Creating Integrated Strategies for Increasing Access to Healthy Affordable Food in Urban Communities: A Case Study of Intersecting Food Initiatives

Michele Silver · Afia Bediako · Tracey Capers ·
Aysu Kirac · Nicholas Freudenberg

Published online: 29 June 2017
© The New York Academy of Medicine 2017

Abstract In New York and other cities, substantial evidence documents that community food environments interact with inequitable allocation of power, wealth, and services to shape the distribution of diet-related diseases and food insecurity. This case study shows how one Central Brooklyn community organization, Bedford Stuyvesant Restoration Corporation, has launched multiple coordinated food initiatives in order to reduce the burden of food-related health problems and boost community development. The report used standard case study methods to document the implementation of the New York City Food and Fitness Partnership in Central Brooklyn. The case study shows how two distinct strands of activities, a Farm to Early Care Program that ultimately brought fresh food to 30 child care centers, and a food hub that sought to make fresh local food more available in Central Brooklyn, intersected and reinforced each other. It also shows how organizational, community, and municipal resources and policies in some cases supported these initiatives and in others served as obstacles. Finally, the case study shows that multiple coordinated strategies have the potential to empower low-income Black and Latino communities to act to make local food environments healthier and more equitable.

Keywords Food environments · Community development · Food inequalities · Farm to early care programs · Food hubs · Urban food policy

Introduction

In New York and other cities, substantial evidence documents the key role that community food environments, interacting with inequitable allocation of power, wealth, and services, play in creating inequitable distribution of diet-related diseases and food insecurity [1–3]. For community organizations committed to reducing such racial, ethnic, and socioeconomic inequalities, changing local food environments to promote more equitable access to healthy, affordable food is an effective and feasible strategy. In this case study, we describe how Bedford Stuyvesant Restoration Corporation (Restoration), a community development corporation in Central Brooklyn, a low-income Black, Latino and immigrant community in New York City, has launched multiple coordinated food initiatives in order to reduce the burden of food-related health problems and promote community development. Our case study also shows that taking on one goal—in this case, bringing healthier food to children in preschool programs—can lead to a cascade of other changes including new efforts to create a local food hub, improving the quality of food in local supermarkets, and training workers for employment in the food sector. Together, these changes have the potential to transform local food environments and empower traditionally undervalued communities.

M. Silver · N. Freudenberg (✉)
City University of New York School of Public Health, New York,
NY, USA
e-mail: Nick.Freudenberg@sph.cuny.edu

A. Bediako · T. Capers · A. Kirac
Bedford Stuyvesant Restoration Corporation, Brooklyn, NY, USA

Each of the innovations Restoration has launched can bring substantial health, social, and economic gains. Investing in the nutritional well-being of low-income urban preschool children, for example, has benefits that can ripple through multiple arenas across the life course including strengthening cognitive development, fostering positive family functioning, creating healthier local food environments, and promoting sustainable community economic development [4–6]. In the last decade, a variety of food, early childhood, and community development organizations have tested models for achieving these intersectoral synergies [7–9].

Similarly, creating local food hubs to improve local food retail opportunities can bring multiple cross-cutting benefits to low-income urban communities: increased access to healthy affordable food, new employment opportunities, and local economic development [10, 11].

In this report, we describe a 5-year effort to create an early childhood nutrition program that brings fresh farm produce to 30 child care centers in Central Brooklyn. This Farm to Early Care Program also helped to generate another initiative to create food aggregation and food value chains in the community, sparked in part by the need to supply the child care centers with fresh, healthy, regionally grown food. By examining the process and impact of these programs on children, families, and food environments, we hope to provide evidence that can guide early childhood educators, community developers, policy makers, funders, local and sustainable agriculture and environmental advocates, and food justice and sovereignty activists to expand and strengthen initiatives with the potential to reduce the inequalities in nutrition, health, education, income, and life chances that now characterize urban America. We also seek to explore whether and how multiple community food initiatives have a cumulative impact greater than the sum of their parts.

Our case study seeks to answer these questions:

1. How can early child care feeding programs become a catalyst for changing local urban food environments, supporting early child development, improving community health, and reducing inequality?
2. How can food hubs contribute to improved access to healthy food, increased employment opportunities, and sustainable community economic development?
3. How do Restoration's food initiatives benefit from and strengthen existing procedures for food

procurement, institutional food, and local food distribution in order to increase healthy food access for children and families in urban communities?

4. What are the shared interests—and the conflicts—in improving food environments and health for young children among early child care programs, healthy food programs, local food retailers, health care providers, and other constituencies concerned about child development and health as well as food and food justice?
5. What policies, programs, and community processes can help to ensure the longer-term sustainability of these initiatives in Central Brooklyn and elsewhere?
6. What local, state and federal policies, funding streams, partnerships, and political dynamics support—or block—the sustainability or replication of more comprehensive approaches to early childhood nutrition and local food distribution?

Methods

This initiative was part of the W. K. Kellogg Foundation's Food and Fitness Collaborative, designed to improve access to healthy, affordable, local food, and opportunities for physical activity in several low-income communities around the country. Our case study and analysis is based on several sources including published documents and internal evaluation reports prepared for the Kellogg Food and Fitness program by the University of Michigan and investigators from the CUNY School of Public Health, municipal and census data describing Central Brooklyn, and the authors' meeting notes from their discussions of Food and Fitness activities at Restoration between 2013 and 2016 [12–15]. Using standard methods for the preparation of case studies, including qualitative analysis of documents for themes that addressed our research questions, development of a timeline of project events, and recursive discussions among investigators to refine insights, this report summarizes the lessons learned [16, 17].

Community and Organizational Setting

Since 1967, Restoration, the nation's first community development corporation (CDC), has partnered with area residents and businesses to improve the quality of

life in Central Brooklyn. Its goals are “to attract investment, improve the business climate, foster the economic self-sufficiency of families, enhance family stability, and promote the arts and culture.” [18] More than 80% of Central Brooklyn residents are Black, and 33% live below the poverty line, the eighth highest rate among the city’s 59 districts [19]. About one in six Bedford Stuyvesant adults aged 16 and older is unemployed, and 55% of residents spend more than 30% of their monthly gross income on rent. Its jail incarceration rate is the sixth highest of the city’s districts [20].

The diet-related health conditions that drive the city’s health inequalities are more prevalent in Bedford Stuyvesant than elsewhere. The rate of adult obesity in Bedford Stuyvesant is 33%, more than four times the rate in the New York City neighborhood with the lowest rate. The adult diabetes rate is 15%, the fifth highest in the city [21]. Brooklyn has the highest number of children experiencing food insecurity across the city’s five boroughs, and the Bedford Stuyvesant neighborhood ranks sixth nationally for food hardship [22, 23].

Affordable healthy food is particularly hard to find. Eight in 10 food stores are bodegas, small convenience stores with limited healthy options. Bedford Stuyvesant has 120 ft² of supermarket space per 100 residents; only 27% of the supermarket space in the city’s highest ranked district [19]. In part as a result, 19% of residents report eating no fruits or vegetables the previous day: almost twice the citywide rate.

At the same time, the community has a wealth of human, cultural, and institutional assets, including a history of community activism, dozens of social service agencies and neighborhood associations, and diverse cultural and food traditions [24]. Another asset is Restoration itself, which has come to play a vital role by leveraging local and national resources to meet persistent community needs. For example, Restoration has constructed or renovated 2200 units of affordable housing, provided \$60 million in mortgage financing to nearly 1500 homeowners, attracted more than \$500 million in investments to Central Brooklyn, placed over 20,000 youth and adults in jobs, and catalyzed other physical and economic improvements throughout the neighborhood [25]. In 2016, Restoration programs served more than 7000 people [25].

In the last 10 years, Restoration has also developed an active portfolio of food programs. It led efforts to attract the first full-service supermarket, the first sit-down restaurant, and the largest farmers market to the

area. Restoration has been the lead player in the W.K. Kellogg Foundation Food and Fitness Initiative’s New York City Partnership. In addition to these expansions of local food retail options, Restoration has sponsored several other food-related activities:

1. The Farm to Early Care Program that has brought farm fresh produce to 1500 young children as part of the meal programs at 28 early child care sites in Central Brooklyn.
2. An emerging food hub created in partnership with several other local food organizations that can facilitate the distribution of local produce to retail outlets and institutional food programs in Central Brooklyn and will also house a co-packing enterprise as well as a food cooperative to create improved retail access for local residents.
3. A flexible enrollment farm share program that accepts SNAP and delivers food boxes of fresh produce to families enrolled in six child care centers as well as to two schools and a hospital.
4. A Farmers Market Promotion Program that connects six farmers’ markets in a network that links retail establishments with local farmers and the food hub to increase local produce selection and lower their prices.
5. Economic Solutions Center programs that provide comprehensive job training and sector-specific certification in a variety of employment sectors including food. Participants learn both how to apply for jobs and obtain the credentials needed for various job opportunities, including food handlers safety certification. The Center also helps individuals find access to a range of other services and benefits, including SNAP.

Due in part to rapid gentrification in urban centers, which is particularly acute in Central Brooklyn, the palates and budgets of new residents have created barriers for long-standing residents, increasing what is often referred to as food gentrification, a process that drives up prices for healthy, fresh foods [26]. Restoration’s parallel efforts to ensure adequate access to affordable housing, healthy food, and employment can help to reduce the economic burdens that gentrification imposes. More ambitiously, by taking on the multiple forces that promote gentrification, Restoration seeks to shift some local economic power back to long time Bedford Stuyvesant residents. In the next section, we

describe how Restoration has used two strategies: Farm to Early Care and a food hub to begin to create a more equitable local food system in Central Brooklyn.

Strategy 1: Farm to Early Care

In 2013, Restoration decided to focus on early childhood centers as a starting point for changing local food environments. The organization already partnered with several child care centers, giving it access to center directors, staff, and children. Starting food programs with young children was appealing, because it offered the promise of preventing both health and educational problems. Moreover, a preschool food program could serve as a platform for nutrition education for center staff, children, and parents and an opportunity to develop the skills of the cooks working in these centers. These insights led Restoration to create the Farm to Early Care initiative, which provides local produce to preschool centers in Central Brooklyn. The use of local produce promised other benefits. It could support regional and local businesses and farmers, including Black and Latino farmers in the region who sometimes had trouble finding markets in New York City. Fresh produce could also help to engage children and their parents in nutrition education, cooking demonstrations, and job training. By designing multiple entry points into Farm to Early Care, Restoration was able to engage a diverse cross-section of constituencies and tap into varying motives for supporting the initiative.

The program began at one Head Start site, encouraging the food service staff to remove canned fruits and vegetables from their menus and replace them with fresh items. Establishing a direct partnership with Corbin Hill Food Project, an organization that brings food grown in upstate New York to low-income communities in New York City enabled Restoration to bring farm fresh food into school meals. Restoration broadened its programming to include the design and development of a community garden run by parents and youth. Finding that reconnecting families with their traditions of growing and preparing fresh food engaged participants, Restoration increased the number of partner Head Start locations that embraced their healthy food programming: from 10 sites with 700 children in 2013 to 30 sites with 1500 children by 2016. Of these, 13 are Head Start programs.

At the same time, implementing Farm to Early Care presented challenges. It was not always easy to find the

amount of fresh local food that was needed due to seasonality and set school menus; transportation in dense urban neighborhoods was often a problem—one parking ticket could wipe out a food distributor's profits for the day; and food distribution partners struggled to find the right balance between needing to make a profit and having a social mission.

The program had three distinct goals:

1. Help students, families, and early care staff obtain healthy fresh food for the meals and snacks required by the program;
2. Support early learning centers in their efforts to empower parents and staff to engage in healthy living decisions while respecting the link between food and culture; and
3. Build demand and infrastructure for the creation of healthy food outlets in the target neighborhoods, including cooperative buying structures, farmers markets, and farm shares.

In its 4 years, Restoration's Farm to Early Care Program has achieved some important successes. It has established strong relationships with local early child care providers, Central Brooklyn farmers, and urban agriculture projects and city agencies. It has expanded the number of sites, children and families served. It has brought healthy farm fresh food to students and families of early care facilities and established multiple food box programs, including year round programming at one location. Restoration's success with Farm to Early Care institutional sourcing has also helped to prime the pipeline for broader systems change and improved healthy eating in the home. Finally, Farm to Early Care has inspired participating centers to create or expand other food initiatives including nutrition education for staff, parents, and children; cooking demonstrations; and new health promoting policies that make fresh local food consumption a priority, and new physical activity programs and campaigns to limit sugary drinks.

Strategy 2: Strengthening Central Brooklyn's Food Supply Chain

The success of Farm to Early Care showed that to make this program sustainable and expand it to other settings, Restoration had to find a more stable and available

supply of healthy affordable, regionally grown food: the impetus for creating a local food hub. The organization's history in initiating conversations about the local food supply and food access in Central Brooklyn and its previous experience in food retail enables Restoration to play a key role. Its partners in food retail include a local supermarket tenant that Restoration has linked with several farmers' markets and local and regional farmers who help to develop shared distribution systems. The organization also provides direct technical assistance to the grocery store to improve its local produce selection and price points. Restoration has sponsored healthy food and market promotional campaigns and provides assistance and support for local growers and local farmers' market managers. The Marcy Plaza Farmers Market created by Restoration attracts 1200 customers a week and has the capacity to serve more. Additionally, Restoration supports eight local gardens that represent 12 urban farmers who supply local farmers markets. These activities demonstrate Restoration's skill in mobilizing community assets to innovatively meet local needs.

Sourcing and procurement for the Farm to Early Care pilot revealed challenges to the distribution and supply of healthy food in Central Brooklyn. Efforts to solve these problems sparked a conversation about the need for local innovations such as a central aggregation unit for healthy food and improved distribution channels. Food hubs are defined as businesses or organizations that actively manage the aggregation, distribution, and marketing of food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand [27].

Restoration saw a food hub as a solution that could enhance its community's capacity to grow, sell, and eat locally and regionally grown healthy food. Central Brooklyn lacks such a locally oriented hub, limiting opportunities for efficiencies in healthy food distribution, value-added production, and cold storage [28].

Restoration's interest in food hubs coincided with others conversations about healthy food in Central Brooklyn. A 2014 survey revealed that the local priorities for the food hub were increasing the affordability of food, ownership and operation by people of color from Central Brooklyn, and the creation of new jobs. These goals, believed local food activists, would help ensure that a new food hub would bring economic, health, and social benefits directly to Central Brooklyn, not just to larger food businesses outside the community. Local

partners of Restoration were working on other innovations including a Central Brooklyn food co-op designed for low-income people of color and a cooperative food processing business to sell locally grown and processed foods to local institutions. These projects, founded on the shared values of racial and economic equity, support for local food grown by farmers of color, and local ownership and economic empowerment, created further synergies and strengthened the links among several local organizations.

In late 2014, New York Governor Andrew Cuomo developed a Regional Food Hub Task Force and Action Plan to expand the distribution of regional foods to the New York City marketplace. As a result, a group of grassroots thought leaders of color, many from Central Brooklyn, wrote a memo to the Task Force recommending explicit attention to promoting economic self-determination and food sovereignty for communities of color through a variety of projects related to urban agriculture and food [29]. The letter was widely circulated and contributed to greater interest in the development of local food hubs as an equity-enhancing strategy within the New York City Council and the New York City Department of Health.

In 2017, Restoration and its partners are developing a food hub in Central Brooklyn that will improve the infrastructure, sustainability, and distribution of healthy, local food. The hub has both a material and a virtual presence. Their vision is for a hub that will include local food entrepreneurs and growers who sell fresh produce and healthy prepared foods and snacks and culturally relevant food products. The hub would serve buyers ranging from individuals and families to retail outlets such as bodegas, fresh food carts, restaurants, and institutions, providing culturally appropriate, quality foods sourced, and produced within Central Brooklyn and beyond. Finding sellers from the local community and from Black, Latino and immigrant-owned businesses remains a priority.

Integrating the Two Strategies

Through its activities, the Farm to Early Care Program emerged as a critical mechanism for creating systemic change at the individual, family, and institutional levels. It has worked to shift the relationship between local food producers and consumers by scaling up to as many early care sites in Brooklyn as possible. In the next stage,

Restoration hopes to leverage the increased demand for locally sourced food procurement from early care centers to mobilize community interest and investment in improving food supply chain infrastructure and further developing the community food hub.

Most recently, Restoration has expanded its focus within early child care from the centers it sponsors to a wider network of Central Brooklyn partners including other child care programs, senior centers, and hospitals. They have engaged two hospitals as institutional partners, are in talks with a number of senior centers, and operate several farm share programs. Restoration implemented a partnership agreement for the institutions and organizations engaged in these efforts. This agreement allows for various levels of participation that can grow and evolve over time. Additionally, Restoration periodically convenes the participating partners, creating space for shared problem solving, relationship building, and strategizing. These conversations inform the support and technical assistance Restoration provides its partners and highlight advocacy opportunities and policy levers. Restoration is well-positioned to leverage resources and relationships in order to troubleshoot, scale, or expand this work. This network of support and resources is another component that facilitates continued participation in the initiative. These expanded and growing partnerships both increase the need for a food hub and have the potential to bring new customers to its doors.

The partners are focusing on further developing their local procurement practices, with a specific emphasis on collaborating with Brooklyn-based food growers of color. They hope to engage these growers beyond providing produce for early care and farm share programs by inviting them to teach garden education and host farm visits for students and families. Currently, they are working with three local growers representing eight different community gardens. Institutional food procurement and farm share expansion are primary means by which Restoration hopes to create additional demand for improved food infrastructure within the neighborhood.

Three critical strategies helped to propel this work at the local level: sustained and repeated community engagement, consistent convening of partners to maintain momentum, and shared leadership among partners with equal and full participation on the part of every member. On the other hand, limited funding, gaps in leadership as a result of staff turnover, and a lack of a formal decision-

making processes or structures have slowed the progress in translating the vision of a transformed local food system into a reality.

Local, Municipal, and Other Influences on Scale and Sustainability

Restoration's Farm to Early Care and food hub initiatives have unfolded in distinct community, municipal, state, and national contexts, with changing political and policy developments operating at each level to shape the opportunities and obstacles for these efforts. Table 1 provides an overview of these levels of influence.

At the *organizational* level, Restoration brought key assets to the goals of developing its two food initiatives. Its experience and investment in child care and food retail provided expertise in relevant content areas. Its many affiliations with community, government, and citywide nonprofit agencies gave it access to the networks needed to establish effective coalitions and partnerships [30]. Its clear values and track record on advancing equity and expanding economic and political opportunities for Black and Latino people in Central Brooklyn made it a credible partner for community organizations and elected officials. Restoration's skillful use of these assets contributed to its success in launching these two food initiatives. By framing these efforts within its central mission of promoting racial justice, Restoration was able to link these food programs with other local campaigns to improve schools, build financial empowerment, and stop discriminatory housing policies.

Like other community organizations, Restoration also faced challenges that made sustained implementation of these two initiatives difficult: limited and unstable funding, staff turnover, multiple competing priorities, and competition with other local organizations with similar missions. These internal limitations made it more difficult for Restoration to overcome the external challenges described below.

At the *community* level, Central Brooklyn also contributed essential resources. For several decades, alliances of organizations and individuals have worked together to promote the well-being of these neighborhoods and to challenge higher-level policies that jeopardized economic or social well-being [31]. This history of struggle has created a deep pool of social and human capital that Restoration has mobilized to achieve its early goals in its two food initiatives. In communities as in families,

Table 1 Influences on sustainability and replicability of Restoration's Farm to Early Care and food hub strategies at various levels.

Level of influence	Farm to early care		Food hub	
	Facilitators	Obstacles	Facilitators	Obstacles
Organizational (Restoration)	Restoration sponsorship of Head Start farm to institution programs; facilitates relationship between institutions and aggregators and farmers as well as supporting programming and training	Staff turnover in food and early child care programs, funding to support procurement	Restoration leaders play strong role in creating community partnership to promote hub and aggregation	Staff capacity in Restoration food program
Community (Central Brooklyn)	Established network of child care providers; NYC Department of Health Center on Health Equity Health Action Center supports intersectoral health equity initiatives in Central Brooklyn including Farm to Early care	Other high priority problems like housing, employment, and education compete with early childhood nutrition for community and policy maker attention	Strong collective leadership on food equity across organizations [29]; NYC Department of Health Center on Health Equity Health Action Center supports intersectoral health equity initiatives in Central Brooklyn including food hub	Other high priority problems like housing, employment, and education compete with food hubs for community and policy maker attention
Municipal (New York City)	Mayoral support for intersectoral initiatives to promote equity; Mayor and City Council support for expanding universal prekindergarten [37]; Mayor's Community Schools Initiative [38]; NYC's farm to preschool program a partnership with Department of Health and Mental Hygiene, GrowNYC (operator of the Greenmarket network of farmer's markets), and Corbin Hill Food Project [39]; NYC Food Standards require public agencies including child care programs to serve food that meets standards [40]	City and state compete making collaboration difficult	Mayoral support for \$15/hour minimum wage; Department of Health and City Council support for food hubs	Business opposition to programs that favor smaller businesses over larger established companies
State (New York state)	New York State Department of Agriculture and Markets and other state agencies provide funding and other support to	City and state compete, making collaboration difficult	Governor's support for \$15/hour minimum wage; Governor's support for food hubs; New York State Grown and Certified Program promotes	State focus and funding is for a single New York City food hub in the Bronx, not Central Brooklyn [45]

Table 1 (continued)

Level of influence	Farm to early care		Food hub	
	Facilitators	Obstacles	Facilitators	Obstacles
Federal (USA)	Farm to Early Care initiatives statewide [41]; New York State Department of Health's Eat Well Play Hard program provides nutrition and healthy food training to child care staff in high-need neighborhoods [42]		New York producers who comply with the state's food safety and environmental sustainability programs and assures consumers that the food they are buying is local and produced at a higher standard [43] Governor proposes \$1.4 billion Vital Brooklyn Initiative to fight against poor health and poverty in Central Brooklyn [44] USDA through the Farm Bill provides some support for food hubs; Head Start encourages centers to contract with minority-owned business such as those to be sited at food hub [47]	Continued support for food innovation uncertain
	Head Start is a national program with national standards, including for food procurement and food quality served in child care centers and ongoing federal funding [46]; Head Start encourages centers to contract with minority-owned businesses for food and other services [47]; USDA through the Farm Bill provides financial support to various farm to early care initiatives, including at Restoration [48, 49]	Trump promises to cut safety net programs		

long histories create conflict as well as consensus. Central Brooklyn has competing political factions, divided opinions on how best to respond to gentrification, and competition for limited municipal and external resources. While Restoration has long experience negotiating these tightropes, the time spent in creating and maintaining community agreement is time *not* spent in expanding the reach or sustainability of a program.

At the *municipal* level, both Farm to Early Care and the food hub projects began in one Mayoral administration and continued after election of a new Mayor. The first, Mayor Michael Bloomberg, made public health a priority and instituted several food policies (listed in Table 1) that assisted in the creation of Restoration's food programs. These included the New York City Food Standards, which established health guidelines for food served in city agencies including child care programs, expansion of farmers markets, creation of Green Carts to sell fresh fruits and vegetables in low-income communities, and the appointment of a Food Policy Coordinator in the Mayor's Office [32]. The next Mayor, Bill De Blasio, emphasized policies that had the goal of reducing income and other forms of inequality in New York City [33]. His implementation of universal prekindergarten and an expanded affordable housing initiative focused attention on the role of local community development: a key Restoration goal. The transition in Mayoral priorities also illustrates the importance of both food and non-food policies in creating healthier local food environments [34]. Multi-sectoral organizations such as Restoration were well-situated to operate in both the food and non-food policy arenas and to make connections across both.

More broadly, the growing attention to food policy in the last two Mayoral elections in New York City created opportunities for developing new community and municipal coalitions to advocate for more effective and equitable municipal food policies: an opportunity Restoration was able to seize [35]. In fact, Restoration played a key role in ensuring that these new alliances made ending racial inequities in food access, food labor, and diet-related diseases a priority. While the Mayor's emphasis on equity-enhancing policies created space for Restoration to advance its food initiatives, Mayoral focus on equity in employment, criminal justice, education, and housing made it more difficult to get policy makers' attention on food-related policy change.

At the *state* level, several initiatives proposed by the Governor, as shown in Table 1, supported Restoration's

Farm to Early Care and the food hub initiatives. These initiatives created funding streams, technical assistance, and training programs that could support this work; unfortunately, ongoing conflicts between city and state government sometimes made it difficult to align state and city programs.

At the *national* level, USDA and Head Start created a framework, standards, and funding streams to support Restoration's initiatives and also showed the potential for replication in other settings where these programs operated. Since the 2016 election, a new President and Congress have proposed cutbacks in food benefits and other safety net programs, reductions in funding for Head Start and USDA, and policies to deport the immigrants who constitute an important segment of New York City's population [36]. To what extent, these proposals will be implemented, and how they will influence the sustainability of Restoration's initiatives is as yet unknown.

Conclusions and Next Steps

In the last decade, scholars of urban food environments have emphasized the value of a systems approach, one that recognizes the multiple sectors, levels, scales, and value systems in which local food systems operate [50–52]. In practice, however, most intervention resources have been invested in categorical programs: better school food, a school garden, a new supermarket, healthy corner stores, calorie labeling, or taxes on sugary beverages. Each of these interventions can contribute to improvements in targeted outcomes, but by themselves, uncoordinated with other interventions, and lacking supportive constituencies, they are unlikely to reverse the pervasive problems facing local food systems, especially in low-income urban communities.

The promise of Restoration's Farm to Early Care and food hub initiatives is their potential for a more integrated, community-driven approach to improving local food environments while targeting both supply and demand. Each project brings new organizations and individuals into the movement to change food environments. Each depends on creating and sustaining partnerships that are rooted in the lived experience of community residents. Each builds bridges between food eaters and food workers, children and adults, and community residents and community professionals like teachers and health providers. Each emphasizes the goal of equity and the potential to take concrete action to reduce specific

inequities in the lives of the families, children, and workers of color in Central Brooklyn. Each is embedded in a web of community, municipal, state, and national networks and institutions; partners that can provide the material resources, human capital, and technical assistance can help these two programs to thrive. And as we have shown, multiple strands of activities connect the two initiatives: creating the potential for mutual reinforcement and escalating progress that can bring the programs to the tipping point of sustainable success.

Based on its experiences, Restoration now has the opportunity to promote policies that explicitly incentivize the use of local produce in institutional settings, support the development of Black, Latino and women farmers, and nurture local food hubs and other alternative forms of locally focused food retail. As elected officials propose new initiatives to expand prekindergarten to 3-year-olds, establish more food hubs, revitalize Central Brooklyn's economy, and reduce inequalities in health, Restoration will continue to find partners and public platforms to advance its goals.

Restoration's experience to date suggests that communities will be patient and persistent if they feel heard, respected, and empowered, and can see demonstrated actions. Rooted firmly in principles of equity and fairness, Restoration remains steady and consistent in their efforts to transform the systems and structures that have created the legacy of poverty, racism, health inequalities, and municipal neglect that have so often characterized Bedford Stuyvesant's history. By demonstrating an alternative to that history, Restoration has planted the seeds for a different future.

Acknowledgments Brooklyn Food and Fitness was funded by the W.K. Kellogg Foundation as part of its National Food and Fitness Program. We gratefully acknowledge the many insights provided by participants in the National and Brooklyn programs. All views expressed in this report are those of the authors, not their institutions.

References

- Black C, Moon G, Baird J. Dietary inequalities: what is the evidence for the effect of the neighborhood food environment? *Health Place*. 2014;27:229–42.
- Hilmers A, Hilmers DC, Dave J. Neighborhood disparities in access to healthy foods and their effects on environmental justice. *Am J Public Health*. 2012;102(9):1644–54.
- Ayazi H, Esheikh E. The US Farm Bill: corporate power and structural racialization in the United States Food System. Haas Institute for a Fair and Inclusive Society at the University of California, Berkeley. Berkeley, CA. 2015. Available at: <http://haasinstitute.berkeley.edu/farm-bill-report-corporate-power-and-structural-racialization-us-food-system>.
- Nores M, Barnett WS. Benefits of early childhood interventions across the world: (under) investing in the very young. *Econ Educ Rev*. 2010;29(2):271–82.
- Neelon SE, Briley ME. Position of the American Dietetic Association: benchmarks for nutrition in child care. *J Am Diet Assoc*. 2011;111(4):607–15.
- Tomlinson M, Rahman A, Sanders D, Maselko J, Rotheram-Borus MJ. Leveraging paraprofessionals and family strengths to improve coverage and penetration of nutrition and early child development services. *Ann N Y Acad Sci*. 2014;1308(1):162–71.
- Farm to Preschool. Program Models. Available at: <http://www.farmtopreschool.org/programmodels.html>. Accessed 15 Apr 2017.
- Berkenkamp J, Mader L. *Farm to childcare: opportunities and challenges for connecting young children with local foods and farmers*. The Institute for Agriculture and Trade Policy. 2012. Available at: https://www.iatp.org/sites/default/files/2012_06_19_F2CCFeasibility_f_0.pdf. Accessed: 15 Apr 2017.
- Mikkelsen MV, Husby S, Skov LR, Perez-Cueto FJ. A systematic review of types of healthy eating interventions in preschools. *Nutr J*. 2014;13(1):56.
- Flood J, Minkler M, Hennessey Lavery S, Estrada J, Falbe J. The collective impact model and its potential for health promotion: overview and case study of a healthy retail initiative in San Francisco. *Health Educ Behav*. 2015;42(5):654–68.
- Sadler RC, Gilliland JA, Arku G. Community development and the influence of new food retail sources on the price and availability of nutritious food. *Journal of Urban Affairs*. 2013;35(4):471–91.
- Lachance L, Carpenter L, Emery M, Luluquisen M. An introduction to the Food & Fitness community partnerships and this special issue. *Community Development*. 2014;45(3): 215–9.
- Lachance L, Carpenter L, Quinn M, Wilkin MK, Green E, Tsuchiya K, et al. Food & community: the cross site evaluation of the W.K. Kellogg Food & Fitness community partnerships. *Community Development: Journal of the Community Development Society*. 2014;45(3):227–39.
- Davidson M. *Farm to Early Care at Bedford-Stuyvesant Restoration Corporation*. CUNY Urban Food Policy Institute at the CUNY School of Public Health and Health Policy & Bedford Stuyvesant Restoration Corporation, 2016, unpublished report.
- PFC Social Impact Investors. *Comfort Food for Urban Revitalization: Bedford Stuyvesant Restoration Corporation*. 2016. Available at: <http://www.pfcsocialimpact.org/comfort-food>. Accessed 15 Apr 2017.
- Yin RK. *Case study research: design and methods*. 4th ed. Thousand Oaks, CA: Sage Publications; 2009.
- Dinour LM, Kwan A, Freudenberg N. Use of comparative case study methodology for US public health policy

- analysis: a review. *Journal of Public Health Management and Practice*. 2017;23(1):81–9.
18. Bedford Stuyvesant Restoration Corporation. Missison Statement. Available at <https://www.restorationplaza.org/about>. Accessed 15 Apr 2017.
  19. NYC Office of the Mayor. NYC Center for Economic Opportunity Poverty Measure 2005–2012. 2014. Available at: http://www.nyc.gov/html/ceo/downloads/pdf/ceo_poverty_measure_2005_2012.pdf. Accessed 15 Apr 2017.
  20. NYC Department of Health and Mental Hygiene. NYC Community Health Profile: Bedford Stuyvesant. NYC Community Health Profiles, 2015. New York, 2016. Available at: <https://www1.nyc.gov/assets/doh/downloads/pdf/data/2015chp-bk3.pdf>. Accessed 16 Apr 2017.
  21. NYC Department of Health and Mental Hygiene. NYC Community Health Profiles Atlas. 2015. Available at: https://www1.nyc.gov/assets/doh/downloads/pdf/data/2015_CHP_Atlas.pdf. Accessed 16 Apr 2017.
  22. Olson EC, Van Wye G, Kerker B, Thorpe L, Frieden TR. *Take care central Brooklyn: NYC Community Health Profiles*, Second Edition. 2006; 10(42):1–16 <https://www1.nyc.gov/assets/doh/downloads/pdf/data/2006chp-203.pdf>.
  23. Food Bank of New York City. “1 in 4 Children in New York City is at Risk of Hunger, New Study Shows,” April 23, 2014. Available at: <http://www.foodbanknyc.org/news/1-in-4-children-in-new-york-city-is-at-riskofhunger-new-study-shows>. Accessed 16 Apr 2017.
  24. Northeast Brooklyn Housing Development Corporation. Resource Guide: Community District 3 Bedford Stuyvesant. 2012. <http://www.cibsbdstuy.org/wp-content/uploads/2013/10/CB3-RESOURCE-GUIDEFINAL.pdf>. Accessed 16 Apr 2017.
  25. Bedford Stuyvesant Restoration Corporation. Annual Report 2016. 2017. Available at: https://www.restorationplaza.org/sites/default/files/BSRC_2016AnnualReport.pdf. Accessed 16 Apr 2017.
  26. Anguelovski I. Healthy food stores, greenlining and food gentrification: contesting new forms of privilege, displacement and locally unwanted land uses in racially mixed neighborhoods. *International Journal of Urban and Regional Research*. 2015;39:1209–30.
  27. Cantrell P, Heuer B. *Food hubs: small-farm aggregators scale up with larger buyers*. Wallace Center, Winrock International. 2014.
  28. New York City Economic Development Corporation. Five borough food flow. 2016. New York City Food Distribution and Resiliency Study Results. Available at: https://www.nycedc.com/system/files/files/resource/2016_food_supply-resiliency_study_results.pdf.
  29. Cooper D et al. Community recommendations for New York State Food Hub Task Force. 2015. Available at: <http://www.centerforsocialinclusion.org/community-recommendations-for-new-york-state-food-hub-task-force/>. Accessed 16 Apr 2017.
  30. Lasker RD, Weiss ES, Miller R. Partnership synergy: a practical framework for studying and strengthening the collaborative advantage. *The Milbank Quarterly*. 2001;79(2): 179–205.
  31. Woodworth M. *Battle for Bed-Stuy: the long war on poverty in New York City*. Harvard University Press; 2016.
  32. Dowell D, Farley TA. Prevention of non-communicable diseases in New York City. *Lancet*. 2012;380(9855): 1787–9.
  33. Alterman E. *Inequality and one city: Bill de Blasio and the New York experiment, Year One*. Nations Books; 2014.
  34. Cohen N, Freudenberg N. Food policy brief: illuminating the hidden food policies of the de Blasio Administration. CUNY Urban Food Policy Center. 2016. Available at: <http://www.cunyurbanfoodpolicy.org/news/2016/7/19/illuminating-the-hidden-food-policies-of-the-de-blasioadministration>. Accessed 15 Apr 2017.
  35. Freudenberg N, Atkinson S. Getting food policy on the Mayoral table: a comparison of two election cycles in New York and London. *Public Health*. 2015;129(4):295–302.
  36. Cohen N, Freudenberg N, Poppendieck. Food justice in the trump age: priorities for urban food advocates. *J Food Law Pol*. 2017. Accepted for publication.
  37. Office of the Mayor of the City of New York. Ready to launch: New York City’s implementation plan for free, high-quality, full-day universal pre-kindergarten. 2014. <http://www1.nyc.gov/assets/home/downloads/pdf/reports/2014/Ready-to-Launch-NYCs-Implementation-Plan-for-Free-High-Quality-Full-Day-Universal-Pre-Kindergarten.pdf>. Accessed 17 Apr 2017.
  38. Office of the Mayor of the City of New York. New York City community schools strategic plan: Mayor Bill de Blasio’s strategy to launch and sustain a system of over 100 community schools across NYC by 2017. <http://www1.nyc.gov/assets/communityschools/downloads/pdf/community-schools-strategic-plan.pdf>. Accessed 17 Apr 2017.
  39. NYC Health Department Launched Farm to Preschool. WABC Eyewitness News. 2014. <http://abc7ny.com/food/fresh-fruits-vegetables-coming-to-new-york-city-preschools/312664/>. Accessed 17 Apr 2017.
  40. Office of the Mayor. New York City Food Standards. Part I: Standards for Meals/Snacks Purchased and Served. Revised 2011. Available at: New York City Food Standards Available at: http://www.nyc.gov/html/dfta/downloads/pdf/community/food_standards.pdf. Accessed 17 Apr 2017.
  41. New York State Department of Agriculture and Markets—Farm to School Program in New York—Home. New York State Department of Agriculture and Markets. Albany, no date. Available at: <http://www.agriculture.ny.gov/f2s/index.html>. Accessed 17 Apr 2017.
  42. New York State Department of Health. Eat Well Play Hard in Child Care Settings. 2013. Available at: http://centertrt.org/content/docs/Intervention_Documents/Intervention_Templates/EWPHCCS_Practice-Tested_Template.pdf. Accessed 17 Apr 2017.
  43. NY State Debuts Grown & Certified Food Program. Progressive Grocer. 2016. Available at: <http://www.progressivegrocer.com/departments/produce-floral/ny-state-grown-certified-food-program-launched>. Accessed 17 Apr 2017.
  44. Foderaro LW. Cuomo’s \$1.4 billion plan targets Brooklyn in fight against poor health and poverty. *New York Times*. 2017, p. A1. Available at: <https://www.nytimes.com/2017/03/09/nyregion/cuomos-1-4-billion-plan-targets-brooklyn-in>

- fight-against-poor-health-and-poverty.html?_r=0. Accessed 18 Apr 2017.
45. New York State-New York City Regional Food Hubs Task Force Final Action Plan. Albany, N.Y. 2016 http://www.agriculture.ny.gov/FHTF_report_FINAL.pdf. Accessed 18 Apr 2017.
  46. Head Start. About Us. *Early Childhood Knowledge and Learning Center*. United States Department of Health and Human Services. 2014. Available at: <https://eclkc.ohs.acf.hhs.gov/hslc/hs/about>. Accessed 18 Apr 2017.
  47. Program Management and Fiscal Operations. Administration for Children and Families Early Childhood Learning and Knowledge Center. United States Department of Health and Human Services. 2015. Available at: <https://eclkc.ohs.acf.hhs.gov/hslc/hs/about>. Accessed 18 Apr 2017.
  48. *Healthy, Hunger-Free Kids Act of 2010*, Pub.L. No. 111–296, §243, 124 Stat. 3183–3266. 2010. Available at: <https://www.gpo.gov/fdsys/pkg/PLAW-111publ296/pdf/PLAW-111publ296.pdf>. Accessed 18 Apr 2017.
  49. United States Department of Agriculture, Food and Nutrition Service. Local Foods in the Child and Adult Care Food Program. 2015. Available at: http://www.fns.usda.gov/sites/default/files/cacfp/CACFP11_2015os.pdf. Accessed 18 Apr 2017.
  50. Hinrichs CC. Transitions to sustainability: a change in thinking about food systems change? *Agric Hum Values*. 2014;31(1):143–55.
  51. Morgan K. Nourishing the city: the rise of the urban food question in the Global North. *Urban Stud*. 2015;52(8):1379–94.
  52. Pothukuchi K, Kaufman JL. Placing the food system on the urban agenda: the role of municipal institutions in food systems planning. *Agric Hum Values*. 1999;16(2):213–24.