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Improving Nutrition and Infant Health Through WIC: Opportunities During and Beyond a Public Health Crisis

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Food insecurity is a harrowing reality for many New Yorkers, and the COVID-19 pandemic has both exacerbated the scope of the problem and posed new challenges to those burdened with social need. Racial inequalities in income, housing, employment, and food access only serve to heighten these risks for Black and Hispanic/Latino communities. Nutrition assistance programs are available for low-income mothers and their infants, but the pandemic has exacerbated the historical barriers preventing many eligible families from receiving such assistance.

This issue brief explores why Medicaid plans and providers may wish to focus on food insecurity as a critical opportunity for improving infant health and reducing associated health costs. The brief examines low birthweight as one key outcome of food insecurity and considers innovative strategies for leveraging the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to support Medicaid-enrolled families during the COVID-19 crisis and beyond.

United Hospital Fund
Improving Health Care for Every New Yorker

Food insecurity, which can include both inadequate quantity and quality of available nutrition, is a harrowing reality for many New Yorkers. As of July 2020, the New York State Health Foundation estimated that more than 1 out of 10 New Yorkers (12.4%) faced food insecurity, including more than 1 out of 7 households with children under age 18 (15.2%) and significantly larger shares of Black (22.7%) and Hispanic/Latino (26.5%) households with children.[1] The COVID-19 pandemic has increased many families' risk of food insecurity, as surging unemployment reduced households' ability to afford food and as social distancing disrupted community-based food sources, such as food pantries, schools, religious institutions, and other nonprofit organizations. According to a recent United Hospital Fund report, *COVID-19 Ripple Effect: The Impact of COVID-19 on Children in New York State*, at least 130,000 children may have become newly food insecure between March and June 2020.[2]

Racial inequalities in income, housing, employment, and food access heighten these risks for Black and Hispanic/Latino children.[3] Although nutrition assistance programs are available for low-income mothers and infants, the pandemic has exacerbated the historical barriers preventing many families from obtaining such assistance. A March 2021 report found that nearly 60% of children lacking sufficient food in New York State were Hispanic/Latino or Black.[4]

Food Insecurity and Infant Health

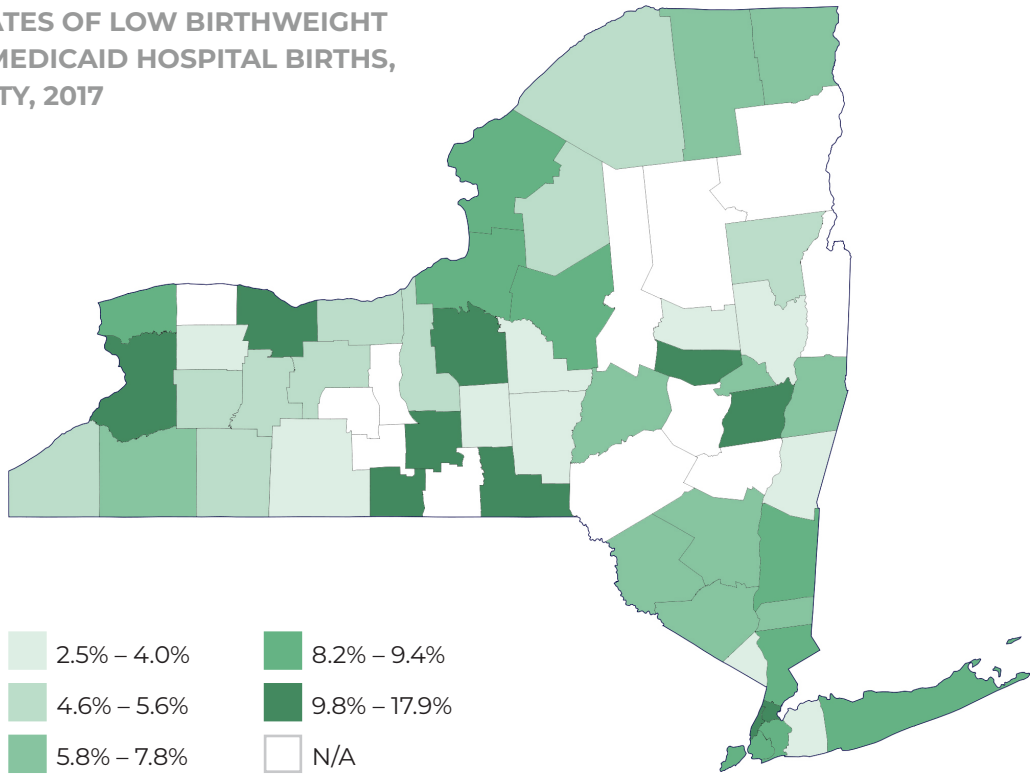
Food insecurity can adversely affect someone's health throughout their life, but developing infants and young children face especially serious risks. These include birth defects,[5] anemia,[6] lower nutrient intake,[7] cognitive problems,[8] asthma,[9] poorer oral health,[10] behavioral problems such as aggression and anxiety,[11] suicidal ideation,[12] and poorer overall health.[13] Food insecurity can be particularly detrimental during the prenatal period, when adequate food and nutrition are critical for promoting the fetus's healthy growth and development.[14]

Maternal nutrient intake also affects birthweight, an important indicator of infant health.[15] Low birthweight is associated with breathing difficulties, bleeding in the brain, weakened immune systems, and other health challenges for newborns, making them significantly more likely to be hospitalized and to require more services in the first year of life.[16] Low birthweight can also increase the risk of perinatal and infant mortality, as well as risks of developmental disabilities, respiratory problems, and health conditions later in life; these include vision and hearing impairments, diabetes, heart disease, high blood pressure, intellectual and developmental disabilities, metabolic syndrome, and obesity.[17,18,19] Black women are more likely than others to have a low-birthweight baby, with about 1 in 7 Black babies born with low birthweight each year compared to 1 in 14 white babies.[20]

New York data show that Medicaid-enrolled infants are disproportionately at risk of having low birthweight. In 2017, 9.4% of all New York infants covered by Medicaid were born with low birthweight, compared to 7.2% of infants covered by all other payers.[21] This translates to 11,373 Medicaid infants born with low birthweight statewide.[22] As Map 1 shows, rates of low birthweight among Medicaid-covered infants varied considerably across New York State counties in 2017, ranging from 2.5% (in Chenango County) to 17.9% (in Albany County).

Note: The authors acknowledge that pregnant people do not all identify as women. For consistency in terms throughout this document, we use the same language in the policies and program names (e.g., pregnant women), with the acknowledgment that they do not represent the full spectrum of gender or how pregnant people identify.

MAP 1. RATES OF LOW BIRTHWEIGHT AMONG MEDICAID HOSPITAL BIRTHS, BY COUNTY, 2017



Source: Authors' analysis of 2017 Statewide Planning and Research Cooperative System (SPARCS) Inpatient De-Identified File.

Notes: "N/A" means that the county is suppressed in SPARCS data. Low birthweight was defined as less than 2,500 grams.

WIC, Barriers to Participation, and the COVID-19 Crisis

One potential strategy for reducing rates of low-birthweight births is to increase eligible mothers' participation in the Special Supplemental Nutrition Program for Women, Infants, and Children—better known as WIC.[23] Established in 1972, WIC is a federally funded nutrition intervention program that provides low-income women, infants, and children with supplemental food benefits, as well as nutrition education and counseling, breastfeeding support, and referrals to health care and other social services.[24] Individuals are eligible for WIC if they have household incomes at or below 185% of the federal poverty level ($2,686 per month for a family of two), receive benefits through Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP), or are enrolled in Medicaid.[25,26] Since the Medicaid eligibility threshold for pregnant women and infants in New York is 223% of the federal poverty level ($3,204 per month for a family of two), the WIC income threshold for that group in New York, by virtue of adjunctive eligibility, has effectively been raised to 223% of the federal poverty level.[27,28] However, expanded eligibility via Medicaid would end when the child turns one year old, at which point that child's WIC eligibility would revert to the threshold of 185% of the federal poverty level, unless the

child remains adjunctively eligible via SNAP or TANF.[29]

In federal fiscal year 2019, the program served 6.4 million women, children, and infants nationally, with nearly 379,000 participants in New York State.[30] WIC benefits can be redeemed each month for a distinct list of food items that vary by participant category (e.g., pregnant people, breastfeeding mothers, and infants). For pregnant people, WIC-covered foods include fruit, vegetables, milk, cereal, eggs, whole-wheat bread, legumes and peanut butter, and canned fish; and, for infants, infant formula when needed, infant cereal, infant fruits and vegetables, and fresh options as well.[31] For new parents and their children, benefits also include four meetings per year: a certification appointment, two nutrition education sessions, and a health and nutrition update that involves an in-depth assessment of the child.[32] Beginning in February 2019, New York WIC participants have the ability to redeem food package benefits using a system of electronic benefits transfer cards known as "eWIC," which act as debit cards that can be used to purchase WIC-allotted food.[33]

Evidence suggests that WIC can reduce food insecurity and improve birth outcomes, dietary intake, feeding practices, immunization rates, access to health care, and cognitive development. The program can also reduce fetal death, infant mortality, and health care spending.[34] Despite the benefits of WIC, many women who are eligible for the program either do not enroll or delay their enrollment until after pregnancy. In 2017, estimates indicated that fewer than half (44.0%) of New York's WIC-eligible pregnant women enrolled in the program, compared to 78.2% of eligible infants and 71.7% of eligible postpartum women.[35] Though estimated national WIC participation rates follow a similar pattern, 23 states have achieved prenatal WIC participation rates that are higher than New York's, suggesting there is room for New York to improve (see Appendix A). The state with the highest rate of WIC participation during pregnancy is Maryland, where it is estimated that 66.7% of eligible pregnant women participate.[36]

This underutilization of WIC during pregnancy may be influenced by a range of factors, including lack of awareness of one's eligibility, perceived lack of need, social stigma, and lack of awareness of WIC itself.[37,38] Historically, WIC enrollees were required to complete an in-person nutrition assessment at a local WIC agency, including bloodwork, anthropometric (height and weight) measurements, and collection of medical and dietary history. These assessments created structural barriers to enrollment for many pregnant women, such as difficulty obtaining medical leave from work or securing needed transportation or child care, as well as the challenge of scheduling WIC appointments that did not conflict with other prenatal care.[39]

Another significant barrier that has affected WIC and several other social services is the climate of fear surrounding immigration. In October 2018, the Trump administration formally proposed changes to the federal "public charge" rule. Public charge is an inadmissibility category for immigrants applying for certain visas. Historically, public charge only applied to immigrants receiving cash assistance and institutional Medicaid. The revised public charge rule included many other public benefits and evaluated immigrants on their income, education, English proficiency, age, health insurance, etc. Although WIC was exempted from the public benefits considered under the revised public charge rule and many immigrants (e.g., green card holders, refugees, asylees, etc.) were not subject to public charge at all, many immigrants worried that seeking public benefits would preclude future immigration status or citizenship and declined to use public benefits; this is often referred to as a

chilling effect.[40] Chilling effects resulted in lower utilization of social services among immigrants.[41] Specifically, evidence shows that noncitizen women forgo benefits for fear of implications to their immigration status.[42,43,44] On March 9, 2021, the Biden administration stopped defending the lawsuits challenging the new public charge rule created by the Trump administration, which resulted in the public charge rule being vacated nationwide.[45] Although this is an important step toward restoring trust among immigrant communities and mitigating the harm caused by the public charge rule and subsequent chilling effect, the work is not done. Additional efforts are needed to notify immigrants of their rights and help them feel safe accessing public benefits.

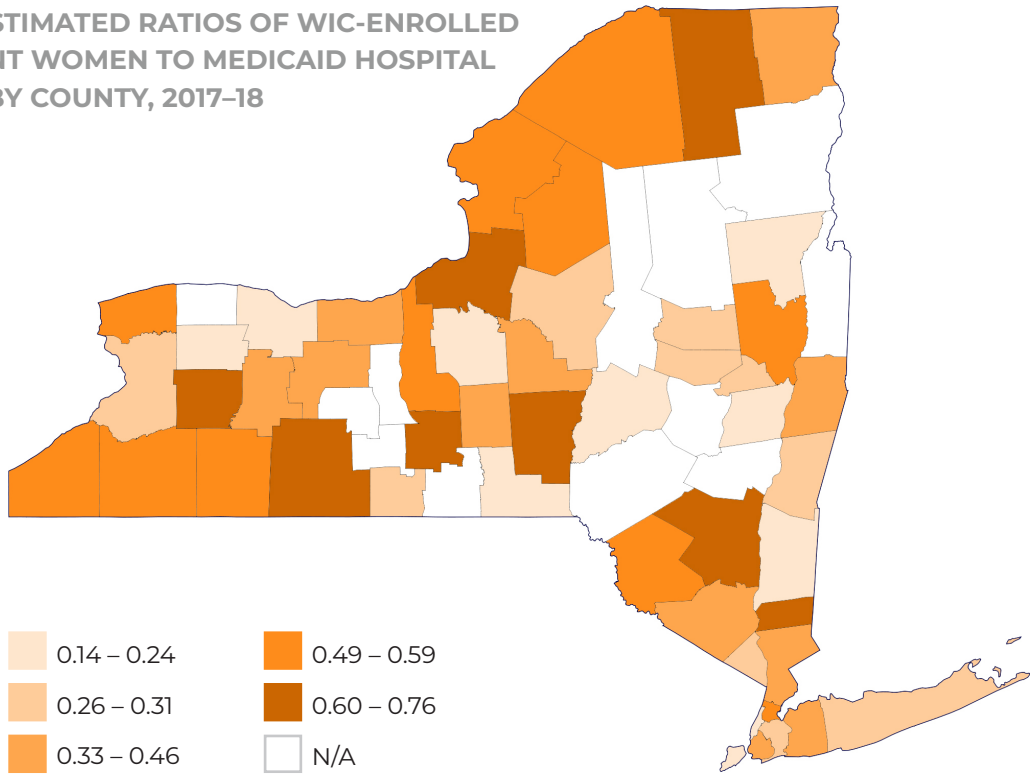
The COVID-19 pandemic has exacerbated traditional barriers to WIC participation. For instance, pregnant women may face additional challenges with attending in-person nutrition assessments due to fear of COVID-19 infection or temporary reductions in agency hours. To ameliorate these and other barriers, the federal Families First Coronavirus Response Act (FFCRA) provided new flexibilities in the program's administration. New York has applied for and received multiple federal waivers under this law. Key examples include a "Physical Presence Waiver" that temporarily allows individuals to enroll in WIC without physically visiting a WIC clinic and completing a nutrition assessment and a "Remote Benefit Issuance Waiver," which eliminates the need for in-person pick up of new eWIC cards.[46] The efficacy of these waivers is contingent upon WIC participants having awareness of and resources to navigate the programmatic changes that they create. Though enrollment decreased at the start of the pandemic and current official data are not yet available, WIC staff have anecdotally reported that overall participation of those who were already enrolled in the program has increased.[47]

Opportunities to Improve WIC Participation for Medicaid Enrollees

WIC participation can also vary widely within a given state, suggesting that there are local opportunities to improve participation. To examine variation in pregnant women's WIC participation across New York's counties, UHF analyzed two data sources. The first was an April 2018 count of all pregnant women with active WIC certifications, by county of residence, as obtained from the New York State Department of Health's Division of Nutrition. The second source was a 2017 count of Medicaid-financed hospital births derived from the Statewide Planning and Research Cooperative System (SPARCS) de-identified inpatient dataset. With these datasets, UHF calculated ratios showing the number of pregnant women enrolled in WIC for a given county ("WIC pregnant women") per Medicaid-enrolled infants born in that same county ("Medicaid births"). Because all pregnant women and infants eligible for Medicaid are also deemed income-eligible for WIC benefits, counties with higher ratios of WIC-enrolled pregnant women to Medicaid-financed births (e.g., ratios approaching values of 1 or higher) are likely to have higher WIC participation rates among eligible pregnant women than other counties.

The county ratios are presented in Map 2. Despite variation across counties, it should be noted that all counties with available data have fewer pregnant residents enrolling in WIC than Medicaid-covered infants born in that county, with ratios of WIC-enrolled pregnant women to Medicaid birth ranging from 0.14 to 0.76 and a median ratio of 0.39. Consistent with United States Department of Agriculture (USDA) national and state estimates of WIC program reach, this finding provides further evidence that many Medicaid-eligible pregnant women across New York

MAP 2. ESTIMATED RATIOS OF WIC-ENROLLED PREGNANT WOMEN TO MEDICAID HOSPITAL BIRTHS, BY COUNTY, 2017–18



Source: Authors' analysis of 2017 SPARCS Inpatient De-Identified File and 2018 WIC data from the New York State Department of Health's Division of Nutrition.

Notes: "N/A" means that the county is suppressed in SPARCS data.

The Division of Nutrition dataset includes all women who had active WIC certifications on April 30, 2018.

The WIC-pregnant-women-to-Medicaid-births ratios show the number of WIC-enrolled pregnant women residing in the county ("WIC pregnant women") per Medicaid-enrolled infants born in the same county ("Medicaid births"). Ratios less than 1 suggest that there are fewer pregnant county residents enrolled in WIC than Medicaid-enrolled infants born in the same county.

may not be enrolling in WIC despite being eligible for the program's benefits.[48]

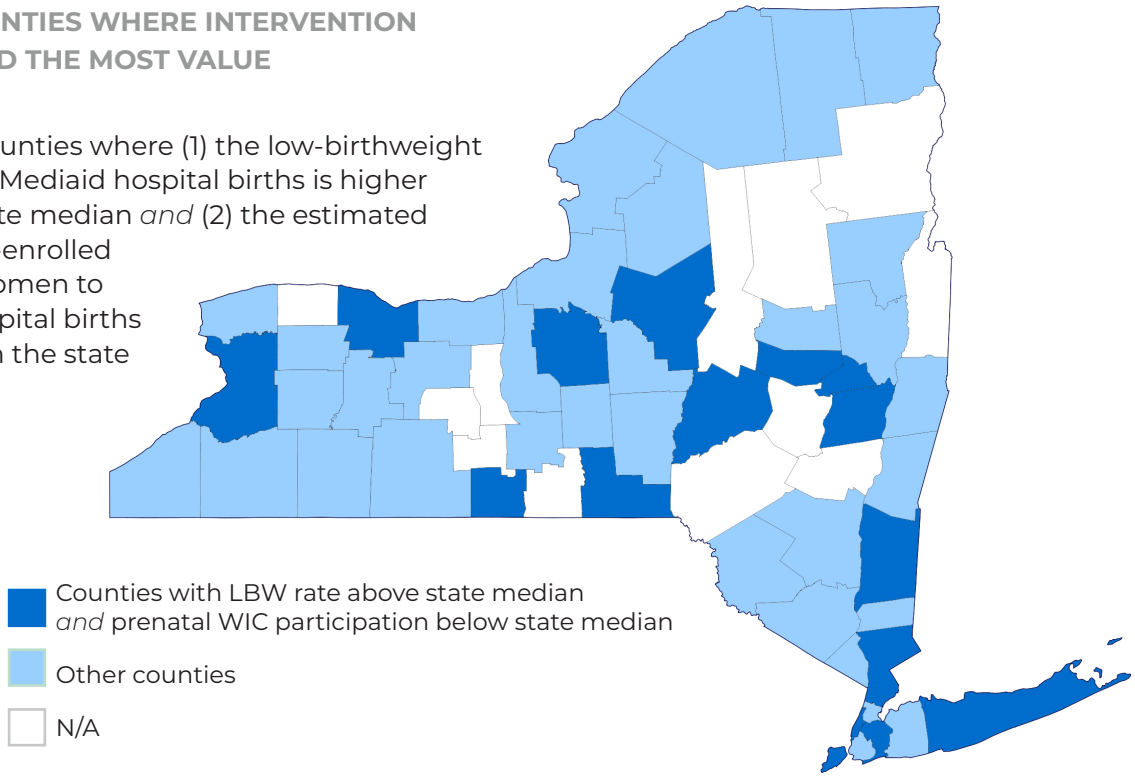
There are limitations to these ratios. First, the underlying data sources are drawn from somewhat different timeframes: the WIC data capture women with active WIC certifications in April 2018 whereas the SPARCS data capture births at any time during calendar year 2017. These analyses were based on the most recent data available, and though they are not perfectly contemporaneous, the analysis assumes that Medicaid births are similar in 2018 compared to 2017.[49] Furthermore, these ratios may slightly overstate the number of WIC-eligible pregnant women because the underlying SPARCS data do not delineate single versus multiple births. Another limitation is that, because the WIC data are based on county of residence whereas the SPARCS data are based on hospital locations, the ratios do not account for WIC-enrolled pregnant women giving birth outside of their home counties. Consequently, these ratios are imperfect proxies for WIC participation rates. Nevertheless, they are still useful for approximating potential cross-county variation in WIC participation among eligible pregnant women.

Opportunities for Addressing Low Birthweight Among the Medicaid Population

Comparing variation in WIC participation with variation in Medicaid low-birthweight rates reveals potential opportunities for Medicaid to connect greater numbers of pregnant women with WIC and other nutrition assistance that can improve maternal and infant health and reduce overall health costs. For example, Map 3 shows the New York State counties where the Medicaid low-birthweight rate was above the state median and the WIC-pregnant-women-to-Medicaid-births ratio was below the state median. In other words, these are some of the counties where implementing WIC screening and referral strategies or other prenatal nutrition interventions might yield the most value. All of the state's major urban areas—Albany, Buffalo, parts of New York City and its surrounding region, Rochester, and Syracuse—fall into these intervention zones. Since WIC is a federally funded program, the cost of implementing these interventions to health plans, providers, and New York State may be relatively low. Strategies such as reciprocal enrollment between Medicaid and WIC due to

MAP 3. COUNTIES WHERE INTERVENTION MIGHT YIELD THE MOST VALUE

New York counties where (1) the low-birthweight rate among Mediaid hospital births is higher than the state median *and* (2) the estimated ratio of WIC-enrolled pregnant women to Mediaid hospital births is lower than the state median.



Source: Authors' analysis of 2017 SPARCS Inpatient De-Identified File and 2018 WIC data from the New York State Department of Health's Division of Nutrition.

Notes: "N/A" means that the county is suppressed in SPARCS data.

Low birthweight was defined as less than 2,500 grams.

The median low-birthweight rate among Medicaid hospital births was 6.9%. The median ratio of WIC-enrolled pregnant women to Medicaid births was 0.39.

The Division of Nutrition dataset includes all women who had active certifications on April 30, 2018.

The WIC-pregnant-women-to-Medicaid-births ratios show the number of WIC-enrolled pregnant women residing in the county ("WIC pregnant women") per Medicaid-enrolled infants born in the same county ("Medicaid births"). Ratios less than 1 suggest that there are fewer pregnant county residents enrolled in WIC than Medicaid-enrolled infants born in the same county.

adjunctive eligibility could be especially useful here in building on the State's commitment to maternal and postpartum care.

Challenges and the Broader Social Context

Addressing food insecurity has the potential to reduce low birthweight and associated costs while improving infant health. Interventions aimed at increasing pregnant women's utilization of WIC are promising strategies for achieving these goals. Nevertheless, such interventions face significant challenges. The COVID-19 pandemic may compound certain longstanding barriers to accessing WIC, such as the administrative and structural burdens associated with enrollment. Other barriers transcend the current public health crisis, such as lack of awareness about program eligibility or the social stigma attached to receiving public benefits. All of these barriers can affect pregnant women's willingness or ability to enroll in the WIC program.

Another key challenge is that food insecurity is not the only cause of low birthweight. Indeed, adverse birth outcomes can have deeper social roots than the health care delivery system is able to readily address. For example, evidence suggests strong associations between low birthweight and prenatal poverty itself, which drive food insecurity but which can also drive environmental stressors (e.g., lack of paid family medical leave, lack of paid maternity leave, lack of affordable child care, lack of safe and affordable housing) that may separately increase risks of preterm birth and low birthweight.[50] Additional research shows that factors such as racial discrimination and other sociopolitical stressors that many women of color experience can contribute to preterm birth as well as low birthweight.[51] These are all crucial factors to keep in mind when setting a strategic course to improve outcomes for women and infants in New York and across the country.

Innovative Strategies for Leveraging WIC to Support Medicaid Enrollees

Multiple models exist for leveraging opportunities to improve WIC participation among Medicaid members and other eligible populations. The following section highlights just a few of the innovative models being implemented across New York, as well as how the models address some of the key barriers to WIC participation. These models are also in the process of adapting to the COVID-19 public health crisis, as described in more detail below.

Food and Nutrition Services Bundle

The Public Health Solutions Food and Nutrition Services (FNS) Bundle is one such model for connecting eligible individuals to nutrition assistance in New York City. Public Health Solutions (PHS) operates Neighborhood WIC, which is the largest community WIC program in New York State and enrolls over 35,000 women, infants, and children annually.[52] Launched in 2018, the FNS Bundle built upon PHS's existing role as a Neighborhood WIC by creating a coordinated intake system to identify and refer food-insecure families from the Bronx and northern Manhattan to optimal food supports, ranging from WIC and SNAP to food pantries and home-delivered medically tailored meals.

At the heart of the coordinated intake system, the FNS Bundle used Unite Us, an electronic care coordination platform, to share and track referrals and other information across its partner network. This network initially included PHS; a health plan (Healthfirst); two NYC Health + Hospitals locations (Jacobi and Lincoln); and several community-based organizations (God's Love We Deliver, BronxWorks, and Food Bank for NYC). At first, the program received most of its referrals from a workforce of food security specialists

(non-clinical staff similar to community health workers) embedded at Jacobi and Lincoln Hospitals, with additional referrals from social workers, health plan enrollers, and other clinical and non-clinical staff based at the hospitals.[53]

Early results from the program are promising. PHS reported that, between November 2018 and August 2019, nearly 1,600 food-insecure Bronx and Manhattan households completed the FNS Bundle coordinated intake and received referrals to nutrition services. More than half (871) households enrolled in at least one service. Although most participants eligible for WIC were already enrolled (82%), the FNS Bundle helped many of these women and children access additional nutrition services, such as SNAP and food pantries.[54,55] Utilization has increased since that first phase of the program, and between September 2019 and December 2020, over 6,400 households completed the bundle's coordinated intake.[56] The FNS Bundle will continue to receive funding through a performance-based contract with NYC Health + Hospitals. Ultimately, the FNS Bundle is intended to be a pilot that is evaluated for potential inclusion in future Medicaid value-based payment arrangements.

The COVID-19 pandemic prompted several changes to the FNS Bundle in early 2020. Participant engagement shifted from reliance on site-based Food Security Specialists to phone outreach, and the program developed a new web access portal, which facilitated larger numbers of self-referrals. These changes coincided with federal and state legal changes waiving in-person requirements[57] for most WIC visits in response to the public health emergency. PHS found that virtual visits produced 45% fewer missed appointments, higher satisfaction, and a preference over in-person visits by three-quarters of participants, suggesting that virtual visits might improve families' access to WIC if federal and state policymakers allow virtual visits to continue after the pandemic.[58] Furthermore, FNS bundle partners are continuing to maintain awareness of the effects of public charge, and pursuing strategies, such as educating their staff on the regulation and its implications, to mitigate those challenges.

NYC WIC Community Health Worker Pilot

The New York City WIC Community Health Worker pilot program was created in collaboration with New York City Health + Hospitals, the New York State Department of Health (NYSDOH), and Health Leads, and funded by the Robin Hood Foundation. The first phase of the pilot program was a two-year intervention that trained and deployed Community Health Workers (CHWs) to help patients access benefits, gather enrollment gap data, and understand the barriers to accessing WIC. The success of the intervention was determined by proactive outreach from CHWs, the proximity of CHWs and local WIC sites to obstetrics and gynecology practices, hands-on support in the WIC enrollment process, and caseloads that were not quota-driven. Patients reported uncertainty about WIC benefits, the application process, and time constraints. They also feared their immigration status was a critical barrier to enrolling into the program.[59] Although WIC eligibility is not contingent on immigration status and was not a part of the Trump administration's public charge rule, chilling effects persist.[60]

For the second phase of the pilot, the identified barriers to WIC enrollment are being used to elevate the community's voice and drive system redesign. Health Leads plans to collaborate with the New York City Center for Innovation through Data Intelligence, the New York State Office of Temporary

and Disability Assistance, and NYSDOH to identify opportunities to mitigate or solve enrollment barriers. The second phase will be a small test of community-driven change, which Health Leads hopes will set the stage for interventions to streamline benefits access throughout the state.

The COVID-19 pandemic dramatically altered the landscape of service delivery. Health Leads has heard from WIC participants and partners that waiving in-person appointments has simplified the WIC enrollment process and that there is a strong desire for these pandemic-era waivers to continue. Participants can now have virtual nutrition check-ins and submit documentation via text message to WIC staff, removing some of the barriers previously identified by the pilot program. WIC is balancing the increase in call volume with new resources, such as cell phones provided to staff and electronic document submission. Health Leads believes targeted outreach is still necessary to explain WIC eligibility and benefits, particularly for immigrant populations.[61]

Health Leads reported that 22% of its clients cited immigration fear as a barrier to WIC enrollment.[62] To combat this, Health Leads directs partner organizations to proactively post signs in offices and hospitals and instructs CHWs to distribute fact sheets explaining that there are no immigration eligibility criteria to qualify for WIC. For clients who are still concerned, CHWs can connect patients to free legal services through the medical-legal partnership NYC Health + Hospitals has with the New York Legal Assistance Group. This patient-centered approach provides resources and information to potential enrollees, allowing them to make an informed choice and clarifying that applying for and accessing these benefits is always their decision.

Pathways Community HUB

The Brooklyn Perinatal Network (BPN) is a community-based organization that was established in 1988 with the mission of preventing infant and maternal illness. They are in the process, along with several other decades-old, trusted agencies, of rolling out a pilot to implement the Pathways Community HUB approach to target maternal and child health in central Brooklyn, a hot spot for severe maternal morbidity.[63] The Pathways Community HUB care coordination model was designed by two Ohio-based physicians and is now used by over thirty communities across several states.[64,65] BPN's Pathways Community HUB will receive funding from a variety of sources and is planning to contract with managed care organizations for outcome-based payment.

BPN will act as the Community HUB, the small administrative agency that serves multiple community-based organizations, which hire and supervise CHWs who come from the same neighborhoods as the people they serve. These CHWs use a standardized assessment to identify each patient's health, social, and behavioral risk. Based on the assessment, one or more of twenty primary Pathways will be identified for each patient. Within the Pathway, CHWs will refer clients to targeted medical, behavioral, and social services. Each Pathway has a measurable outcome that CHWs must document effort towards achieving before their employer is paid, with CHWs able to complete the case receiving a bonus payment, incentivizing proper care coordination while acknowledging the challenges faced by these underresourced communities.

This model's framework targets food insecurity on several levels: Pathways for food assistance, including WIC service referrals;

Pathways for food security; and Pathways for meeting postpartum and pregnancy needs. The last of these resolves in the explicitly identified outcome of a healthy-birthweight baby.[66] Through the Food Security Pathway, which will be launched later this year, CHWs will screen for food insecurity and connect the family to resources such as WIC or SNAP as necessary. The Food Security Pathway can be considered complete when the family can report "no problems, or anxiety about, consistently accessing adequate food for the past 30 days."[67]

The COVID-19 pandemic has starkly demonstrated the need for this model in its current design, which has remained largely unchanged aside from virtual CHW visits replacing in-person ones. Food insecurity has increased exponentially during the pandemic, and the model allows for flexibility in identifying which social need is most pervasive and in need of targeted intervention. Most HUBs report that their CHWs are busier than ever with the pandemic, and several have compared their completed Pathways numbers from 2019 with those of 2020 and found an increase in successful risk resolution.[68]

Partnerships for Early Childhood Development

United Hospital Fund's Partnerships for Early Childhood Development (PECD) grant initiative uses food insecurity screening and referral programs to focus on young children and their families in clinical settings. The initiative comprises eight hospital-based primary care organizations across New York City, each partnering with one or more local community-based organizations to address social needs facing children ages 0-5 and their families.[69] Each of the initiative's clinical-community teams created and implemented its own social needs screening and referral program, which was typically incorporated into the hospital-based pediatric primary care sites. While each team targeted a unique set of needs, all eight teams addressed food insecurity.

As the program completed its second year in 2019, early findings indicated that food insecurity was among the most common social needs identified, and that many families in need were successfully referred to a local food bank or another community partner that could help them enroll in programs such as WIC or SNAP.[70]

In the wake of the COVID-19 pandemic, the PECD leadership team has received reports that food insecurity needs have more than doubled among families over the 2019 rate. Some teams have already altered their food insecurity screening question to ask whether families are afraid of running out of food in the next 24 to 48 hours, as opposed to the standard 30 days.[71] As in other models, these organizations have shifted to virtual visits to deliver both care and innovative solutions for social needs.

One of the clinical-community teams includes the Mt. Sinai Health System, which has adapted service to include both in-person and virtual screening for social needs. Mt. Sinai has also integrated that screener into a patient's electronic medical record, so that all pediatricians have direct access to it. In collaboration with New York Common Pantry (NYCP, one of Mt. Sinai's PECD partners), Mt. Sinai's Pediatric Associates Clinic has opened an on-site food pantry program, wherein patients who screen positive for food insecurity are then provided with two-week food packages from NYCP, healthy homes kits, and are directly enrolled in NYCP and other social services.[72]

Other Models: Healthy Families and Healthy Start

Other models across the state have shown promise in addressing food insecurity in pregnant women by incorporating screening and referrals to WIC and other nutrition assistance. Healthy Families America is a nationwide family support and home visiting initiative that promotes collaboration between local clinics, birthing hospitals, and community-based organizations to proactively identify families in need of services. There are several dozen Healthy Families sites across New York, and previous evaluations have found that the home visitors helped families access resources such as WIC, SNAP, food pantries, nutritional counseling, and housing assistance.[73] Evidence from a randomized controlled trial also suggests that Healthy Families New York sites' home visiting is associated with fewer low-birthweight births, with particularly strong effects for Black families.[74] In response to the ongoing COVID-19 crisis, Healthy Families America has created a resource center for participating sites with guidance on adapting their models, including a guide to virtual home visiting.[75]

A different model, Healthy Start, is funded by the federal Health Resources and Services Administration to improve maternal and infant health by connecting mothers to an array of services. These include health care services (prenatal, perinatal, infant, and women's health), enabling services (outreach, case management, home visiting, parenting support, social services), and public health services (immunization and health education).[76] Healthy Start specifically targets communities with high rates of infant mortality and other negative birth outcomes, such as low birthweight, and grantees provide breastfeeding support, nutrition education, and linkage to WIC and other nutrition assistance among their services.[77] One of New York's six current grantees, the Bronx Healthy Start Partnership (BxHSP), includes several WIC programs, two federally qualified health centers, and two major health systems. In 2017, BxHSP implemented a new clinician referral system that was integrated with CHWs who identified and enrolled program participants.[78,79]

Policy Recommendations and Conclusion

The American Rescue Plan Act of 2021 (ARPA), signed into law by President Biden on March 11, 2021, includes temporary funding to increase WIC benefits through September 2021 as well as funding for "outreach, innovation, and program modernization efforts."[80] This moment—at the confluence of a new Federal executive administration and an era of COVID-related administrative flexibility—could be an opportune time to improve WIC access by making the following policy changes.

1. Extend offering of remote WIC application and appointments beyond the COVID-19 crisis.

The flexibility allowed by remote application and appointments eases structural barriers to enrollment and program participation. A portion of the ARPA funding could be used to develop online and app-based programs for WIC, to reduce the barriers of in-office applications and appointments.

2. Develop automatic enrollment of pregnant Medicaid recipients in WIC.

New York State's generous pregnancy Medicaid income eligibility allows more pregnant women in the State access to WIC through adjunctive eligibility. However, due to a lack of awareness or understanding of WIC, confusion over paperwork, and other obfuscating factors, many who are eligible

remain unenrolled. A portion of the ARPA funding could help the State create a system of automatic enrollment of pregnant Medicaid members in WIC to remove the burden of separate applications.

3. Increase partnership with community-based organizations.

Organizations that are trusted by the communities they serve are well positioned to understand their needs and to help the State overcome barriers to WIC utilization through outreach, care coordination, and other tailored solutions. A portion of the ARPA funding could support state-level outreach and community-based outreach as well as program expansion.

4. Take steps to restore trust with immigrant communities.

After years of anti-immigrant rhetoric and federal policy initiatives, trust in public programs among noncitizen communities requires repair. Public information campaigns and legal assistance offered by trusted community-based legal services programs are key steps in rebuilding that trust and increasing WIC utilization among eligible immigrant populations. New York has already made significant investments to provide legal services to immigrants, and some of the ARPA funding could be used to tailor legal services for immigrants to facilitate public benefit access.

Food insecurity is a complex, intersectional challenge that will require complex, intersectional solutions. New York is well positioned to leverage the ARPA funding to develop systems for more online and app-based applications and appointments, automatic WIC eligibility for pregnant women enrolled in Medicaid, targeted outreach about WIC benefits and eligibility, and resources to help immigrant New Yorkers understand and trust the public benefit system.

Finally, as New York State considers how to advance its demonstrated commitment to meeting social needs, future value-based payment arrangements and waiver opportunities could provide vehicles for enhancing existing clinical community partnerships like those discussed in this paper—and for supporting new collaborations that address social needs. These partnerships could be crucial to ameliorating food insecurity. Such efforts can be a valuable step toward improving nutrition for expectant mothers—and mitigating some of food insecurity's most detrimental effects on the youngest New Yorkers.

Acknowledgments

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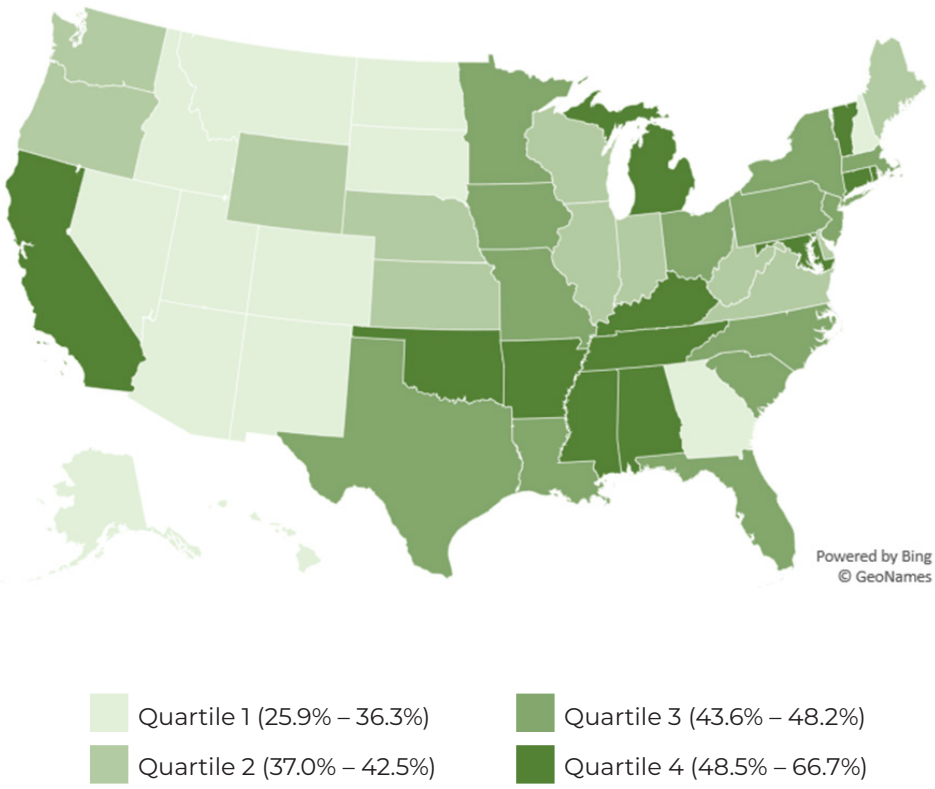
APPENDIX A. ESTIMATED PRENATAL WIC PARTICIPATION RATES BY STATE, 2017



Source: Authors' analysis of 2017 United States Department of Agriculture data (Table 4.6.).

APPENDIX B. RATES OF LOW BIRTHWEIGHT AMONG MEDICAID HOSPITAL BIRTHS AND ESTIMATED RATIOS OF WIC-ENROLLED PREGNANT WOMEN (2018) TO MEDICAID HOSPITAL BIRTHS (2017)

County	Rates of Low Birthweight Among Medicaid Hospital Births	Estimated Ratio of WIC-Enrolled Pregnant Women to Medicaid Hospital Births	County	Rates of Low Birthweight Among Medicaid Hospital Births	Estimated Ratio of WIC-Enrolled Pregnant Women to Medicaid Hospital Births
New York State	**9.4%**	**0.32**	Niagara	9.4%	0.55
Albany	17.9%	0.18	Oneida	8.9%	0.30
Allegany	4.6%	0.58	Onondaga	14.2%	0.22
Bronx	10.4%	0.49	Ontario	4.6%	0.46
Broome	10.5%	0.22	Orange	6.9%	0.46
Cattaraugus	7.3%	0.57	Orleans	N/A	N/A
Cayuga	5.6%	0.49	Oswego	8.4%	0.75
Chautauqua	4.6%	0.50	Otsego	7.1%	0.14
Chemung	15.4%	0.26	Putnam	5.8%	0.67
Chenango	2.5%	0.69	Queens	8.8%	0.30
Clinton	7.8%	0.40	Rensselaer	6.1%	0.42
Columbia	3.5%	0.27	Richmond	8.3%	0.20
Cortland	3.2%	0.33	Rockland	3.4%	0.31
Delaware	N/A	N/A	Saratoga	3.3%	0.58
Dutchess	9.1%	0.19	Schenectady	7.8%	0.27
Erie	12.1%	0.26	Schoharie	N/A	N/A
Essex	N/A	N/A	Schuyler	N/A	N/A
Franklin	5.8%	0.61	Seneca	N/A	N/A
Fulton	3.8%	0.31	St Lawrence	4.8%	0.50
Genesee	4.0%	0.23	Steuben	3.3%	0.71
Greene	N/A	N/A	Suffolk	8.6%	0.29
Hamilton	N/A	N/A	Sullivan	6.9%	0.49
Herkimer	N/A	N/A	Tioga	N/A	N/A
Jefferson	8.2%	0.59	Tompkins	11.8%	0.60
Kings	8.2%	0.41	Ulster	6.4%	0.73
Lewis	4.8%	0.49	Warren	5.0%	0.17
Livingston	5.1%	0.38	Washington	N/A	N/A
Madison	3.1%	0.33	Wayne	4.8%	0.38
Monroe	9.8%	0.15	Westchester	9.3%	0.33
Montgomery	14.1%	0.27	Wyoming	5.5%	0.76
Nassau	3.8%	0.42	Yates	N/A	N/A
New York	12.5%	0.24			

Source: Authors' analysis of 2017 SPARCS Inpatient De-Identified File and 2018 WIC data from the New York State Department of Health's Division of Nutrition.

Notes: "N/A" means that the county is suppressed in SPARCS data.

Low birthweight was defined as less than 2,500 grams.

The Division of Nutrition dataset includes all women who had active certifications on April 30, 2018.

The WIC-pregnant-women-to-Medicaid-births ratios show the number of WIC-enrolled pregnant women residing in the county ("WIC pregnant women") per Medicaid-enrolled infants born in the same county ("Medicaid births"). Ratios less than 1 suggest that there are fewer pregnant county residents enrolled in WIC than Medicaid-enrolled infants born in the same county.

Endnotes

1 New York State Health Foundation. October 2020. *Food Scarcity in New York State During the COVID-19 Pandemic.* https://nyshealthfoundation.org/resource/food-scarcity-in-new-york-state-during-the-covid-19-pandemic/

2 United Hospital Fund. September 2020. *COVID-19 Ripple Effect: The Impact of COVID-19 on Children in New York State*. https://uhfnyc.org/publications/publication/covid-19-ripple-effect-impact-covid-19-children-new-york-state/

3 The Alliance to End Hunger. July 2017. *Hunger is a Racial Equity Issue.* https://alliancetoendhunger.org/wp-content/uploads/2017/07/Hill-advocacy-fact-sheet__HUNGER-IS-A-RACIAL-EQUITY-ISSUE_Alliance-to-End-Hunger.pdf

4 New York State Health Foundation. March 2021. *One Year Later: Food Scarcity in New York State During the COVID-19 Pandemic.* https://nyshealthfoundation.org/resource/one-year-later-food-scarcity-in-new-york-state-during-the-covid-19-pandemic/?mc_cid=d5ed910976&mc_eid=f070eeb475

5 Scholl, T.O., Johnson, W.G. Folic Acid: Influence on the Outcome of Pregnancy. *Am J Clin Nutr*, 2000; 71(suppl):1295S-1303S. https://academic.oup.com/ajcn/article/71/5/1295S/4729437

6 Skalicky A, Meyers AF, Adams WG, Yang Z, Cook JT, Frank DA. Child food insecurity and iron deficiency anemia in low-income infants and toddlers in the United States. *Matern Child Health J*. 2006;10(2):177–85.

7 Cook JT et al. 2006. Child Food Insecurity Increases Risks Posed by Household Food Insecurity to Young Children's Health. *The Journal of Nutrition,* 136(4), 1073-1076. https://academic.oup.com/jn/article/136/4/1073/4664203

8 Cook J and Jeng K. July 2009. *Child Food Insecurity: The Economic Impact on Our Nation.* Feeding America. https://www.nokidhungry.org/sites/default/files/child-economy-study.pdf

9 Gundersen C and Ziliak JP. 2015. Food Insecurity and Health Outcomes. *Health Affairs*, 34(11), 1830-1839. https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2015.0645

10 Muirhead V, Quiñonez C, Figueiredo R, Locker D. Oral health disparities and food insecurity in working poor Canadians. *Community Dent Oral Epidemiol*. 2009;37(4):294–304.

11 Whitaker RC, Phillips SM, Orzol SM. Food insecurity and the risks of depression and anxiety in mothers and behavior problems in their preschool-aged children. *Pediatrics*. 2006;118(3):e859–68.

12 McIntyre L, Williams JV, Lavorato DH, Patten S. Depression and suicide ideation in late adolescence and early adulthood are an outcome of child hunger. *J Affect Disord*. 2013; 150(1):123–9.

13 Kirkpatrick SI, McIntyre L, Potestio ML. Child hunger and long-term adverse consequences for health. *Arch Pediatr Adolesc Med*. 2010; 164(8):754–62 https://jamanetwork.com/journals/jamapediatrics/fullarticle/383613

14 Morgane PJ et al. 1993. Prenatal Malnutrition and Development of the Brain. *Neuroscience & Biobehavioral Reviews*, 17(1), 91-128. https://www.researchgate.net/publication/11184826_Effects_of_prenatal_protein_malnutrition_on_the_hippocampal_formation

15 Hromi-Fiedler A, Bermúdez-Millán A, Chapman D, Segura-Pérez S, Damio G, Melgar-Quiñonez H, & Pérez-Escamilla R. 2008. Adaptation of the U.S. Food Security Survey Module for Low-Income Pregnant Latinas: Qualitative Phase. *J Hunger Environ Nutr* 4(1): 62–80. https://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC2748279&blobtype=pdf

16 March of Dimes. March 2018. *Low Birthweight.* https://www.marchofdimes.org/complications/low-birthweight.aspx

17 Bergner L and Susser MW. 1970. Low Birth Weight and Prenatal Nutrition: an Interpretative Review. *Pediatrics*, 46(6), 946-966. https://pediatrics.aappublications.org/content/pediatrics/46/6/946.full.pdf

18 Hediger M. et al. 1998. Growth of Infants and Young Children Born Small or Large for Gestational Age. *Archives of Pediatrics & Adolescent Medicine*, *152*(12), 1225-1231. https://jamanetwork.com/journals/jamapediatrics/fullarticle/190148

19 March of Dimes. March 2018. *Low Birthweight.* https://www.marchofdimes.org/complications/low-birthweight.aspx

20 Ibid.

21 Authors' analysis of 2017 SPARCS data.

22 Ibid.

23 Center on Budget and Policy Priorities. 2017. *WIC Works: Addressing the Nutrition and Health Needs of Low-Income Families for 40 Years*. https://www.cbpp.org/sites/default/files/atoms/files/5-4-15fa.pdf

24 United States Department of Agriculture. 2018. *Women, Infants, and Children (WIC).* https://www.fns.usda.gov/wic/women-infants-and-children-wic

25 Congressional Research Service. 2015. *Primer on WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children*. https://fas.org/sgp/crs/misc/R44115.pdf

26 United States Department of Health and Human Services. 2020. *2020 Percentage Poverty Tool*. https://aspe.hhs.gov/system/files/aspe-files/107166/2020-percentage-poverty-tool.pdf

27 New York State Department of Health. March 2020. *GIS 20 MA/02 – 2020 Federal Poverty Levels (Attachment IV).* https://www.health.ny.gov/health_care/medicaid/publications/docs/gis/20ma02_att_iv.pdf

28 Ibid.

29 Congressional Research Service. 2015. *Primer on WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children*. https://fas.org/sgp/crs/misc/R44115.pdf

30 United States Department of Agriculture. 2020. *WIC Data Tables.* https://www.fns.usda.gov/pd/wic-program

31 Congressional Research Service. 2015. *Primer on WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children*. https://fas.org/sgp/crs/misc/R44115.pdf

32 United Hospital Fund. 2021. WIC Association of NYS board member communication with Nathan Myers, Sarah Scaffidi, and Alexandra Brandes, January 2021.

33 New York State Department of Health. February 2019. *New York State Department of Health Announces Electronic Benefit Card for Women, Infants, and Children Program on Long Island.* https://www.health.ny.gov/press/releases/2019/2019-02-13_electronic_benefit_card.htm

34 United States Department of Agriculture. 2013. *About WIC: How WIC Helps.* https://www.fns.usda.gov/wic/about-wic-how-wic-helps

35 United States Department of Agriculture. 2019. *National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2017*. https://fns-prod.azureedge.net/sites/default/files/resource-files/WICEligibles2017-Volume1.pdf

36 Ibid.

37 California Department of Public Health. 2016. *Making Connections: Understanding Women's Reasons for Not Enrolling in WIC during Pregnancy.* https://www.cdph.ca.gov/Programs/CFH/DWICSN/CDPH%20Document%20Library/ResearchandData/WICProgramParticipantInformation/Making%20Connections%202010-2012%20FINAL%204252016.pdf

38 Liu CH and Liu H. 2016. Concerns and Structural Barriers Associated with WIC Participation among WIC-Eligible Women. *Public Health Nursing*, *33*(5), 395-402. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5527844/pdf/nihms884976.pdf

39 Ibid.

40 United States Citizenship and Immigrant Services, Department of Homeland Security. Inadmissibility on Public Charge Grounds. August 8, 2019. Final Rule. https://www.federalregister.gov/documents/2019/08/14/2019-17142/inadmissibility-on-public-chargegrounds

41 Batalova J, Fix M, and Greenberg M. June 2018. *Chilling Effects: The Expected Public Charge Rule and Its Impact on Legal Immigrant Families' Public Benefits Use*. Washington, DC: Migration Policy Institute. https://www.migrationpolicy.org/research/chilling-effects-expected-public-charge-rule-impact-legal-immigrant-families

42 Bottemiller Evich H. "Immigrants, fearing Trump crackdown, drop out of nutrition programs," *Politico* (Washington, DC, September 4, 2018). https://www.politico.com/story/2018/09/03/immigrants-nutritionfood-trump-crackdown-806292

43 United Hospital Fund. 2021. WIC Association of NYS board member communication with Nathan Myers, Sarah Scaffidi, and Alexandra Brandes, January 2021

44 United Hospital Fund. 2020. Health Leads staff communication with Sarah Scaffidi and Alexandra Brandes, December 2020.

45 The White House. 2021. *Executive Order on Restoring Faith in Our Legal Immigration Systems and Strengthening Integration and Inclusion Efforts for New Americans*. https://www.whitehouse.gov/briefing-room/presidential-actions/2021/02/02/executive-order-restoring-faith-in-our-legal-immigration-systems-and-strengthening-integration-and-inclusion-efforts-for-new-americans/

46 For comprehensive information about New York's WIC waivers, see: United States Department of Agriculture, Food and Nutrition Service. October 2020. *New York: COVID-19 Waivers & Flexibilities*. https://www.fns.usda.gov/disaster/pandemic/covid-19/new-york

47 United Hospital Fund. 2021. WIC Association of NYS board member communication with Nathan Myers, Sarah Scaffidi, and Alexandra Brandes, January 2021.

48 United States Department of Agriculture. 2019. *National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2017*. https://fns-prod.azureedge.net/sites/default/files/resource-files/WICEligibles2017-Volume1.pdf

49 This analytic assumption is based on examining the New York State Department of Health's vital statistics across years and observing only small variation in the number of Medicaid-financed births per county from year to year. For instance, statewide Medicaid-financed births are as follows:

Year	Medicaid-Financed Births
2014	121,174
2015	122,883
2016	120,003
2017	116,084
2018	114,631

Source: New York State Department of Health. *Annual Vital Statistics Tables: Live Births by Financial Coverage and Resident County New York State (2014-2018)*. https://www.health.ny.gov/statistics/vital_statistics/

50 Strully KW, Rehkopf DH, and Xuan Z. 2010. Effects of Prenatal Poverty on Infant Health: State Earned Income Tax Credits and Birth Weight. *American Sociological Review*, *75*(4), 534-562. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3104729/

51 Mustillo S et al. Self-Reported Experiences of Racial Discrimination and Black–White Differences in Preterm and Low-Birthweight Deliveries: The CARDIA Study. *American Journal of Public Health,* 94(12), 2125-2131. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1448602/pdf/0942125.pdf

52 Public Health Solutions. 2020. *Neighborhood WIC.* https://1ijrim370iz22k1owzbmpcx1-wpengine.netdna-ssl.com/wp-content/uploads/2020/02/PHS-Neighborhood-WIC.pdf

53 United Hospital Fund. 2020. Public Health Solutions staff communication with Nathan Myers, Sarah Scaffidi, and Alexandra Brandes, December 2020.

54 Public Health Solutions. November 2019. *The Food and Nutrition Services Bundle: Findings from a Pilot Project.* https://1ijrim370iz22k1owzbmpcx1-wpengine.netdna-ssl.com/wp-content/uploads/2019/11/Food-and-Nutrition-Services-Bundle-Report.pdf

55 United Hospital Fund. 2021. Public Health Solutions staff communication with Sarah Scaffidi and Alexandra Brandes, January 2021.

56 Ibid.

57 Mclean M, Haynes L, Tkachenko O, and Hennessey Z. July 2021. *Acceptability, Preference, and No-Show Rates for In-Person and Phone-Based Consultations at Nine WIC Centers in New York City Before and During COVID-19.* Healthy Eating Research. https://healthyeatingresearch.org/wp-content/uploads/2021/07/McLean-WIC-Brief-FINAL.pdf

58 Ibid.

59 Health Leads. March 2019. *Community Health Workers, Localized Data and the Path to Healthier Families*. http://healthleadsusa.org/wp-content/uploads/2019/03/NY-WIC-Case-Study-4319.pdf

60 Newell P. April 2020. *New York's "Other" Individual Market Needs an Update*. United Hospital Fund. https://uhfnyc.org/publications/publication/off-exchange-market-healthwatch/

61 United Hospital Fund. 2020. Health Leads staff communication with Sarah Scaffidi and Alexandra Brandes, December 2020.

62 Health Leads. March 2019. *Community Health Workers, Localized Data and the Path to Healthier Families*. http://healthleadsusa.org/wp-content/uploads/2019/03/NY-WIC-Case-Study-4319.pdf

63 Brooklyn Perinatal Network, Inc. 2020. *Pathways Community Hub Maternal Child Health Pilot Initiative*. http://www.bpnetwork.org/nyc/community-a-civic-engagement/pathways-community-hub-maternal-child-health-pilot-initiative

64 Goldman TR. December 2018. Charting a Pathway to Better Health. *Health Affairs*, *37*(12), 1918-1922T. https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2018.05166

65 United Hospital Fund. 2020. Brooklyn Perinatal Network staff communication with Sarah Scaffidi and Alexandra Brandes, December 2020.

66 Agency for Healthcare Research and Quality. 2016. *Connecting Those at Risk to Care: The Quick Start Guide to Developing Community Care Coordination Pathways.* https://innovations.ahrq.gov/sites/default/files/guides/CommHub_QuickStart.pdf

67 United Hospital Fund. 2021. Health Leads staff communication with Sarah Scaffidi, Alexandra Brandes, and Nathan Myers. January 2021.

68 Ibid.

69 Brundage SC and Gilman M. 2018. *Clinical-Community Partnerships for Better Health: Observations from New York City's Partnerships for Early Childhood Development Initiative.* United Hospital Fund. https://uhfnyc.org/publications/publication/clinical-community-partnerships-for-better-health-observations-from-new-york-citys-partnerships-for-early-childhood-development-initiative/

70 Ibid.

71 United Hospital Fund. 2020. Partnerships for Early Childhood Development staff communication with Sarah Scaffidi, May 2020.

72 United Hospital Fund. 2020. Partnerships for Early Childhood Development staff communication with Sarah Scaffidi, December 2020.

73 New York State Office of Children and Family Services. 2014. *Healthy Families New York: A Home Visiting Program that Works! 2013 Triennial Report.* https://ocfs.ny.gov/main/reports/HFNY%202013%20Triennial%20Report%203-14-14.pdf

74 Ibid.

75 Healthy Families America. 2020. *HFA and COVID-19*. https://www.healthyfamiliesamerica.org/hfa-and-covid-19/

76 Maternal & Child Health Bureau, Health Resources & Services Administration, U.S. Department of Health and Human Services. September 2020. *Healthy Start.* https://mchb.hrsa.gov/maternal-child-health-initiatives/healthy-start

77 Escarne JG, et al. 2017. Introduction to the Special Issue on Healthy Start. *Maternal and Child Health Journal*. *21*(1), S1-S3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5736770/

78 Healthy Start EPIC Center. July 2017. *Healthy Start "On the Ground" in New York City.* https://www.healthystartepic.org/wp-content/uploads/2017/08/HealthyStartOnTheGround.pdf

79 Idehen A. October 2018. "Using the Epic Electronic Health Record to Integrate the Federal Healthy Start Program into a Regional Health Care System." *2018 CityMatCH Conference Compendium.* https://www.citymatch.org/wp-content/uploads/2018/10/2018-CityMatCH-Conference-Compendium.pdf

80 One Hundred Seventeenth Congress of the United States. March 11, 2021. *The American Rescue Plan Act of 2021, H.R. 1391.* U.S. Congress. https://www.congress.gov/bill/117th-congress/house-bill/1319/text