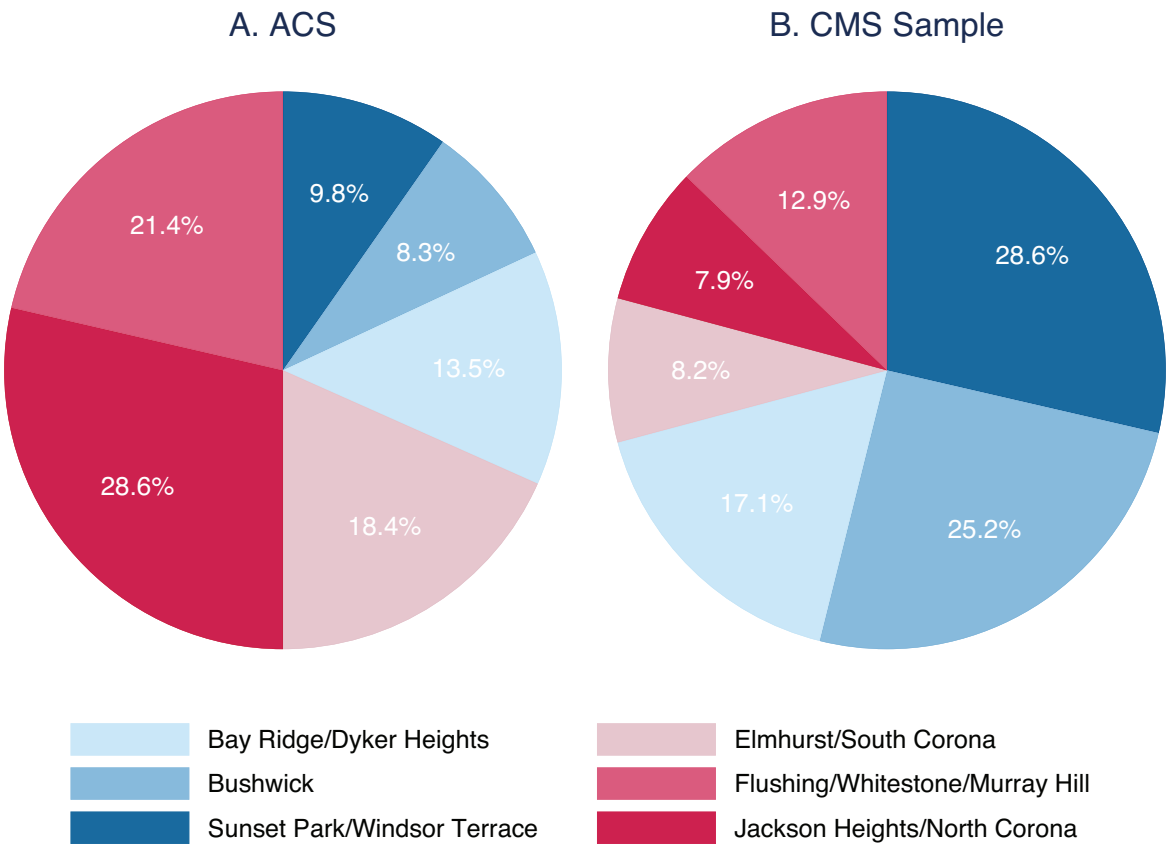
Region	Country	Respondents
Africa	Ghana	13
Central and South America, Hispanic	Colombia	35
	Dominican Republic	1
	Ecuador	7
	El Salvador	8
	Honduras	6
	Peru	2
Central and South America, non-Hispanic	Haiti	8
	Jamaica	9
	Trindad and Tobago	2
East and South Asia	Bangladesh	7
	Bhutan	11
	China	114
	Hong Kong	26
	India	25
	South Korea	31
	Pakistan	10
	Philippines	29
	Uzbekistan	1
	Vietnam	1
Europe and Central Asia	Denmark	1
	England	3
	Italy	37
	Other USSR/Russia	12
	Poland	9
	Ukraine	14
North America	Mexico	67
Other	Undisclosed	3

Source: CMS survey of immigrants.

Note: East and South Asia includes the Middle East and the Gulf Cooperation Council countries. For regional definitions, see Appendix Table A.1.

The surveyed immigrants came from all six neighborhoods in Brooklyn and Queens, though immigrants from Brooklyn are overrepresented. Figure 6 Panel A shows the distribution of immigrants across the six neighborhoods according to the ACS, and Figure 6 Panel B shows the distribution of immigrant respondents across the six neighborhoods in the CMS survey sample. The blue neighborhoods represent Brooklyn and the magenta neighborhoods represent Queens. The survey weights based on nationality used in the results throughout the report correct for some of the over- and under-representation of certain neighborhoods.

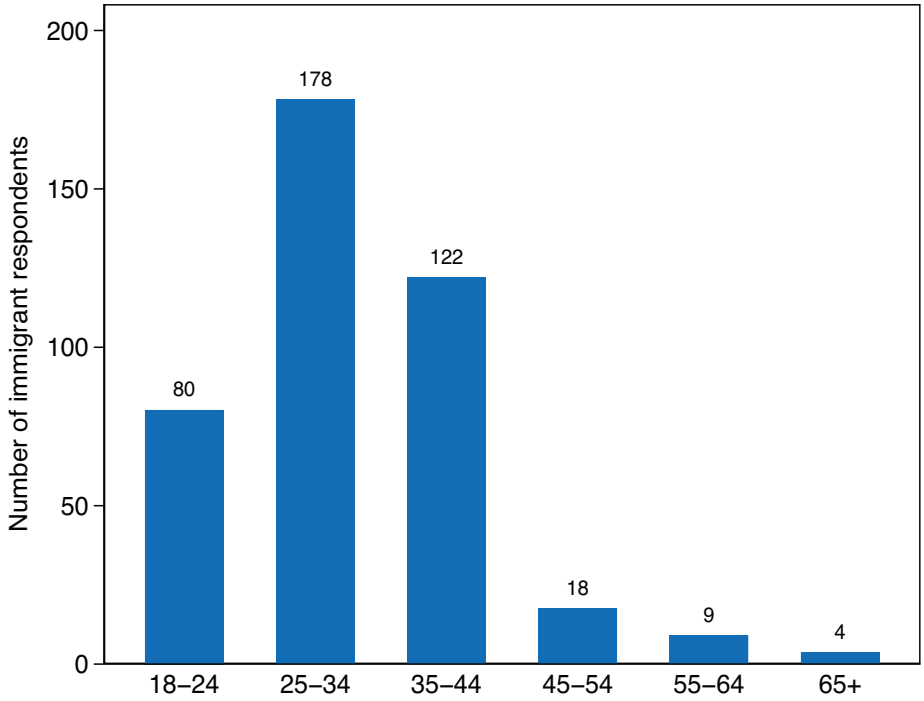
Figure 6: Distribution of Survey Respondents Across Neighborhoods



Source: Panel A uses the one-year ACS data, 2019, Ruggles et. al (2021). Panel B uses the CMS survey of immigrants. Results for Panel B are weighted by nationality.

Fifty-five percent of survey respondents were citizens, 36 percent noncitizens, and 8 percent chose not to disclose their citizenship status. Of those who reported their gender, 64 percent were female and 36 percent were male. Figure 7 shows the age distribution of the respondents, and Figure 8 shows the years the respondents have been in the United States for those who reported an answer. Nearly two-thirds of the respondents reported their age was between 18 and 34 years. Thirty-six percent said they had lived in the United States for 15 years or more.

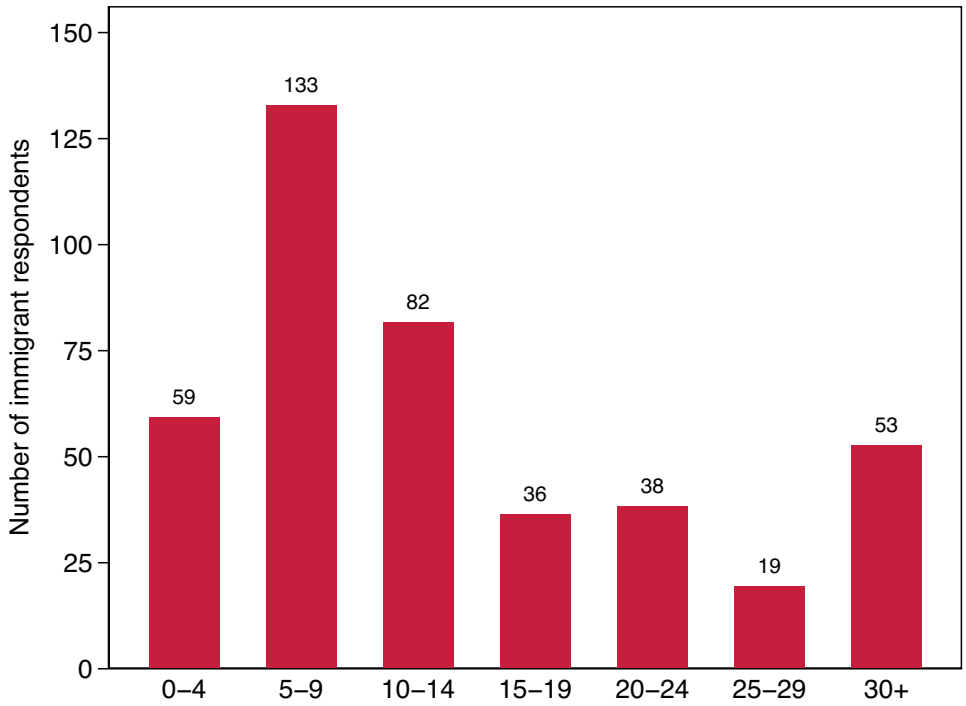
Figure 7: Age Distribution of Immigrant Respondents



Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

Figure 8: Immigrant Respondents' Years Spent in the United States

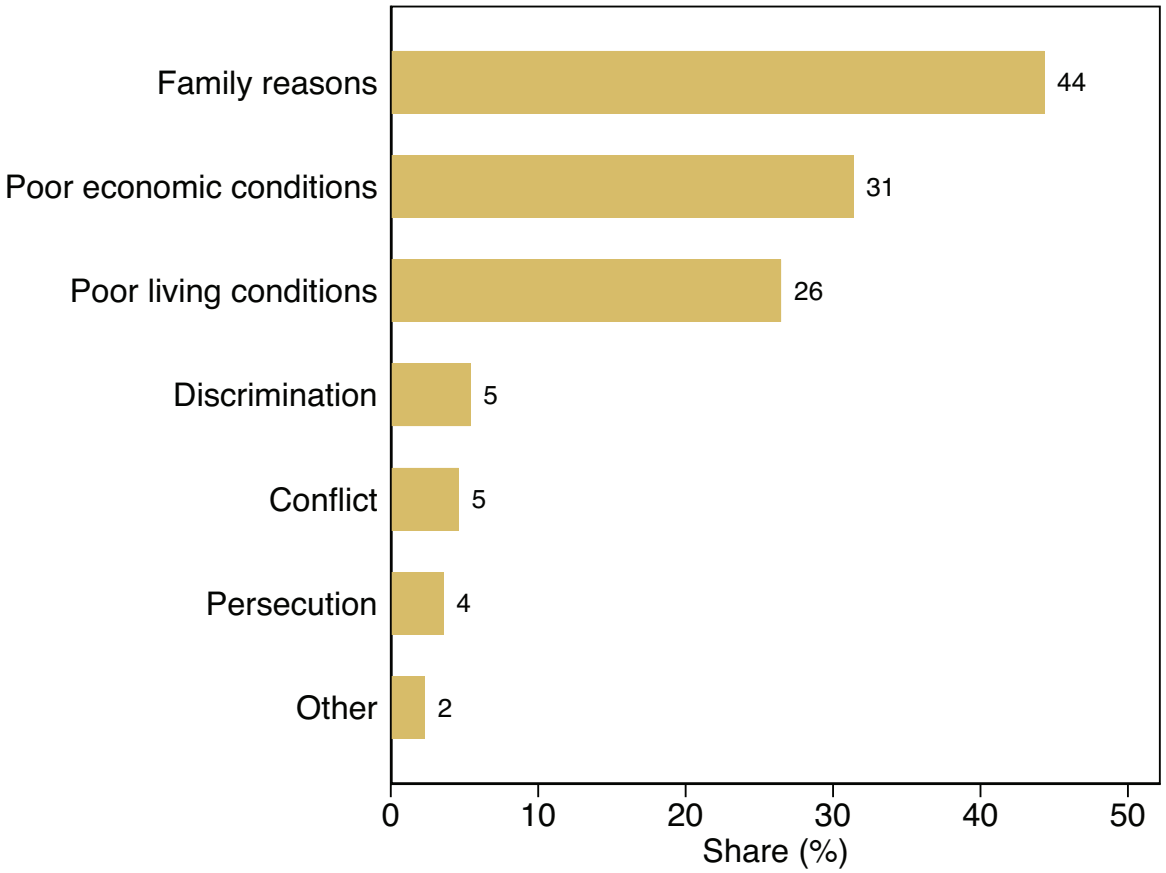


Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

The majority immigrants in this sample decided to migrate primarily for family reasons and to escape poor economic or living conditions in their home country. Forty-four percent of immigrant respondents said they left their home country for family reasons (Figure 9). Respondents from Bhutan (82 percent), Hong Kong (77 percent), and Ecuador (71 percent) were the most likely to have migrated for family reasons. More than half of respondents said they migrated due to poor economic conditions (31 percent) or poor living conditions (26 percent). Other respondents were displaced due to discrimination (5 percent), conflict (5 percent), or persecution (4 percent). Approximately 8 percent of respondents preferred not to answer.

Figure 9: Immigrants Respondents' Reasons for Migrating



Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

CMS conducted one focus group with immigrants in Brooklyn. The focus group consisted of six people, all of whom were men. The participants lived in Bushwick and Bay Ridge/Dyker Heights neighborhoods and came from Ghana, South Sudan, and Mexico. Participants had resided in the United States from between three to 10 years. Fliers were distributed in community health clinics and community-based organizations to recruit participants. Some of the participants had also participated in the survey.

For this study, the CMS research team surveyed 24 service providers that support immigrants' health across the six neighborhoods in Brooklyn and Queens. Many service providers had multiple locations across a borough or the city at large. Among the service providers are 21 CBOs, a large network of community health clinics, a hospital, and a health insurance company. The

most common services offered were assisting clients to secure health insurance, find health and mental health service providers, and access New York City public health programs and public health education programs. The CBOs reported providing the services listed in Table 3. Among other services (not listed in Table 3), they identified providing preventative services, crisis intervention, safety planning, caregiver-child bonding programs, youth programming, accompaniment in benefits' applications, financial literacy, housing counsel, pro-bono tax preparation, case management, and referral programs. The service providers ranged from having zero paid employees (only volunteers) to 5,000 employees, with a median of 125 employees and 25 volunteers. These organizations served anywhere from 50 to 15,000 clients.

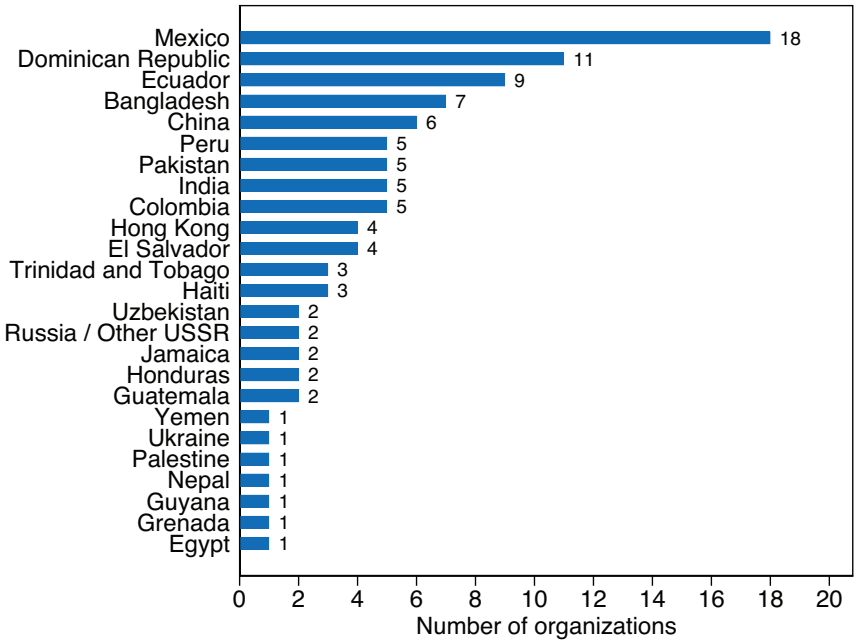
Table 3: Number of CBOs Providing Select Services

Types of services provided	Number of CBOs
Assistance securing health insurance	13
Assistance finding health service providers	12
Assistance finding mental health service providers	12
Public health education programs	12
Assistance accessing NYC public health programs	12
ESL classes	10
Assistance securing access to food	10
Domestic violence support	10
Legal services regarding immigration status	9
Assistance finding housing	9
Assistance finding dental service providers	8
Assistance finding substance abuse service providers	8
Community safety programs	8
Nutrition education programs	7
Other services	6
American civic education classes	5

Source: CMS survey of service providers.

These institutions reported serving immigrants of many nationalities. Figure 10 shows the number of organizations serving each nationality.

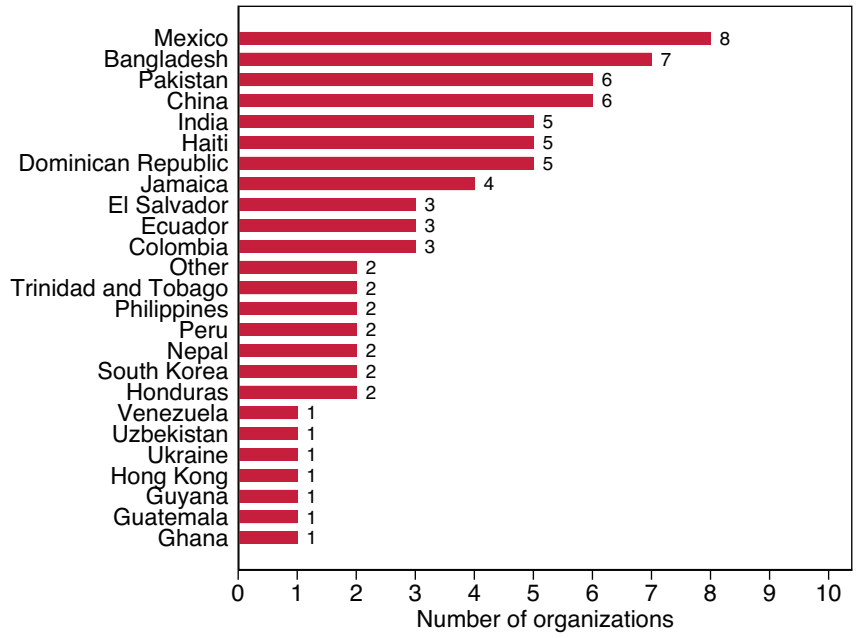
Figure 10: Nationalities of Immigrant Groups Served by Service Providers



Source: CMS survey of service providers.

Mexican, Bangladeshi, Pakistani, and Chinese immigrants were the most-underserved groups, according to service providers. The survey respondents were asked to report any nationalities of immigrants in their communities they believed should receive more health services. Figure 11 shows the number of service providers that identified immigrant groups by nationality that receive less healthcare services than they need.

Figure 11: Nationalities Receiving Less Health Services than Are Needed, According to Service Providers



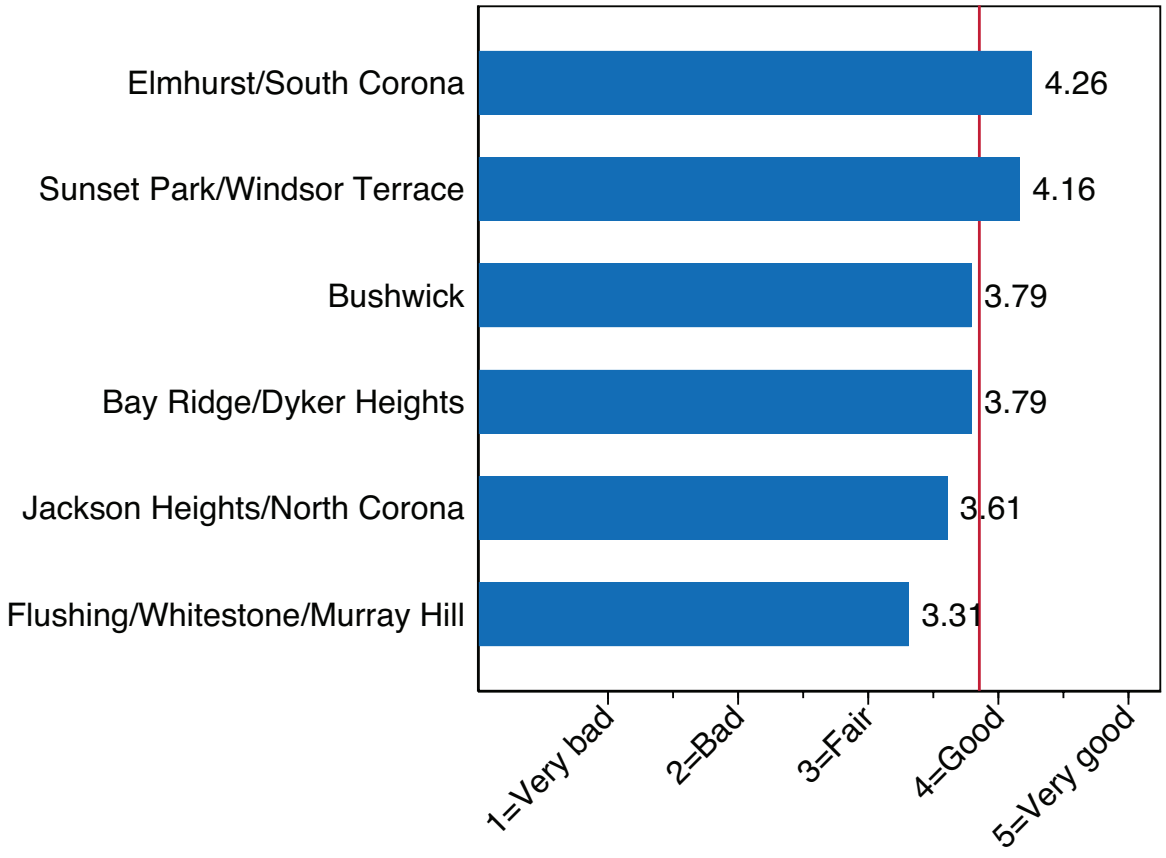
Source: CMS survey of service providers.

4. Social Determinants of Health among Immigrants

Using the ACS, CHS, CMS surveys, and focus group data, the CMS research team identified eight social determinants of health: income-level; occupation and work conditions; education level; limited English-proficiency; overcrowding; food insecurity; neighborhood "health," safety and location; and discrimination and lack of representation.

Across the neighborhoods studied, respondents from Flushing/Whitestone/Murray Hill had the worst self-reported health (Figure 12). Survey participants were asked to report their overall health conditionon a scale of 1 to 5, where 1 means "Very bad" and 5 "Very good." Respondents in this area reported an average health of 3.3 out of 5.

Figure 12: Average Self-Reported Health of Residents on a Scale of 1-5, by Neighborhood

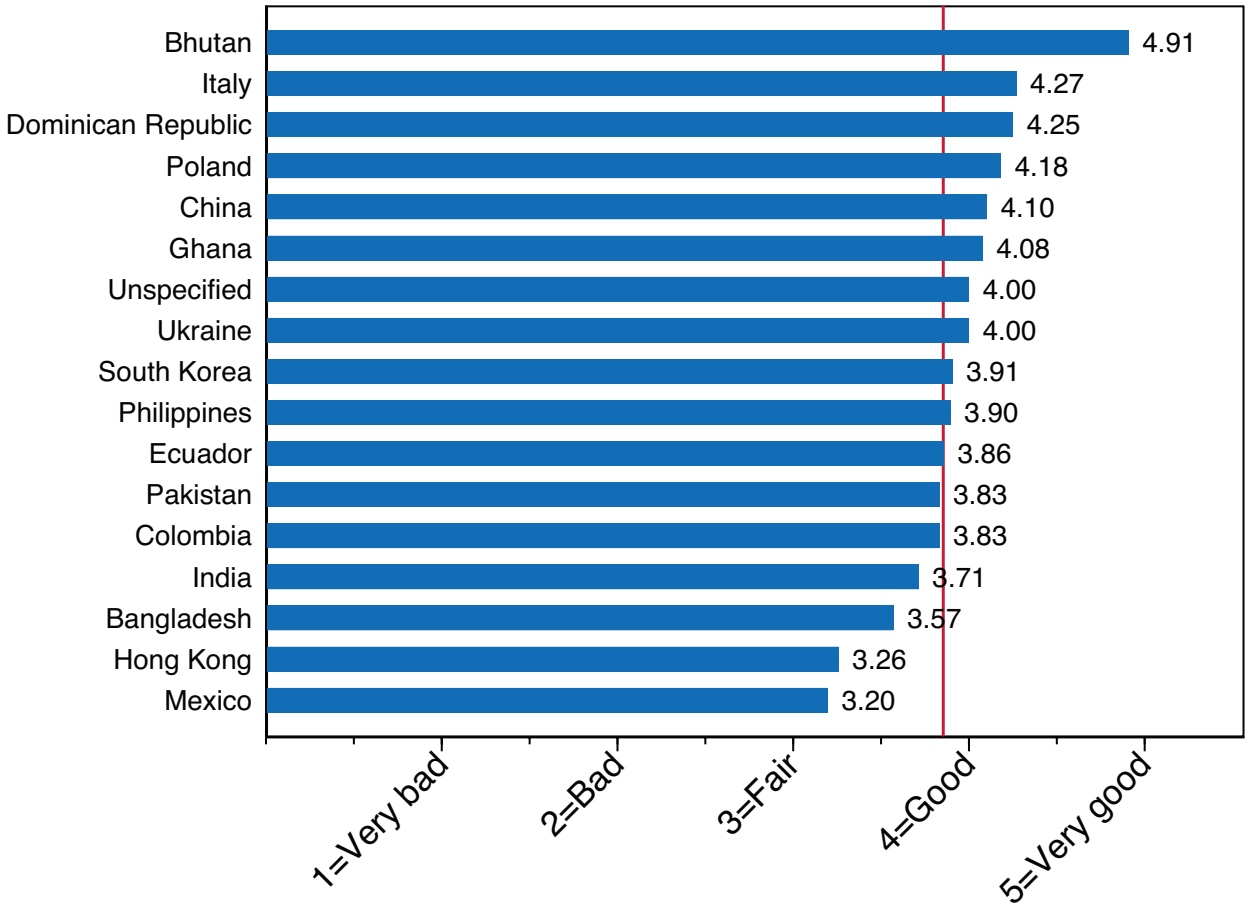


Source: CMS survey of immigrants.

Note: Results are weighted by nationality. The vertical line is the average across the whole sample.

According to the CMS survey, immigrant respondents on average said they were in good health, and respondents from Mexico, Hong Kong, and Bangladesh had the worst self-reported health. Figure 13 shows the average self-reported health by nationality, with the vertical line representing the sample average. Those nationalities with an average health status to the left of the line are on average worse off than the average of the whole sample.

Figure 13: Average Self-Reported Health of Residents on a Scale of 1-5, by Nationality

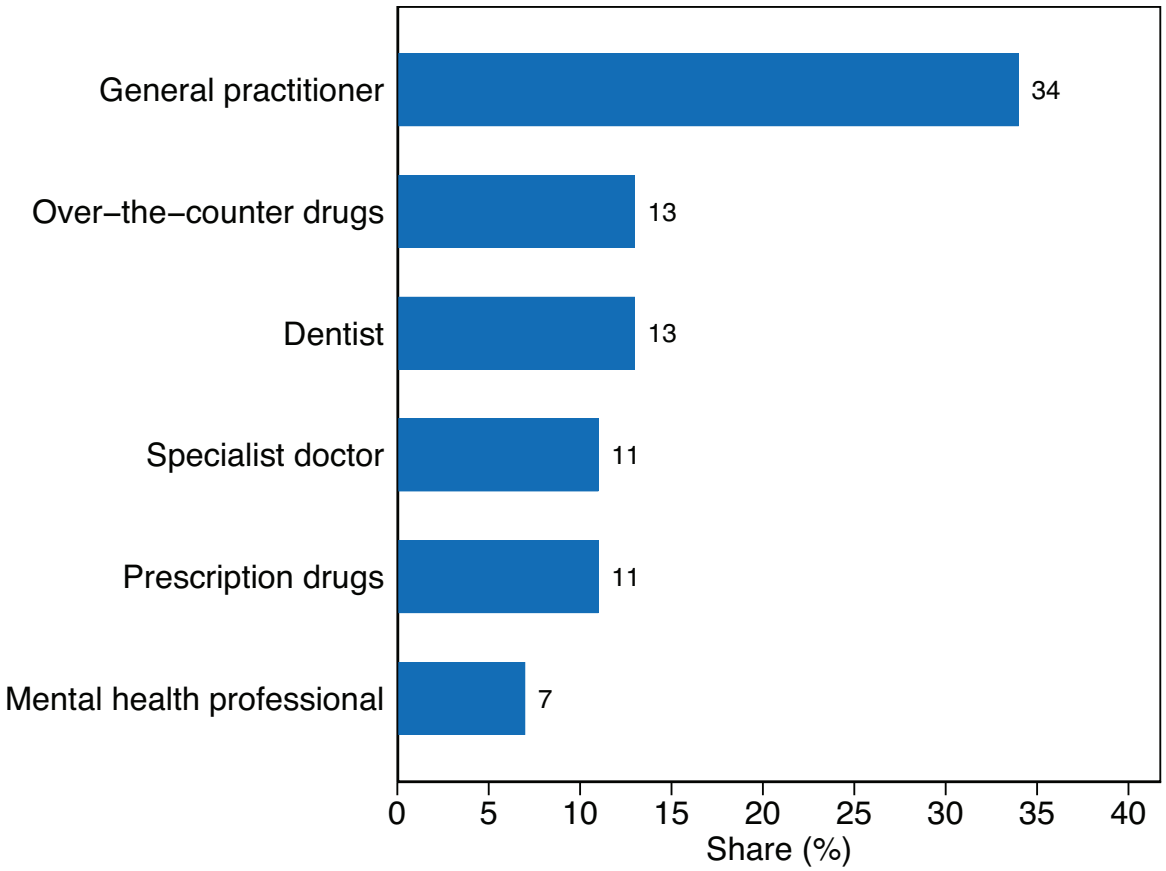


Source: CMS survey of immigrants.

Note: Results are weighted by nationality. The vertical line is the average across the whole sample.

Thirty-seven percent of respondents reported needing to access healthcare in the previous year, but not receiving it. Figure 14 shows the percent of immigrant respondents that needed to access healthcare the previous year but did not seek treatment by type of healthcare needed. More than a third said they needed to see a general practitioner but did not. Unaffordability and lack of insurance coverage were among the top reasons that immigrants said they did not seek treatment.

Figure 14: Share of Respondents that Reported Needing Access Healthcare in the Previous 12 Months but Did Not Receive It, by Type of Healthcare



Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

The top three countries of origin of respondents who said they needed to see a general practitioner in the previous 12 months but did not were Ghana (38 percent), Bangladesh (33 percent), and Colombia (30 percent). Among those who reported needing to see a mental health professional in the previous 12 months but did not receive it were immigrants from Bangladesh (33 percent), the Philippines (24 percent), and India (19).

The COVID-19 pandemic prevented many from seeking needed treatment, due to fears of entering healthcare facilities for non-urgent concerns and the lack of capacity at overwhelmed healthcare facilities. Data collection for the study of immigrants closed December 28, 2021, in the middle of the COVID-19 Omicron variant surge in New York City. At that point, 90 percent of respondents said they were vaccinated, and only 2 percent reported having contracted COVID-19 (as confirmed by a test). This figure is exceptionally low compared to the 34 percent of Americans who had contracted COVID-19 by December 2021 (Clarke et al. 2022) and thus may indicate that immigrants were either unwilling to report having been infected, did not confirm their infection with a test, or perhaps misunderstood the question. Nevertheless, 26 percent said they avoided or delayed going to the doctor because of the COVID-19 pandemic. However, 74 percent of these respondents said they had eventually sought treatment for their previously unattended

ailments. Thus, at the time of the survey, 7 percent of the immigrants surveyed were still living with untreated ailments due to the COVID-19 pandemic, which led them to delay care.

The barriers to receiving healthcare and mental healthcare services that service providers identified differed substantially from those reported by immigrants. The survey asked immigrants to report their reasons for not receiving treatment for physical and mental health concerns in the previous year, and to report their reasons for not receiving treatment. In addition, service providers were asked to rank a list of factors which might serve as barriers to accessing health services in their community. Table 4 and Table 5 list the barriers to receiving physical and mental healthcare according to immigrants and service providers, ranked from the most to the least problematic.

The top three reasons *immigrants* said they did not receive healthcare were:

1. Lack of health insurance;
2. Inability to afford care; and
3. Inability to take time off due to work, childcare, or other responsibilities.

The top three reasons service providers said immigrants did not receive needed healthcare services were:

1. Language barriers;
2. Fear of revealing documentation status; and
3. Inability to afford services.

The discrepancy between the responses of immigrants and service providers on barriers to seeking mental healthcare was even greater. The top three reasons *immigrants* identified for not seeking mental health services were:

1. Inability to take time off due to work, childcare, or other responsibilities;
2. Lack of health insurance; and
3. Inability to afford services.

The top three reasons *service providers* said immigrants did not receive needed mental health services were:

1. Fear of stigma;
2. Cultural reasons; and
3. Language barriers.

These disparate responses suggest that service providers may have overestimated the role of culture in immigrants' decisionmaking to seek mental healthcare.

Table 4: Barriers to Immigrants Receiving Healthcare for Physical Health Concerns, as Reported by Immigrants and Service Providers

Rank	Top Reasons Immigrants Did Not Receive Needed Treatment
1	Lack of health insurance
2	Cannot afford services
3	Cannot take the time because of work, care for children, or for other reasons
4	Wait time for an appointment is too long
5	Wanted to see if problem got better on its own
6	Lack of knowledge about treatment options
7	Too far to travel
8	Fear of discrimination
9	Fear of treatment
10	No means of transportation
11	Language barriers
12	Patients prefer doctors from the same country of origin, who were not available
13	Cultural reasons
14	Do not trust medical care or provider
15	Religious reasons
16	Other

Rank	Top Barriers to Seeking Healthcare, According to Service Providers
1	Language barriers
2	Fear of revealing documentation status
3	Cannot afford services
4	Not eligible for health insurance
5	Lack of health insurance, though eligible
6	Cannot take the time because of work, care for children, or for other reasons
7	Fear of stigma
8	Fear of treatment
9	Do not trust medical care or provider
10	Cultural reasons
11	Patients prefer doctors from the same country of origin, who were not available
12	Lack of knowledge about treatment options
13	Fear of discrimination
14	Too far to travel
15	No means of transportation
16	Religious reasons

Source: CMS survey of immigrants and survey providers.

Note: Results for barriers reported by immigrants are weighted by nationality. "Did not receive needed treatment" means having needed to see a general practitioner, specialist doctor, or dentist in the previous 12 months, but did not make an appointment.

Table 5: Barriers to Immigrants Receiving Healthcare for Mental Health Concerns, as Reported by Immigrants and Service Providers

Rank	Top Reasons Immigrants Did Not Receive Needed Treatment
1	Cannot take the time because of work, care for children, or for other reasons
2	Lack of health insurance
3	Cannot afford services
4	Wait time for an appointment is too long
5	Lack of knowledge about treatment options
6	Wanted to see if problem got better on its own
7	Too far to travel
8	Fear of treatment
9	No means of transportation
10	Language barriers
11	Culutral reasons
12	Religious reasons
13	Fear of discrimination
14	Fear of stigma
15	Do not trust psychological care or mental health provider
16	Patients prefer psychologists from the same country of origin, who were not available

Rank	Top Barriers to Seeking Healthcare, According to Service Providers
1	Fear of stigma
2	Cultural reasons
3	Language barriers
4	Not eligible for health insurance
5	Cannot afford services
6	Lack of health insurance, though eligible
7	Cannot take the time because of work, care for children, or for other reasons
8	Fear of revealing documentation status
9	Fear of discrimination
10	Lack of knowledge about treatment options
11	Fear of treatment
12	Don't trust medical care or care provider
13	Patients prefer doctors from the same country of origin, who weren't available
14	Religious reasons
15	Too far to travel
16	No means of transportation

Source: CMS survey of immigrants and service providers.

Note: Results are weighted by nationality. "Did not receive needed treatment" means having needed to see a mental health professional in the previous 12 months, but did not make an appointment.

Many immigrants who leave home in "search of a better life," face mental health consequences when their economic situation becomes more difficult than anticipated, according to focus group participants. This type of trauma leaves many immigrants with unmet mental health needs. As one focus group participant described:

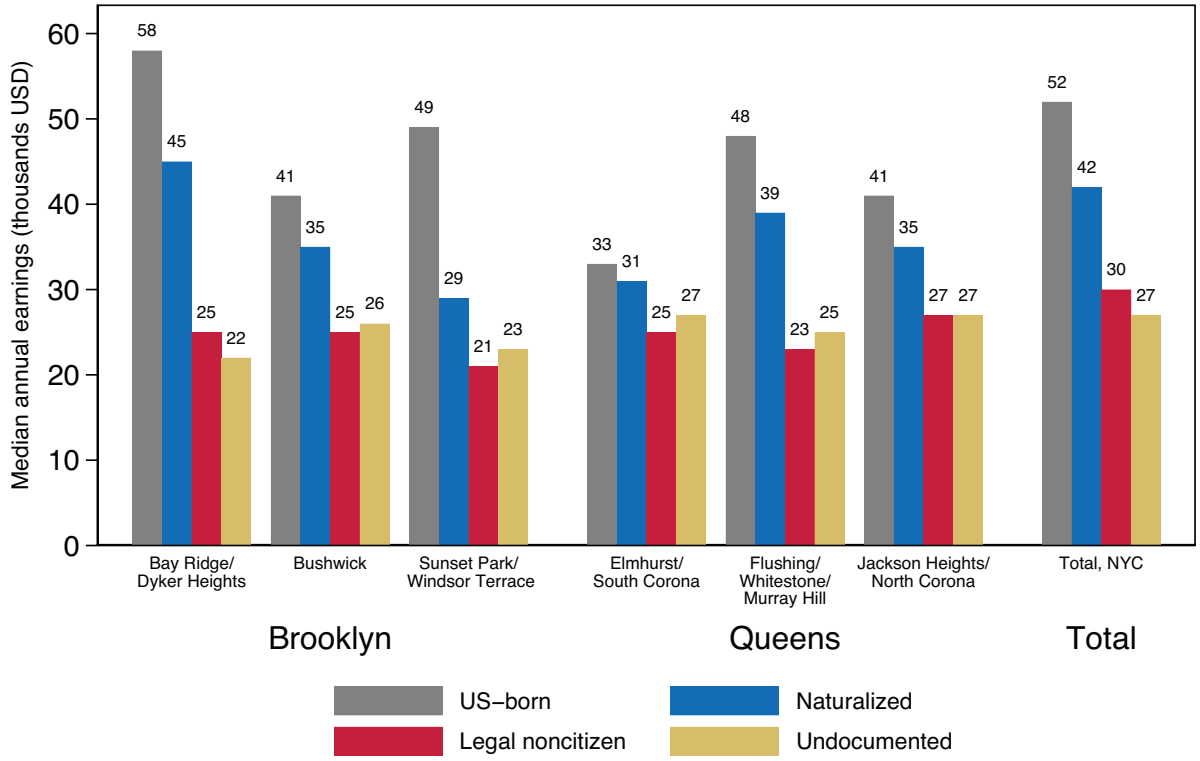
I'm privileged in that I had an opportunity to leave my own country to a strange country for survival, in search of a better life. I think, sometimes, before we leave, we already have a mental projection or a forecasting of the way we think where we're heading will be – or how we want the place to be. I think getting here and being faced with all the challenges that we never planned for, it causes some level of depression for the individual involved – in terms of financial stability or having a plan for the place you want to stay and the job you want to do to make life better for yourself. When you get there, you try to look for jobs, and you can't get those jobs at the time you want. It causes depression and frustration as well. I think that's one of the major causes of depression as immigrants upon arrival to the United States.

Lack of insurance was the second-most reported barrier to immigrant respondents receiving needed medical treatment in the previous year. Respondents identified lack of insurance as a reason for not seeing a specialist doctor (40 percent), mental health specialist (35 percent), general practitioner (33 percent), and dentist (29 percent).

4.1. Income

Naturalized citizens have much higher median earnings than legal noncitizens and undocumented immigrants. Figure 15 shows the median earnings of residents by immigration and citizenship status. In general, the earnings for citizens, both US-born and naturalized, were significantly higher than for the noncitizen groups. Immigrants in Elmhurst/South Corona, were an exception, where the difference in earnings between citizens and noncitizens was smaller than in the other neighborhoods. Overall earnings for workers in Elmhurst/South Corona were the lowest of all the neighborhoods studied. In Sunset Park/Windsor Terrace, there was a wide gap in median earnings between US-born and naturalized citizens. Median earnings for US-born workers were $20,000 greater than for naturalized citizens – $49,000 compared to $29,000. Overall, earnings were similar for legal noncitizen and undocumented workers. Citywide, median earnings for legal noncitizens were $30,000 compared to $27,000 for undocumented workers.

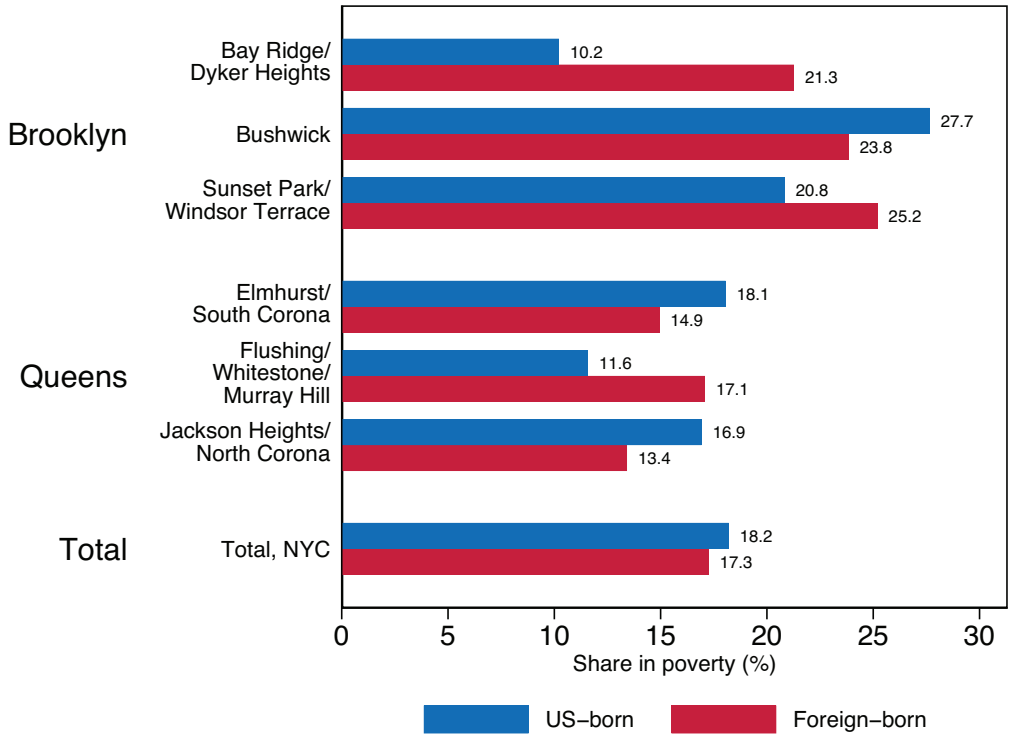
Figure 15: Median Earnings, by Immigration and Citizenship Status and Neighborhood



Source: CMS calculations using the five-year ACS 2015-2019 data, Ruggles et. al (2021).

Residents across the six neighborhoods experience high levels of poverty. Between 2015 and 2019, the three Brooklyn neighborhoods had higher poverty rates than the neighborhoods in Queens. In Brooklyn, the overall poverty rates for all residents were: Bay Ridge/Dyker Heights (15 percent), Bushwick (27 percent), and Sunset Park/Windsor Terrace (23 percent). In Queens, the overall poverty rates were: Elmhurst/South Corona (16 percent), Flushing/Whitestone/Murray Hill (15 percent), and Jackson Heights/North Corona (15 percent). Citywide, the US-born poverty rate was higher than that of immigrants. This is in part because naturalized citizens have the lowest poverty rate of any group. The US-born poverty rate was higher than that of immigrants in Bushwick, Elmhurst/South Corona, and Jackson Heights/North Corona. However, in three of the six neighborhoods, immigrant poverty rates were higher than the poverty rates of the US-born: Bay Ridge/Dyker Heights, Flushing/Whitestone/Murray Hill, and Sunset Park/Windsor Terrace. Of the six neighborhoods studied, Sunset Park/Windsor Terrace had the highest foreign-born poverty rate, with a quarter of immigrant residents in poverty (Figure 16).

Figure 16: Poverty Rates across Selected Neighborhoods, by Nativity



Source: CMS calculations using the five-year ACS 2015-2019 data, Ruggles et. al (2021).

Cost was one of the top deterrents for immigrants in seeking medical care. Fifty-four percent of respondents said out-of-pocket costs or high deductibles on their medical insurance plan "sometimes" or "regularly" discouraged them from seeking medical treatment. Forty-six percent said the same about seeking dental care. Among those who said they needed to see a general practitioner in the previous 12 months but did not, the top reported reason (34 percent) for not making an appointment was they could not afford it. Cost was the third most-reported reason for not seeing a specialist doctor (27 percent), mental health professional (25 percent), or dentist (25 percent).

Cost also prevented immigrants from seeking the medicines they needed. Forty-six percent of respondents said that the out-of-pocket costs or high deductibles on their prescription drug insurance plan "sometimes" or "regularly" discouraged them from buying prescription medicine. Twenty-four percent of those who did not receive their needed prescription drugs at least once in the previous year attributed this to their inability to pay for the doctor appointment to obtain the prescription drug and to pay for the drug itself. Similarly, 27 percent of respondents said the cost of over-the-counter drugs was prohibitive.

Healthcare costs financially strain immigrant families. Forty-one percent of respondents said they "sometimes" or "regularly" face difficulties as a result of spending on healthcare. Twenty-nine percent of respondents said they had reduced spending on food or other essential items to cover the cost of healthcare in the previous year. In some cases, immigrants fall into debt from medical expenses. Six percent of the respondents had accrued medical debt, which averaged $7,295.

4.2. Occupation and Work Conditions

The COVID-19 pandemic revealed that some populations, including both legal and undocumented immigrants, working in essential occupations at high rates, faced disproportionate health risks due to their work. However, the health hazards of immigrant-dense occupations are not limited to exposure to the COVID-19 virus. Several other workplace hazards can put immigrants at risk.

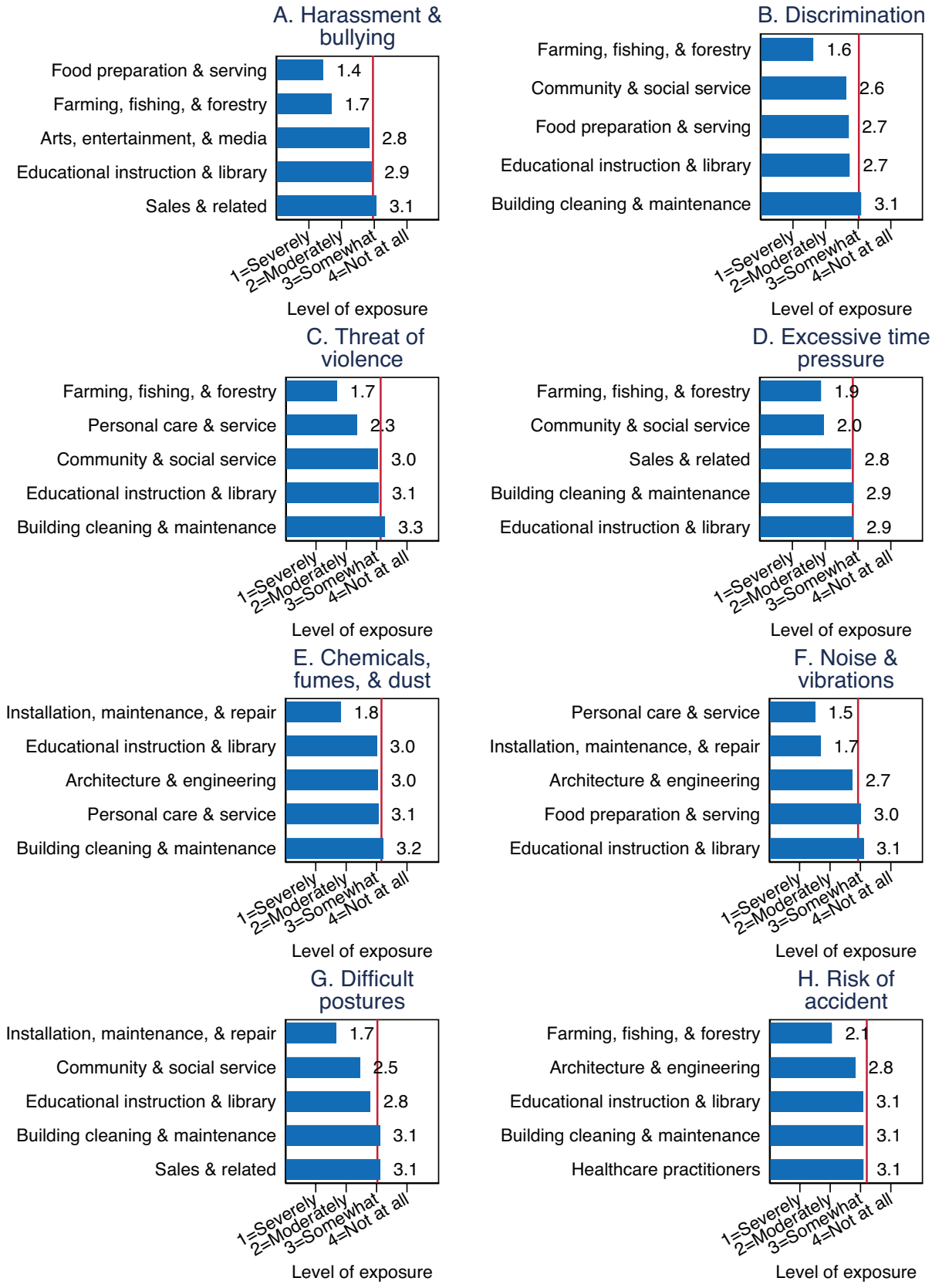
Many immigrants reported being exposed to physical and mental safety hazards at work, and their exposure to these hazards depended on their occupation. Respondents were asked how exposed they are to mental and physical safety hazards on the job. Figure 17 shows the top five occupations in which, on average, immigrants are most exposed to hazards. Immigrants were asked how exposed they were on a scale from 1 to 4 to safety hazards at work, with 1 meaning "Very exposed," 2 "Moderately exposed," 3 "Somewhat exposed," and 4 "Not at all exposed." For example, people working in personal care and service reported having the most exposure to noise or vibrations at work, whereas those working in building and grounds cleaning and maintenance had the most exposure to the risk of an accident at work. The vertical lines in the graph show the average exposure to the specific safety hazard at work across the entire sample.

Those who are exposed to mental and physical safety hazards at work are more likely to have a long-standing[13] physical or mental illness. For each of the occupational hazards in Figure 16 Panels A-H, a safety ranking is assigned to the occupation on a scale of 1 to 4, from "Very unsafe" to "Safe," with "Very unsafe" corresponding to "Severely exposed," and "Safe" corresponding to "Not at all exposed" to the hazard. These safety rankings are then averaged into a single overall safety ranking for the occupation. Figure 18 shows a correlation between the safety ranking of an occupation and the share of immigrants in the occupation who reported having health problems, where each scatter point represents a single occupation. The downward sloping line in Panel A illustrates that immigrants who work in occupations with reportedly safer conditions report having fewer long standing physical health problems. Panel B shows a similar trend for mental health problems, illustrating that immigrants who work in occupations with reportedly safer conditions reported fewer long-standing mental health problems.

Figure 19 similarly shows that poor health outcomes are correlated with workplace hazards. Immigrants ranked their health in general on a scale from 1 to 5, or "Very bad" to "Very good." Each point again represents a single occupation. The average self-reported health of workers in an occupation is correlated with the safety ranking of the occupation. The upward sloping line illustrates that in safer occupations, or those with reportedly less exposure to safety hazards at work, immigrant workers have better self-reported health.

13 "Long-standing" means lasting six months or longer.

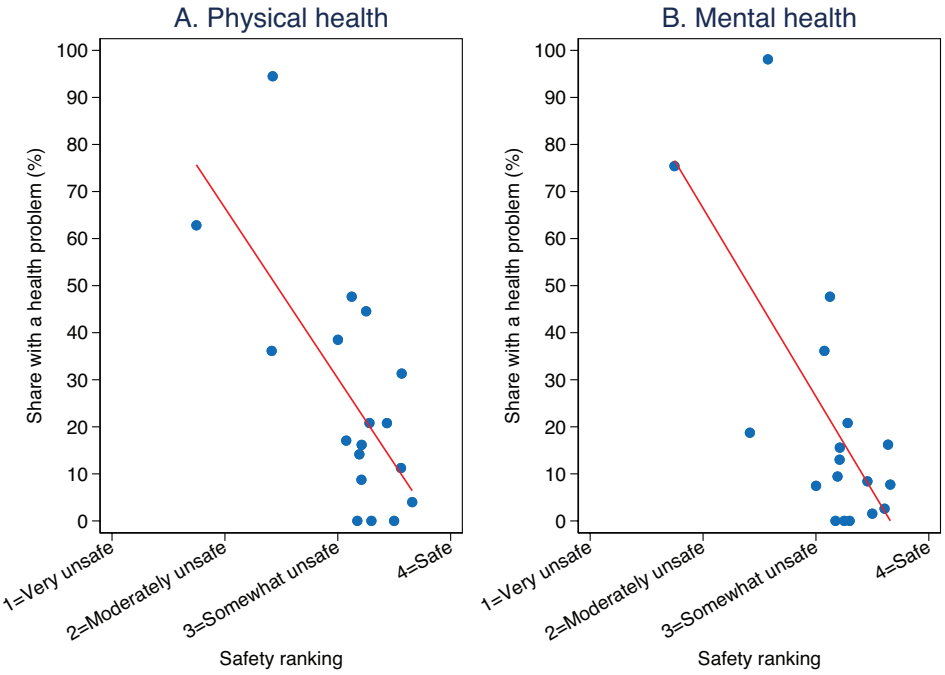
Figure 17: Occupations with the Average Highest Exposure to Safety Hazards, by Type of Hazard



Source: CMS survey of immigrants.

Note: Results are weighted by nationality. Occupations with less than 10 people are excluded.

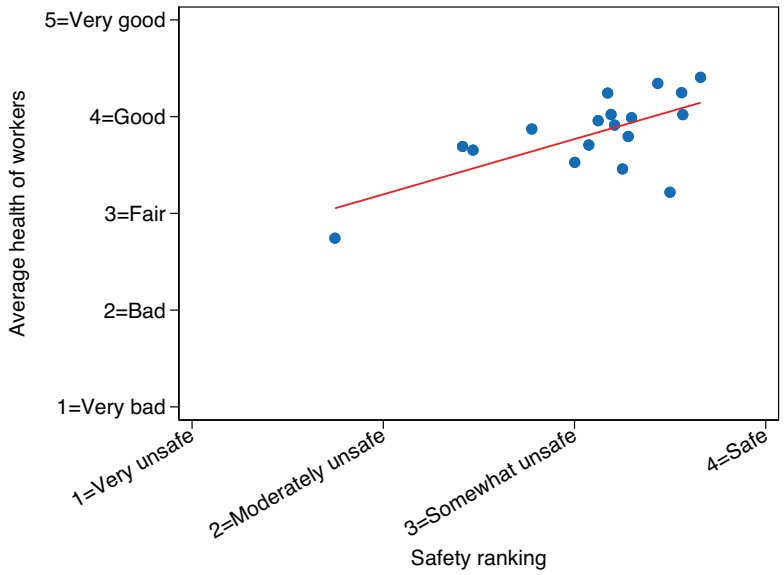
Figure 18: How Safe an Occupation Is vs. the Share of People with Self-reported Health Problems Working in That Occupation, by Type of Health Problem



Source: CMS survey of immigrants.

Note: Results are weighted by nationality. Occupations with less than 10 people are excluded. The safety rating is the average of the self-reported exposure to the safety hazards in Figure 17. "Very unsafe" corresponds to being severely exposed and "Safe" corresponds to not being exposed at all.

Figure 19: How Safe an Occupation Is vs. the Average Self-reported Health of Respondents in an Occupation



Source: CMS survey of immigrants.

Note: Results are weighted by nationality. Occupations with less than 10 people are excluded. The safety rating is the average of the self-reported exposure to the safety hazards in Figure 17. "Very unsafe" corresponds to being severely exposed and "Safe" corresponds to not being exposed at all.

Lack of paid sick leave prevents many immigrants from seeking healthcare when they need it. The median number of days off for sick leave among immigrant survey respondents was 13 days. However, employers sometimes discourage employees from taking sick leave, even when it is allotted. Inability to take time off from work was among the top five reasons that respondents cited for not seeking necessary healthcare across all types of services. More than 30 percent of respondents reported lack of sick leave was a prohibitive barrier to seeing any type of doctor. Moreover, this was also a top reason that respondents did not see a dentist or mental health professional when needed. Likewise, lack of sick days was the second-most and fourth-most reported barrier to seeing a specialist doctor or general practitioner.

The occupations[14] in which immigrant respondents reported the lowest average number of paid time off days per year were the following:

- Sales & Related: 11.5
- Personal Care & Service: 10.6
- Healthcare Practitioners & Technical: 10.5
- Food Preparation & Serving Related: 9.5
- Legal: 6.1

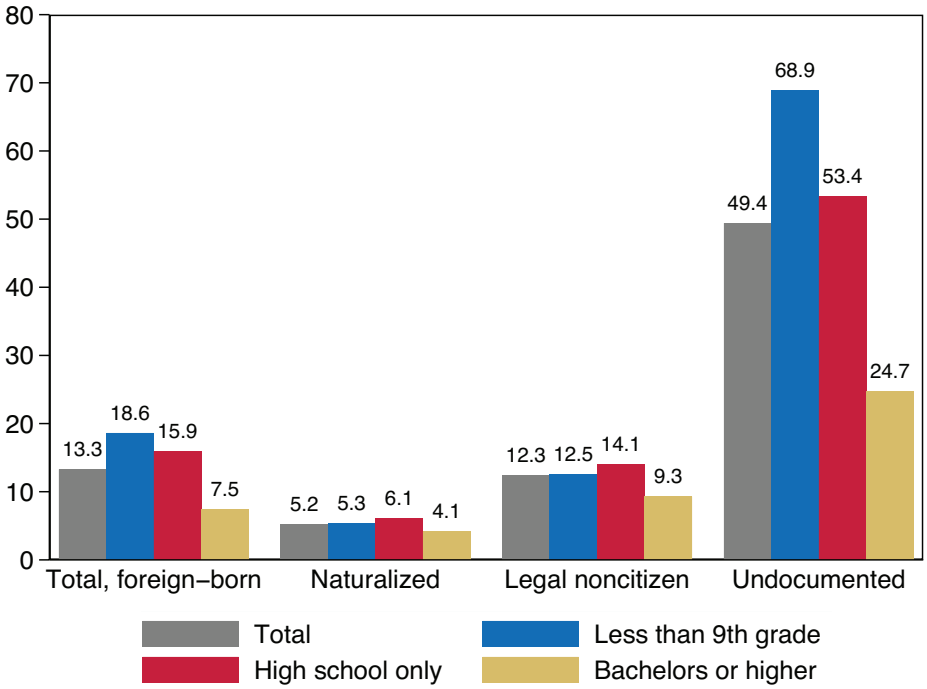
4.3. Education

Immigrants with a lower level of education are less likely to have health insurance. According to the ACS, 19 percent of immigrants with less than a 9th grade education had no health insurance. By contrast, 8 percent of those who had attained a Bachelor's degree or higher had no health insurance. This difference in health insurance coverage by education-level is especially pronounced for the undocumented. Sixty-nine percent of undocumented immigrants with less than a 9th grade education lacked health insurance, compared to 25 percent of college graduates (Figure 20). In the surveyed sample of immigrants, while half of respondents with a high-education level (those with post-secondary education or vocational training), had private health insurance, only 23 percent of those with a secondary education or below could say the same. On the contrary, while just 16 percent of the highly-educated were uninsured, 31 percent of those with a low education level had no insurance.

Education level is also related to the type of health insurance people have. Forty-six percent of low-educated respondents were using Affordable Care Act coverage ("Obamacare,") a public health insurance (Medicaid and Medicare,) Emergency Medicaid, or NYC Care, a healthcare access program for those who cannot afford or access health insurance. Those with a low-education level were more likely to use Medicaid than those with a high education level (14 percent as opposed to 5 percent). However, both of these figures may be misreported, as some people may have confused Medicare with Medicaid or Emergency Medicaid. Seventy-three people reported using Medicare despite being under the age of 65 (Figure 21). While it is possible some of these respondents received Medicare on the basis of disability, it is likely that many people were unaware which public health insurance they had. This perhaps demonstrates a lack of understanding by immigrant communities of public benefits for which they are eligible, even if they are receiving them. Nevertheless, the distribution across types of healthcare coverage show the importance of public health insurance and NYC Care in ensuring coverage for low-educated immigrant populations.

[14] Occupations with fewer than 10 people in the sample working in them are excluded. Results are weighted by survey weights.

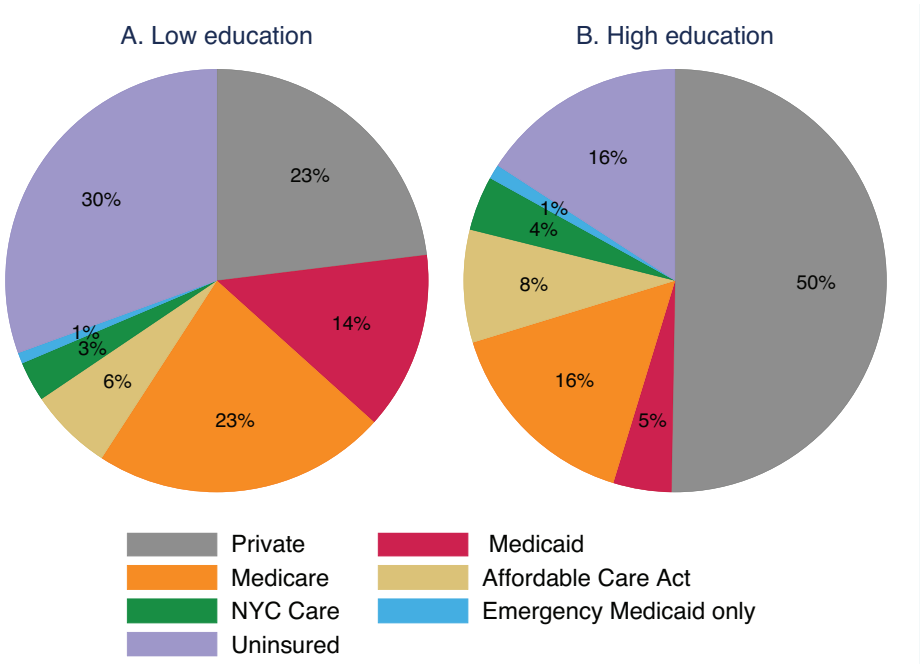
Figure 20: Share of Populations in New York City without Health Insurance, by Immigration and Citizenship Status and Education Level



Source: CMS calculations using the five-year ACS data, 2015-2019, Ruggles et al. (2021).

Note: Populations include persons age 25 years and older.

Figure 21: Health Insurance Coverage of Respondents, by Education Level



Source: CMS survey of immigrants.

Note: Results are weighted by nationality. Those with a secondary school education or lower are considered "Low Education," and those with higher than a secondary education are considered "High Education."

4.4. Limited English Proficiency

The neighborhoods in this study are linguistically diverse. The majority of immigrants who speak a language other than English at home in the six neighborhoods speak either Spanish or Chinese.[15] Bay Ridge/Dyker Heights, Sunset Park/Windsor Terrace, and Flushing/Whitestone/Murray Hill have a larger share of Chinese-speaking immigrants than Spanish-speaking immigrants, while Bushwick, Elmhurst/South Corona, and Jackson Heights/North Corona have a larger share of Spanish-speaking immigrants than Chinese-speaking immigrants. More than 69 percent of immigrants who speak Spanish and more than three-quarters who speak Chinese at home in the six neighborhoods have limited English proficiency. In the Brooklyn neighborhood of Bay Ridge/Dyker Heights, 16 percent of the immigrant population speaks either Arabic (10 percent) or Russian (6 percent). In Elmhurst/South Corona and Jackson Heights/North Corona there is a relatively large share of immigrants who speak Hindi and related languages[16] (8 percent and 9 percent respectively). In Flushing/Whitestone/Murray Hill, 13 percent of immigrants speak Korean (Appendix Table A2).

Immigrants' level of English proficiency is strongly associated with their likelihood of seeking out needed care. Respondents were asked to describe their English proficiency on a scale of 1 to 5: "1 meaning "Very bad," 2 "Bad," 3 "Fair," 4 "Good," and 5 "Very good". Controlling for age and gender, those with a self-reported English-speaking proficiency of "Very Bad" were 38 percentage points more likely to say they needed healthcare[17] within the previous 12 months but did not receive it, than those with a self-reported English-speaking proficiency of "Very Good". However, while this statistic shows a correlation between limited English proficiency and not receiving needed care, language is not the only reason people do not seek out care, as this statistic may be confounded with other factors such as education level and insurance coverage.

Language barriers were a reason some respondents did not access healthcare, though it was not a primary barrier. Fifteen percent of respondents who needed healthcare[18] said they did not try to access it due to language barriers. These respondents came from China, Colombia, India, Korea, Mexico, the Philippines, and Poland. All the Korean-speakers who said they did not try to access healthcare said the language barrier was one of the problems. Similarly, 48 percent Cantonese-speakers, 33 percent of Hindi-speakers, 17 percent of Mandarin-speakers, and 7 percent of Spanish-speakers who did not seek healthcare also reported language problems to be a reason.

There is an unmet demand for more translators for certain languages. Sixteen of the 24 organizations surveyed said they provide translation services. Combined, these organizations provided translation into 38 languages.[19] Among those providing these services, 60 percent provided interpretation and translation, 13 percent provided interpretation only, and 27 percent

15 Mandarin or Cantonese.

16 "Hindi and related languages" includes, among others, Bengali, Hindi, Punjabi, and Urdu.

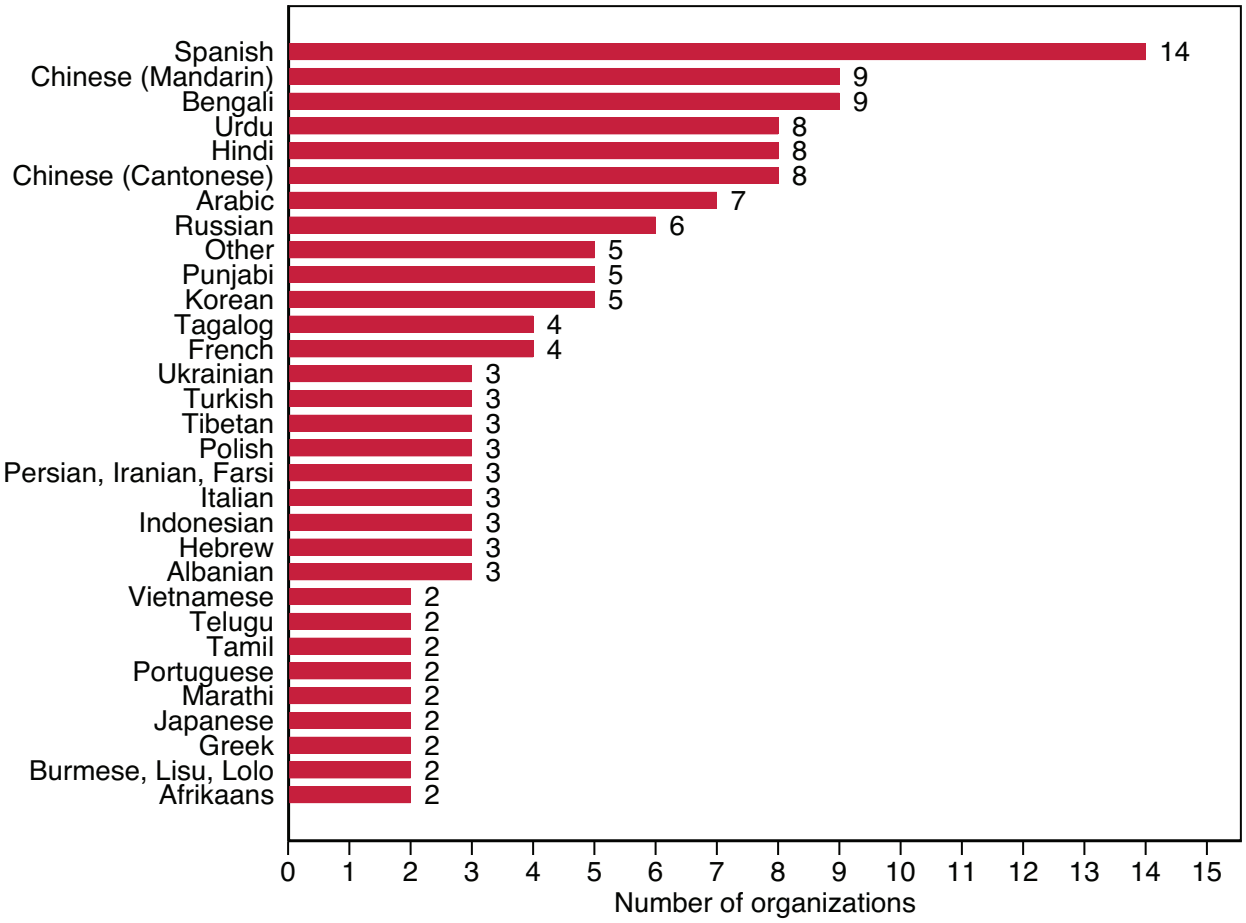
17 Healthcare in this case means going to a general doctor, a specialist doctor, a dentist, or a mental health professional, or obtaining prescription or over-the-counter medications.

18 Healthcare in this case means going to a general doctor, a specialist doctor, a dentist, or a mental health professional, or obtaining prescription or over-the-counter medications.

19 Afrikaans, Albanian, Arabic, Bengali, Burmese, Cantonese, Farsi, French, Greek, , Gujarati, Haitian, Creole, Hakka, Hebrew, Hindi, Indonesia, Italian, Japanese, Kannada, Korean, Malay, Mandarin, Marathi, Nepali, Polish, Portuguese, Punjabi, Russian, Spanish, Tagalog, Tamil, Telugu, Tibetan, Turkish, Ukrainian, Urdu, Uzbek, and Vietnamese.

said the type of language access services they provide depends on the language. Spanish, Chinese (Mandarin), and Bengali were the top three languages for which service providers reported a need for more language services (Figure 22). The "other" languages that needed more translators and/or interpreters included Armenian, Chinese dialects, Haitian Creole, and indigenous languages such as Mixteco and Nahuatl.

Figure 22: Number of Organizations Reporting a Lack of Translators Available, by Language

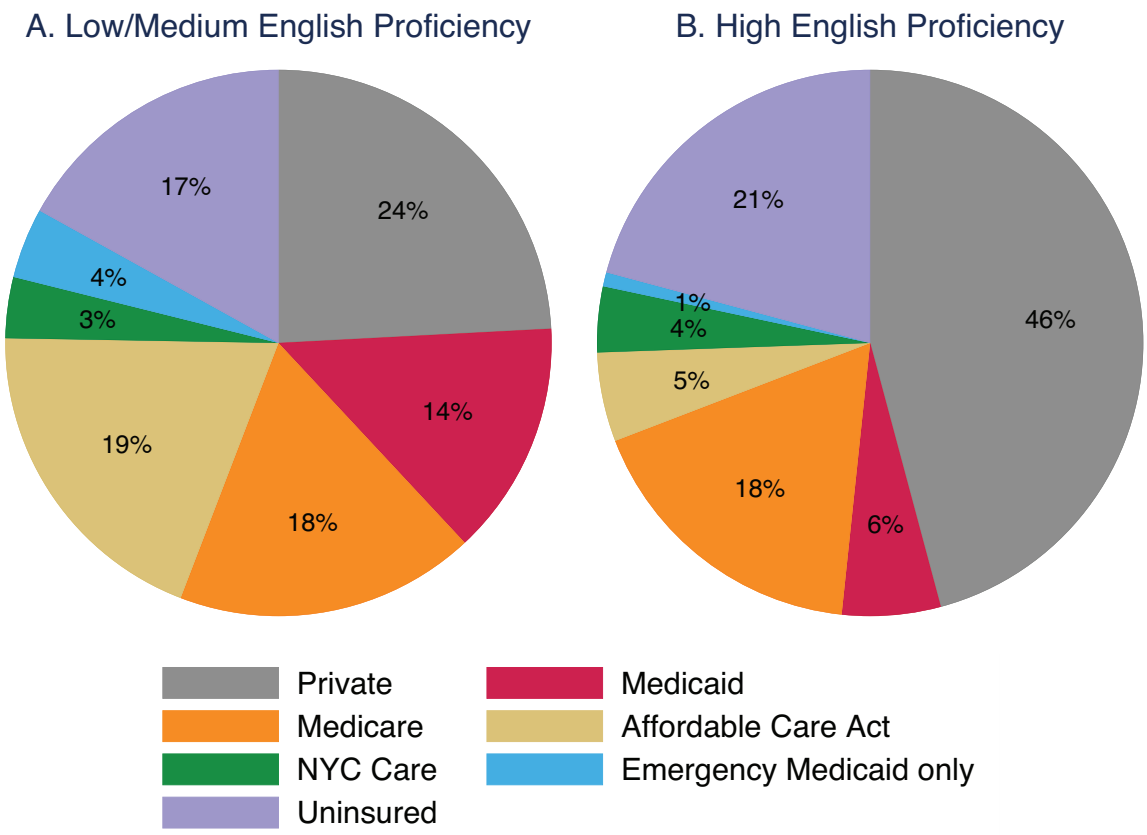


Source: CMS survey of service providers.

While limited English proficiency may be a barrier to obtaining private health insurance, those with limited English proficiency are more likely to utilize public health insurance, Emergency Medicaid, or NYC Care. Respondents with low or medium English proficiency are much less likely to have private health insurance coverage than those with a high English proficiency (24 percent as opposed to 46 percent).[20] However, those with low or medium English proficiency are more likely to take up other forms of health insurance or alternatives than remain uninsured (Figure 23).

20 Respondents who reported their English-speaking ability to be "Very poor," "Poor," or "Fair" are categorized as having low or medium English proficiency.

Figure 23: Health Insurance Coverage of Respondents, by English-speaking Proficiency



Source: CMS survey of immigrants.

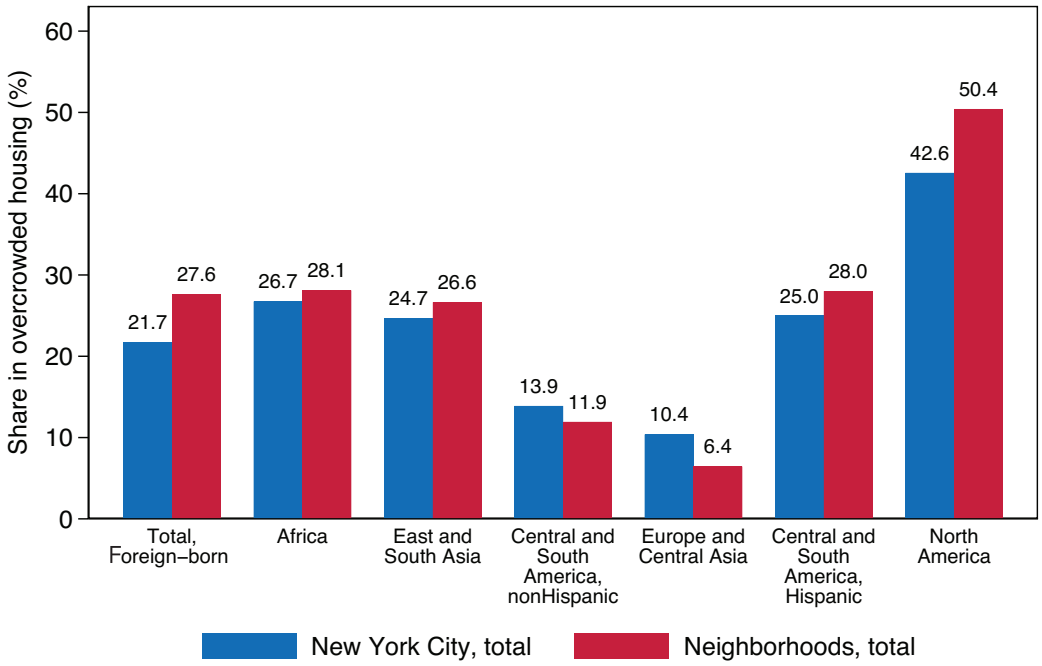
Note: Results are weighted by nationality. "Low/Medium English Proficiency" is defined as having a self-reported English-speaking proficiency that is "Very poor," "Poor, "or "Fair." "High English Proficiency" is defined as having a self-reported English-speaking proficiency that is "Good" or "Very good."

4.5. Overcrowding

Overcrowding is a social determinant of health which has proven to lead to higher COVID-19 infection rates in New York City (Hamidi and Hamidi 2021). The levels of overcrowding among immigrant households vary by immigrants' region of origin. Citywide, European and Central Asian immigrants have the lowest levels of overcrowding (10 percent) compared to immigrants from North America (43 percent) who have the highest level. Overcrowding was slightly more prominent for immigrants in the six neighborhoods studied with the exception of immigrants from non-Hispanic countries of Central and South America and Europe and Central Asia. Across the six neighborhoods, the share of immigrants from these two regions of the world who were living in overcrowded housing was smaller than their citywide counterparts (Figure 24).

Undocumented immigrants are much more likely to live in overcrowded conditions in New York City overall and in the six neighborhoods (Figure 25). More than a third of the undocumented population lives in overcrowded households, which is more than double the rate for the US-born. Overcrowding was more prevalent in the six selected neighborhoods than in the city at large, regardless of citizenship and legal status.

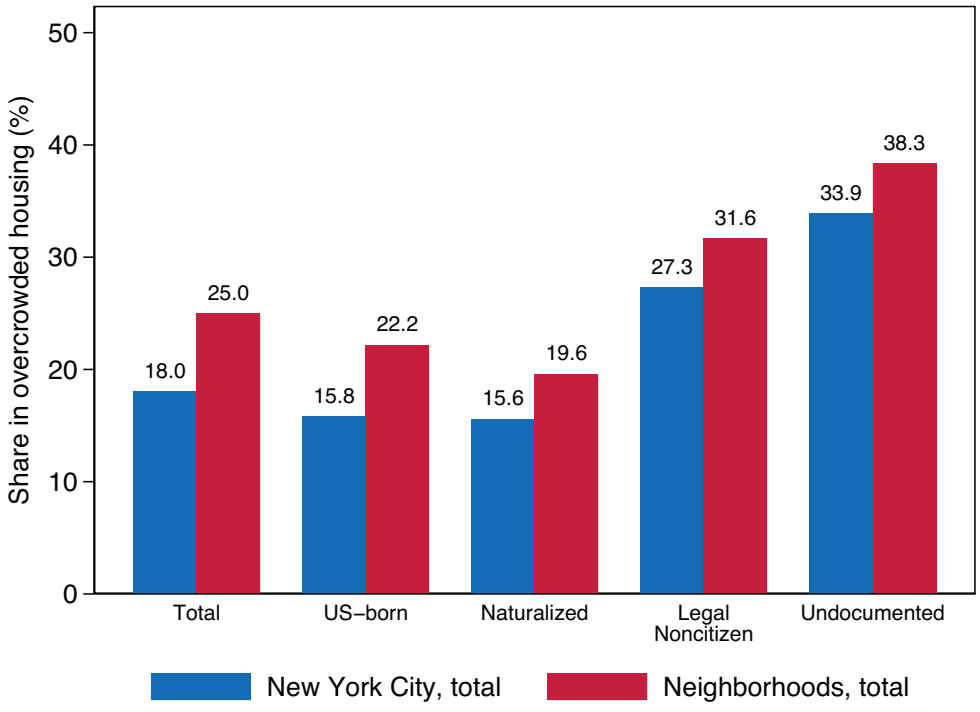
Figure 24: Share of Foreign-Born Persons Living in Overcrowded Housing, by Region of Origin, in New York City Compared to the Selected Neighborhoods



Source: CMS calculations using the five-year ACS data, 2015-2019, Ruggles et al. (2021).

Note: Overcrowding is defined as households with more than one person per room. East and South Asia includes the Middle East and the Gulf Cooperation Council countries. For regional definitions, see Appendix Table A.1.

Figure 25: Share of Persons Living in Overcrowded Housing, by Immigration and Citizenship Status



Source: CMS calculations using the five-year ACS data, 2015-2019, Ruggles et al. (2021).

4.6. Food Insecurity

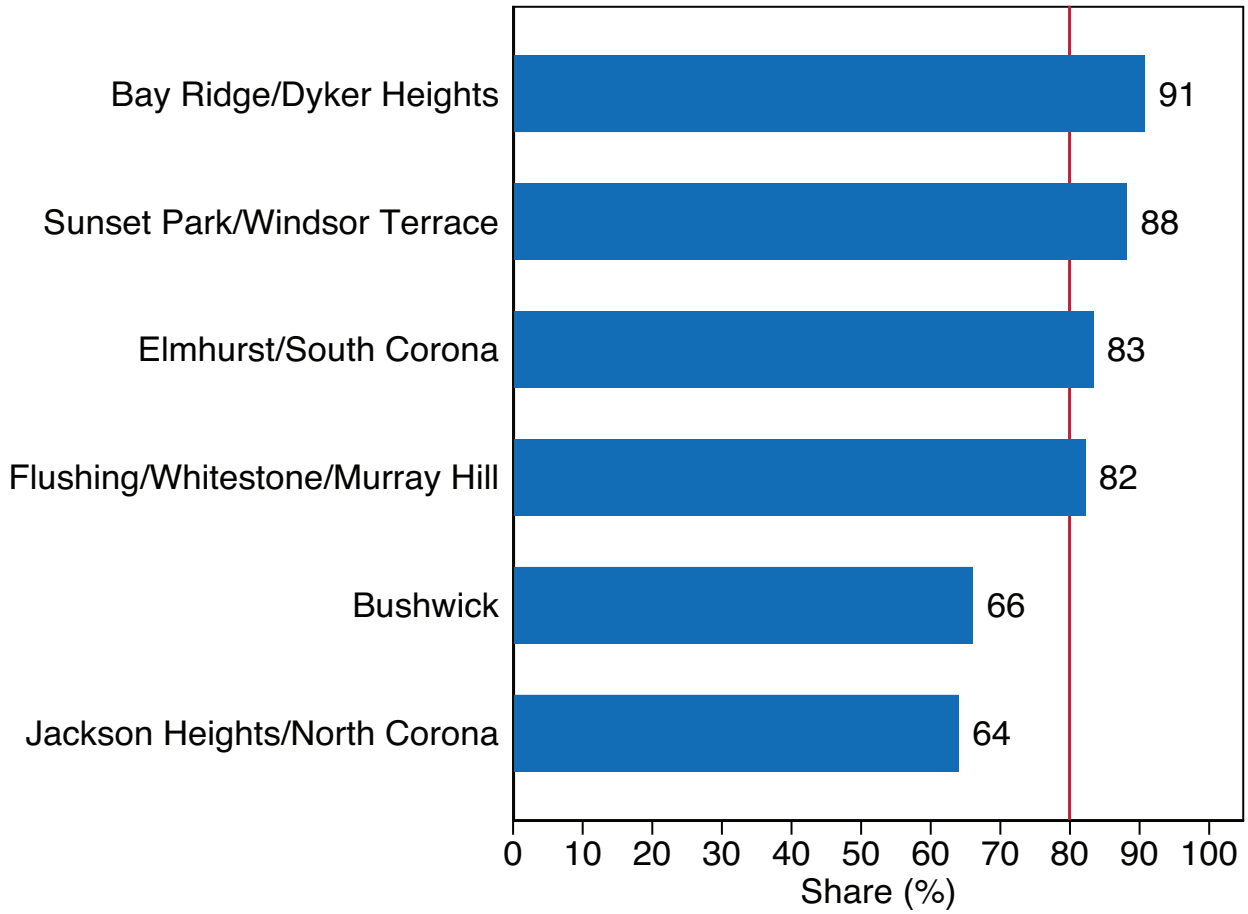
Cost is the primary barrier to healthy eating for immigrants in the six neighborhoods. Nearly a quarter of immigrants across the six neighborhoods said they did not purchase healthy food due to prohibitive costs. Among the surveyed immigrants, 75 percent said they never had to go without food in the last month, with the remaining 25 percent saying they were food insecure, defined as going without eating at least once in the past month due to lack of resources. Eleven percent said they went without food one to two times, 10 percent said they went without food three to five times, and 4 percent said they went without food six times or more because of lack of funds. Respondents in Bushwick (28 percent), Elmhurst/South Corona (25 percent), and Jackson/Heights North Corona (25 percent) were the most likely to be food insecure.

Immigrants were also asked how many times per week they eat fresh fruits or vegetables. Thirty-one percent said they eat fresh foods three times per week or fewer. Ninety-four percent of the service providers surveyed said they believed healthy eating was a problem among immigrants in their communities. When asked to identify the largest barriers for immigrants to healthy eating, service providers reported the top barrier was a lack of funds to purchase healthy food (15 of the 24 service providers). Ten service providers said they believed lack of awareness about healthy food options was a problem, and nine said they believed cultural ideas about nutrition posed problems to the community. By contrast, among immigrants who gave a reason why they did not eat fresh produce, 85 percent said it was too costly.

Immigrants living in Bushwick and Jackson Heights/North Corona are more likely to live in areas considered "food deserts." Across the sample of immigrants surveyed, 80 percent said they had access to a grocery store that sold fresh food within one mile of their home. However, in Bushwick and Jackson Heights/North Corona, just 66 and 64 percent of respondents (respectively) had access to fresh produce. Respondents were also asked to describe their access to healthy food within one mile of their home. Bushwick and Jackson Heights/North Corona also had the lowest share of respondents saying their access to healthy food within one mile of their house was "Good" or "Very good" (Figure 26).

Service providers believe lack of nearby fresh food may be more of a barrier to healthy eating than immigrants reported. Ten of the 24 service providers said that they believe lack of nearby health food options was a primary barrier. On the contrary, among those immigrants who said they ate fresh food less than three times per week, only 7 percent said the reason was because there was nowhere nearby to buy it. In short, immigrants reported that lack of financial resources was more of a barrier to healthy eating than lack of availability.

Figure 26: Share of Immigrants with a Grocery Store that Sells Fresh Food within One Mile of Their Home, by Neighborhood



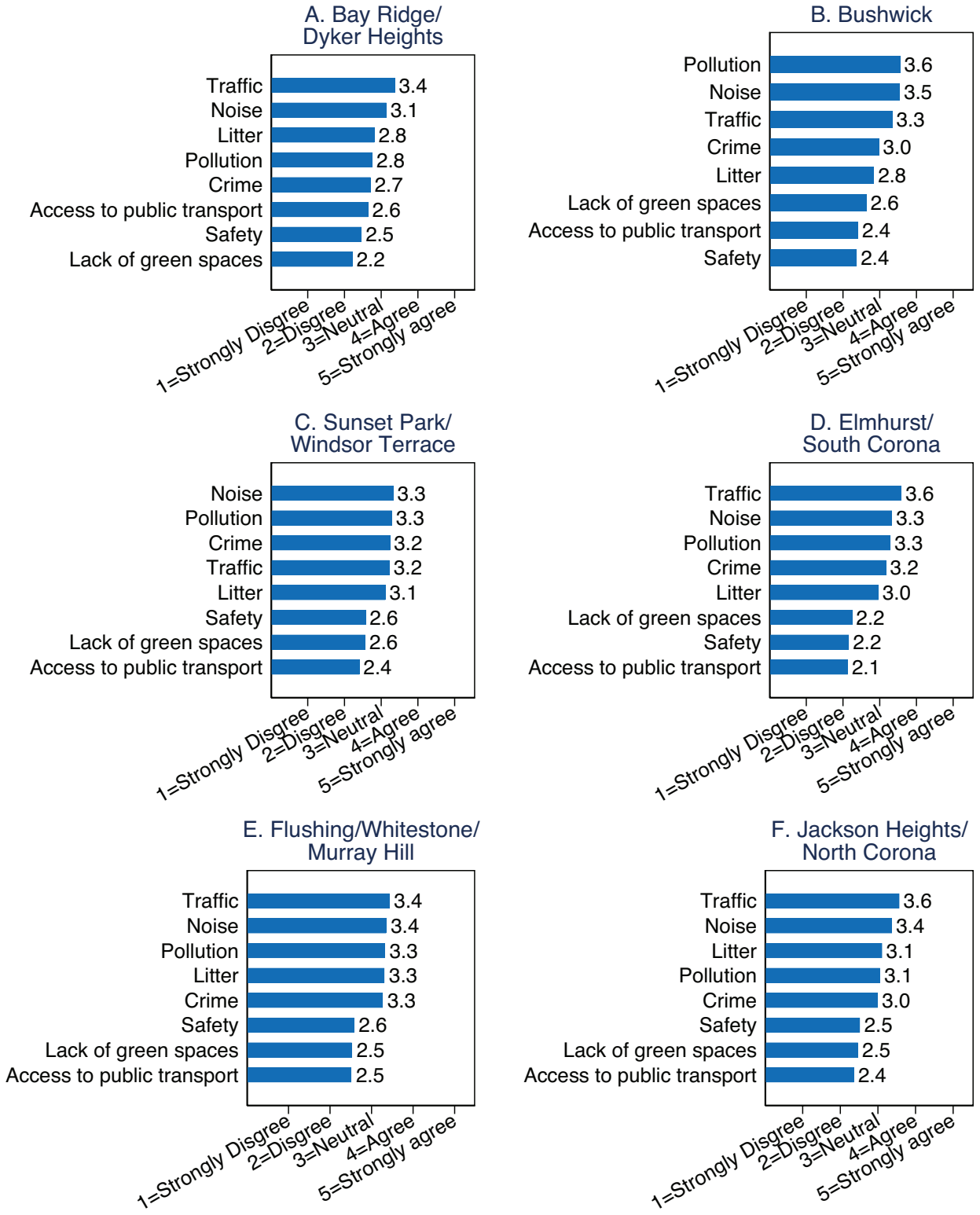
Source: CMS survey of immigrants.

Note: Results are weighted by nationality. The vertical line represents the sample average.

4.7. Neighborhood "Health," Safety, and Location

The lack of safe and healthy neighborhood conditions can have adverse health effects. Immigrants were also asked whether the following conditions posed problems in their area: access to public transportation, crime, lack of green spaces, litter, noise, pollution, and traffic. They could respond on a scale from 1 to 5 with 1 meaning "Strongly disagree," 2 "Disagree," 3 "Neutral," 4 "Agree," and 5 "Strongly agree." Figure 27 shows each neighborhood's average response to these questions. Traffic was the top-reported problem overall, followed by noise, pollution, litter, and crime.

Figure 27: Top-reported Problems, by Neighborhood

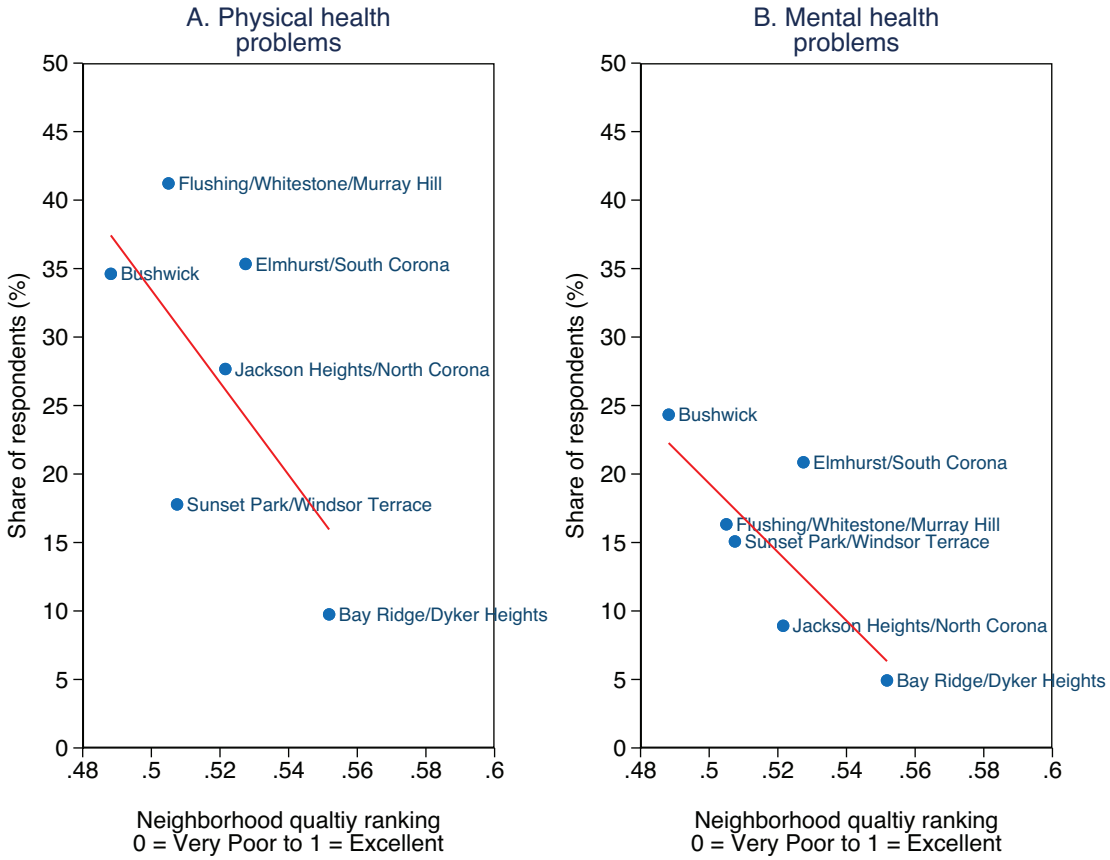


Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

Immigrants in neighborhoods with higher neighborhood quality reported better health. The neighborhood quality factors from Figure 27 were averaged and rescaled to create a composite "neighborhood quality" score on a scale from 0 to 1, or from "Very poor" to "Excellent." Figure 28 shows the neighborhood quality score plotted against the share of respondents in the neighborhood with long-standing physical health problems and long-standing mental health problems. The downward-sloping line indicates that as neighborhood quality increases, smaller shares of immigrants in the neighborhood report health concerns.

Figure 28: Share of Respondents in a Neighborhood with Long-standing Physical and Mental Health Concerns Compared to Neighborhood Quality



Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

The importance of distance and lack of transportation as a barrier to healthcare varies by neighborhood. Among those who said they needed to access healthcare in the previous 12 months but did not, across the whole sample, 30 percent reported that it was too far to travel or that they had no means of transportation to access care. However, this problem is more acute in some neighborhoods than in others. For example, in Bushwick, Elmhurst/South Corona, and Flushing/Whitestone/Murray Hill, 48 percent, 48 percent, and 40 percent (respectively) of those who did not receive needed care reported distance or transportation to be a barrier. However, in Bay Ridge/Dyker Heights, Sunset Park/Windsor Terrace, and Jackson Heights/North Corona, only 23 percent, 9 percent, and 4 percent of those who did not receive needed care reported distance or transportation to be a problem.

5. Discrimination and Lack of Representation

Immigrants reported feelings of discrimination in their communities, and this sometimes prevented them from seeking necessary healthcare. Among those who said they needed to see a healthcare professional[21] in the previous 12 months but did not, 17 percent said fear of discrimination was one of the reasons they let ailments go untreated. While this was not one of the top five barriers, it was a factor in not accessing healthcare for immigrants from China, Colombia, Hong Kong, Italy, Mexico, and the Philippines.

Discrimination on the basis of race was the most reported form of discrimination, followed by nationality/citizenship, that immigrants reported when seeking healthcare. Thirty-eight percent said they faced racial discrimination when seeking healthcare, and more than a quarter of respondents (27 percent) said they faced discrimination on the basis of their nationality/citizenship (Figure 29). A focus group participant from Ghana described being pushed back in the waiting line by a receptionist at a public clinic in Queens, and said that being given less time and attention at public clinics was a common form of racial discrimination he faced personally and witnessed. He said that in order to receive equal treatment at clinics, foreigners need the added "criteria" of being white:

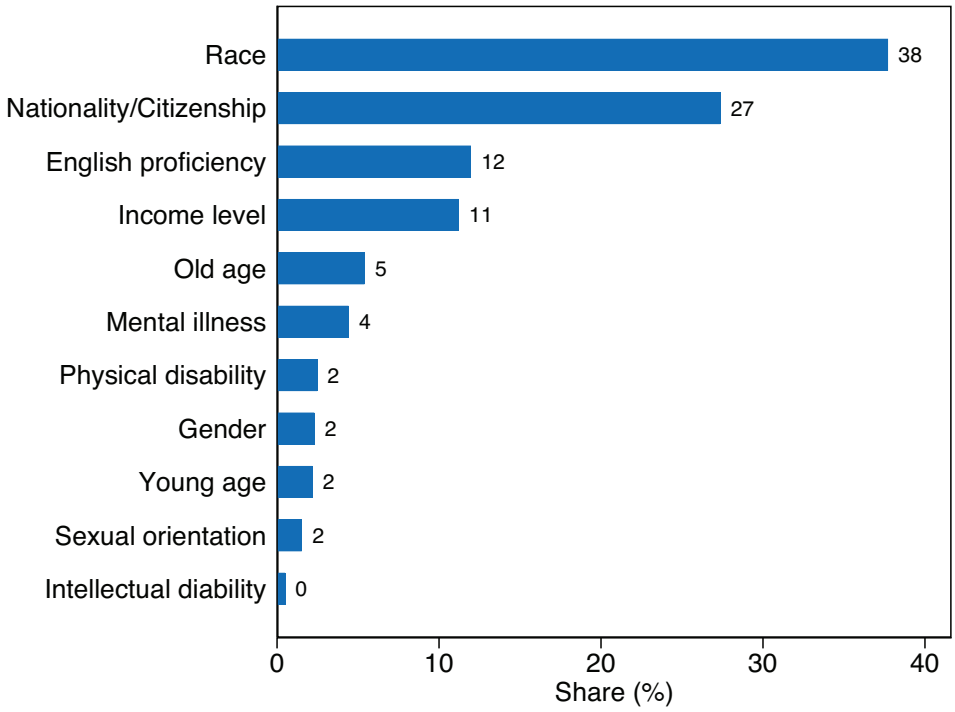
> *Sometimes, the personnel in charge, because we do not identify as pure white, just tend to delay us without attending to us. We do notice. Sometimes they will make the discrimination glaringly. Sometimes it's crystal clear for us to see we are not receiving preferred treatment because we do not associate as white. Because we are Black or we do not identify as white, they tend to reduce service both in terms of quantity and quality. Sometimes, they just have a way of walking us out of the place. That experience has not been fair.*

The third and fourth most-reported forms of discrimination were on the basis of English-speaking ability (12 percent) and income (11 percent). Those who reported linguistic discrimination spoke Urdu, Cantonese, Hindi, Mandarin, Italian, Spanish, Korean, or reported "Other" as their primary language. Speakers of various Asian languages were most likely to report this form of discrimination.

Some service providers had staff that were representative of the community served, while other organizations did not. Service providers were asked to report what percentage of their staff members were immigrants, and what percentage of the community they served were immigrants. Most health service providers (79 percent) said that 50 to 74 percent of the community they served was immigrants. Some organizations reported high levels of immigrants on staff (Figure 30). Thirty-seven percent of organizations said more than half their agency's leadership positions were filled with immigrants; 51 percent of organizations said more than half their paid staff were immigrants; and a third said more than half their social workers were immigrants. However, 38 percent of organizations said less than a quarter of their agency's leadership were immigrants.

21 "Healthcare professional" includes a general practitioner, a specialist doctor, a dentist, or a mental health professional.

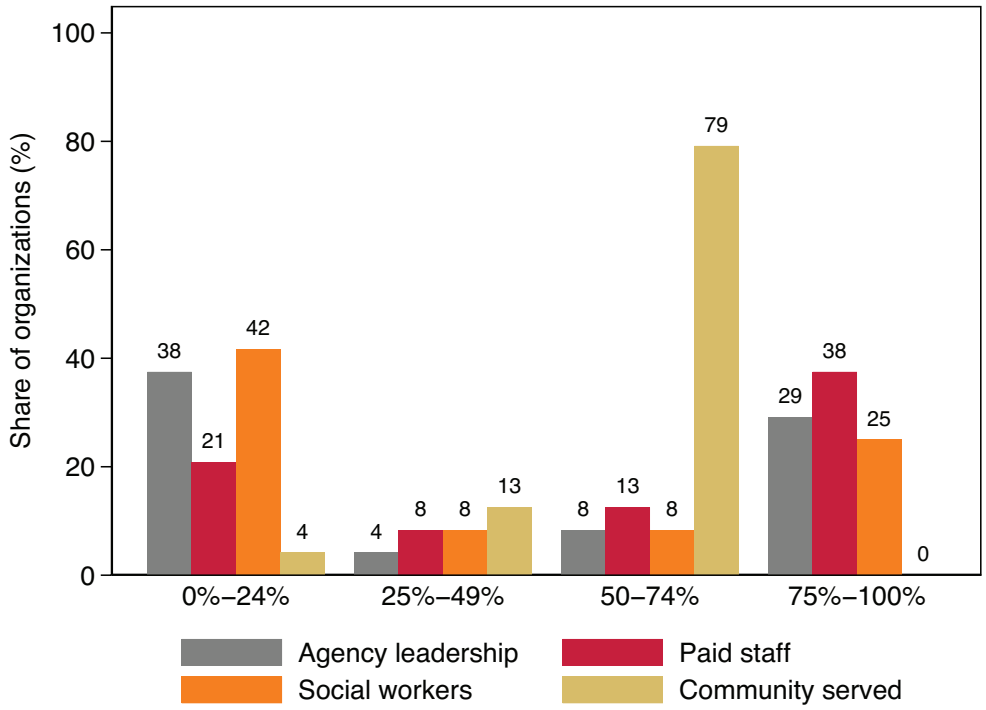
Figure 29: Forms of Discrimination Respondents Reported Facing While Seeking Healthcare



Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

Figure 30: Prevalence of Immigrants in Organization and Service Community



Source: CMS survey of service providers.

6. Immigrants' Use of Public Benefits and City Programs

Immigrants have access to a wide range of benefits in New York City. Immigrant respondents reported using federal benefits such as housing assistance (18 percent), Supplemental Security Income (SSI - 17 percent), Supplemental Nutrition Assistance Program (SNAP - 15 percent), Temporary Assistance for Needy Families (TANF - 14 percent), and Supplemental Nutrition Program for Women, Infants, and Children (WIC - 13 percent). Service providers often help immigrants apply for these benefits. However, when immigrants, such as the undocumented are excluded from federal benefits, the city has alternative programs to ensure they can access needed care. The city's public hospital network offers a healthcare access program called NYC Care that guarantees low-cost and no-cost services to New York residents who do not qualify for or cannot afford other forms of health insurance. Similarly, the city's former ThriveNYC (later converted into the Mayor's Office of Community Mental Health) program helps all New Yorkers access mental health services. Finally, the Mayor's Office of Immigrant Affairs' ActionNYC program offers immigrants free legal help. Among the service providers surveyed, 15 said they recommend people to NYC Care, 13 recommend people to ThriveNYC, and 12 recommend people to ActionNYC as part of their programming.

Approximately half of immigrant respondents had heard of NYC Care, and just over a third of respondents had heard of ThriveNYC and ActionNYC. Forty-eight percent of respondents knew about NYC Care, 36 percent about ThriveNYC, and 35 percent about Action NYC. There was not much variance in knowledge of city programs by neighborhood, suggesting the city has equitably distributed information geographically across neighborhoods. Accounting for respondents' differences in self-reported health, respondents who used NYC Care were 8 percentage points more likely to have a primary care physician than the uninsured. Respondents in Bushwick, Flushing/Whitestone/Murray Hill, and Elmhurst/South Corona were the most informed about NYC Care. Respondents from Bushwick were the least informed about ThriveNYC and ActionNYC. Knowledge of the three programs across the other neighborhoods was relatively similar (Table 6). For all three programs, the top way people said they had heard about the program was through social media advertisements, followed by TV advertisements and TV news programs. Another top way people said they learned about ActionNYC was through online searching.

Table 6: Knowledge of New York City Programs

	Have you heard of…?		
Neighborhood	**NYC Care**	**ThriveNYC**	**ActionNYC**
Bay Ridge/Dyker Heights	43%	46%	33%
Bushwick	59%	27%	26%
Sunset Park/Windsor Terrace	46%	38%	37%
Elmhurst/South Corona	50%	42%	44%
Flushing/Murray Hill/Whitestone	55%	39%	43%
Jackson Heights/North Corona	37%	35%	55%

More than half

Between one-third and one-half

Less than one-third

Source: CMS survey of immigrants.

Note: Results are weighted by nationality.

About a quarter of respondents used NYC Care, and less than a fifth of respondents used ThriveNYC and ActionNYC. Those who used these programs said they were satisfied with them. Twenty-four percent of all immigrant respondents said they used NYC Care at least once in the past, with respondents from Bhutan, Hong Kong, and Poland the most likely to have used this program. Use of NYC Care was comparable across neighborhoods, ranging from 22 to 30 percent of the respondents. Among the uninsured, 27 percent said they needed healthcare in the previous 12 months but did not receive it, but only 29 percent of the uninsured had heard of NYC Care, indicating there is still room for awareness-raising about the program. Only 14 percent of respondents in Bushwick used ThriveNYC, and 16 percent used ActionNYC. Overall, respondents were satisfied with NYC Care, ThriveNYC, and ActionNYC. Respondents who used the programs were asked to rank their satisfaction with the programs on a scale of 1 to 5 with 1 meaning "Very dissatisfied" and 5 meaning "Very satisfied." On average, respondents gave both NYC Care and ThriveNYC a ranking of 4.4 out of 5 and ActionNYC a ranking of 4.3 out of 5.

7. Policy Recommendations

The findings of this report are consistent with past research and provide a more thorough and detailed assessment of the challenges immigrants face in these six neighborhoods. According to service providers, the interventions in Table 7 would help to break down the barriers to a healthy lifestyle.

Table 7: Interventions that Would Help Minimize Barriers Immigrants Face in Living a Healthy Lifestyle

Rank	Intervention
1	More targeted funding for immigrant groups specifically
2	More general funding
3	Outreach campaigns to help immigrants apply for public benefits
4	Outreach campaigns to inform immigrants about alternative health services for the uninsured and under-insured (NYC Care etc.)
5	Hiring more diverse staff
6	Awareness campaign to de-stigmatize use of health services among immigrants
7	Outreach campaigns to help immigrants apply for insurance
8	Awareness campaign to de-stigmatize use of mental health services among immigrants
9	Providing information in more languages
10	Awareness campaigns to encourage use of the community health center facilities among immigrants
11	Awareness campaign to ensure the privacy/confidentiality of documentation status in the provision of health services to immigrants
12	Nutrition education programs
13	Public health awareness programs

Source: CMS survey of service providers.

Based on the evidence in this report, including voices of immigrants themselves, CMS proposes the following recommendations:

The Biden Administration should continue the marketplace provisions of the American Rescue Plan Act of 2021.[22] Part of the Act has made Affordable Care Act ("Obamacare") plans more affordable and expanded access to them by reducing the percentage of household income that people must spend on the benchmark for the plan and providing premium tax credits to households at more than 400 percent of the federal poverty level. However, these marketplace provisions are temporary. Branham et al. (2022) estimate that if these provisions are removed in 2023, 3 million people would lose their insurance entirely (a 15 percent decrease in the number insured in the individual market). An additional 8.9 million would see a decrease in their marketplace premium subsidies and 1.5 million would lose their subsidies entirely. The federal government should ensure that provisions are kept in place to maintain the affordability of insurance for all.

Governor Hochul should ensure that the New York State proposed legislation which includes "Coverage for All" is enacted. The bill[23] includes a budget of $345 million in funding for a program which would provide healthcare coverage from 150,000 low-income New Yorkers who currently cannot access health insurance due to immigration status. The Office of the New York City Comptroller Brad Lander (2022) estimates this program will provide $710 million annually in economic benefits due to increased life expectancy, increased labor productivity, decreased out-of-pocket costs, and less reliance on emergency room visits.

New York City Council should pass the pending bill Int. No. 1674,[24] **which would create an Office of the Patient Advocate within the New York City Department of Health and Mental Hygiene (DOHMH).** This office would increase accountability for healthcare equity. It would establish a system to receive and respond to comments and complaints about medical services and coverage. It would also provide a structure to collect and analyze data to provide evidence-based policy recommendations for improving the city's healthcare services.

New York City should fully fund NYC Care. Such funding is imperative to guarantee healthcare access for those who cannot access or cannot afford health insurance. This city funding should include funding for local CBOs to conduct outreach, awareness-raising, and direct enrollment for immigrants across the six neighborhoods.

City agencies and mayoral offices (including the Office of Citywide Health Insurance Access at New York City Human Resources Administration/Department of Social Services and DOHMH), community health clinics, and health-focused and immigrant-serving CBOs should more actively promote the NYC Care, ActionNYC, and services of the Mayor's Office of Community Mental Health (formerly ThriveNYC) in the six selected neighborhoods. Those who used these programs were very satisfied with them, but a large percentage of the immigrant population had not heard of them (Table 7). At the same time, immigrants reported cost of care and lack of health insurance as primary barriers to receiving care. These programs are especially vital in providing access to healthcare to those immigrant groups – such as the undocumented – who are excluded

22 American Rescue Plan Act of 2021, H.R. Res. 1319, Pub. L. No. 117-2, 117th Cong. (2021) (enacted). https://www.congress.gov/117/plaws/publ2/PLAW-117publ2.pdf.

23 S. Res. S1572A, Reg. Sess. (NY 2021-2022). https://www.nysenate.gov/legislation/bills/2021/s1572/amendment/a.

24 Int. No. 1674, Reg. Sess. (NYC Council 2019). https://legistar.council.nyc.gov/LegislationDetailaspx?ID=4085833&GUID=C2FEBE38-2F3E-4908-8AB3-18394F115B67&Options=&Search=.

de jure or in practice from federal and state public healthcare programs. Given less than a third of the uninsured had heard of NYC Care, city and service providers could expand health coverage by increasing awareness of alternative health insurance and healthcare programs. These public city programs are a model example of programs that other cities could implement as long as some private and public insurance programs are cost-prohibitive or exclusive of certain groups.

Health service providers should continue to ensure their personnel are racially and ethnically representative of the communities they serve. Discrimination on the basis of race, followed by nationality/citizenship, were the most reported forms of discrimination. Immigrants reported that these types of discrimination negatively affect the quality of service they receive. While immigrants were well-represented among the agency leadership and staff of many organizations, a third of service providers nonetheless said less than a quarter of their agency's leadership were immigrants, and a fifth of organizations said less than a quarter of their agency's paid staff were immigrants. Institutions that do not yet have a staff that reflects the diversity of the immigrant communities they serve should improve the recruitment and retention of more diverse staff members. Furthermore, all institutions should ensure that staff members take adequate diversity training.

Health service providers and CBOs should offer more educational opportunities, including literacy and English-language courses, and ensure informational materials use plain language. Immigrants, especially the undocumented with a high-school education or less, are far less likely to be insured. CBOs and healthcare providers should ensure that informational materials about available services are digestible to immigrants of lower education levels and continue to accompany these immigrants in applying for benefits and seeking out services, rather than solely providing referrals.

The New York City government should invest more in providing healthy, fresh food to immigrant New Yorkers, especially across the six neighborhoods. The primary reason immigrants said they did not eat fresh foods was prohibitive costs. The city should focus on increasing the availability of affordable food. Special attention should be paid to the neighborhoods of Bushwick and Jackson Heights/North Corona, where immigrants were less likely to report living within one mile of a grocery store that sells fresh food.

Health service providers and CBOs should provide more outreach materials to immigrants from Bangladesh and Mexico across the six neighborhoods. Mexicans and Bangladeshis were both among the top three nationalities of immigrants with the worst self-reported health. At the same time, these two groups were among the top three most underserved nationalities according to service providers. Furthermore, Spanish and Bengali were the top two languages for which service providers reported an unmet demand for translators. Health service providers and CBOs should try to place their translated informational materials in locations frequented by these two groups.

City agencies should improve interpretation and translation services to and accompaniment for speakers of certain Asian languages in accessing public services. Some immigrants (especially Cantonese-, Hindi-, and Mandarin-speakers) reported language barriers as a problem in accessing health services, and Urdu-, Cantonese-, Hindi-, and Mandarin-speakers were mostly likely to report discrimination on the basis of language while seeking out healthcare. Service providers should accompany speakers of these languages in applying for benefits and helping them access services.

Health service providers should increase the number of offices or clinics in Bushwick, Elmhurst/South Corona, and Flushing/Whitestone/Murray Hill. Immigrants in these three neighborhoods said that distance or lack of transportation was a barrier to receiving health services. Health service providers should consider opening new offices, clinics, or mobile clinics to better service these communities.

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9. Appendix

Table A1: Regional Definitions

Region	Countries
Africa	Algeria, Cameroon, the Democratic Republic of Congo, the Arab Republic of Egypt, Eritrea, Ethiopia, the Gambia, Ghana, Guinea, Ivory Coast, Kenya, Liberia, Libya, Morocco, Nigeria, the Republic of Congo, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, and Zimbabwe
Central and South America (Hispanic)	Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela
Caribbean (non-Hispanic)	Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago
East and South Asia	Bangladesh, Bhutan, Cambodia, China, Cyprus, Hong Kong, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, the Republic of Korea, Kuwait, Laos, Lebanon, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Saudi Arabia, Singapore, the Syrian Arab Republic, Taiwan, Thailand, Turkey, West Bank and Gaza, the United Arab Emirates, Vietnam, and the Yemen Arab Republic
Europe and Central Asia	Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, the former Czechoslovakia, Denmark, England, Finland, France, the Republic of Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, the Krygyz Republic, Kosovo, Latvia, Lithuania, Moldova, Montenegro, the Netherlands, North Macedonia, Northern Ireland, Norway, Poland, Portugal, Romania, Scotland, Serbia, Slovakia, Spain, Sweden, Switzerland, the Ukraine, the former USSR, Uzbekistan, and the former Yugoslavia
North America	Bermuda, Canada, Cape Verde, and Mexico
Other	Australia, Fiji, Micronesia, New Zealand, Samoa, Tonga, and Other (non-specified)

Table A2: Top Reported Languages Spoken among Immigrants at Home, by Neighborhood

Borough	Neighborhood	Language Spoken at Home	Number	Share	Number with Limited English Proficiency	Share with Limited English Proficiency
Brooklyn	Bay Ridge/Dyker Heights	Chinese	15,701	33%	13,160	84%
		Spanish	7,021	15%	5,346	76%
		Arabic	5,593	12%	2,826	51%
		English	4,703	10%	-	0%
		Russian	2,867	6%	1,703	59%
		Hindi and related	2,310	5%	951	41%
		Greek	1,514	3%	862	57%
		Italian	1,496	3%	864	58%
		Polish	1,163	2%	595	51%
		All other	4,810	10%	2,185	45%
	Bushwick	Spanish	25,274	65%	17,355	69%
		English	7,301	19%	17	0%
		Chinese	1,595	4%	1,207	76%
		All other	4,953	13%	1,741	35%
	Sunset Park/ Windsor Terrace	Chinese	27,740	43%	25,903	93%
		Spanish	24,241	38%	20,576	85%
		English	4,682	7%	-	0%
		Hindi and related	1,544	2%	1,113	72%
		Russian	1,286	2%	826	64%
		All other	5,047	8%	2,954	59%
Queens	Elmhurst/South Corona	Spanish	45,267	51%	37,488	83%
		Chinese	13,944	16%	11,187	80%
		Hindi and related	7,368	8%	4,472	61%
		Filipino, Tagalog	5,284	6%	1,916	36%
		English	4,999	6%	36	1%
		Dravidian	2,299	3%	1,152	50%
		All other	9,057	10%	4,974	55%
	Flushing/ Whitestone/ Murray Hill	Chinese	70,180	51%	62,996	90%
		Spanish	20,193	15%	16,176	80%
		Korean	16,428	12%	14,258	87%
		English	8,737	6%	-	0%
		Hindi and related	6,020	4%	4,427	74%
		Greek	2,707	2%	1,681	62%
		Italian	2,447	2%	1,428	58%
		Filipino, Tagalog	1,611	1%	838	52%
		Russian	1,135	1%	826	73%
		All other	7,568	6%	4,098	54%
	Jackson Heights/ North Corona	Spanish	69,372	68%	58,104	84%
		Hindi and related	9,561	9%	6,194	65%
		Chinese	6,623	6%	5,349	81%
		English	6,222	6%	17	0%
		Filipino, Tagalog	1,632	2%	679	42%
		Tibetan	1,148	1%	668	58%
		All other	8,129	8%	4,615	57%

Source: CMS calculations using the five-year ACS 2015-2019 data, Ruggles et al. (2021).

Note: Only languages with more than 1,000 speakers are reported. Chinese includes both Cantonese and Mandarin. "Hindi and related languages" includes, among others, Bengali, Hindi, Punjabi, and Urdu.