

Wellspring Harvest

Health Impact Assessment



Jeanette Pantoja & Lauren Southwick
SES 5330: Healthy Places
Harvard Graduate School of Design
December 20, 2017

Contents

Executive Summary	3
Introduction	6
Harvesting Health: A Health Impact Assessment	
What is Health Impact Assessment?	
Why Health Matters	
Reader's Guide	8
Methods	9
Background	10
Springfield, Massachusetts	
Worker-Owned Cooperative Model	
Case Study: Anchor-Institution Economic Development	
Wellspring Collaborative Corporation & Wellspring Harvest	
Assessment & Findings	16
Healthy Food Access	
Healthy Economy	
Equitable Community Development	
Conclusion & Summary of Recommendations	28



Executive Summary

Health impact assessment (HIA) is an emerging practice that brings together diverse sectors, including departments of planning and transportation, local, state, or tribal health departments, community members, universities, and hospitals. HIA's are structured documents that characterize the connections between health and the built environment. They identify anticipated health effects of a project, program, or policy, and aim to mitigate identified challenges. They aim to bring a greater understanding of human health outcomes to decision-making and planning processes. HIA can also serve as a strategy to engage and co-create with community members.

The goal of this HIA is to assess the potential health outcomes of Wellspring Harvest, a 10,400 square foot innovative, hydroponic urban greenhouse cooperative business. Wellspring Harvest is the newest addition to the Wellspring Collaborative Corporation (WCC), a non-profit organization that aims to create stable employment opportunities for Springfield residents through a network of mutually supportive cooperative and worker-owned businesses. WCC currently has two cooperatives, an upholstery business and window repair workshop. Wellspring Harvest aims to increase access to local, fresh produce, to create entry-level jobs and training opportunities, and to enhance the Pioneer Valley's sustainable food system. Specifically, this HIA will analyze Wellspring Harvest's influence on:

Individual-level health outcomes

Changing the nutrition of local residents

Environmental-level changes

Creation of new jobs and the environmental sustainability

Community development

Bringing different sectors together

The HIA team embarked on a rapid HIA, which included literature reviews and key informant interviews with stakeholders identified by Wellspring Harvest leadership. Each stakeholder contributed expertise and critical local knowledge to the HIA process. The HIA team identified three objectives based on conversations with key informants and WCC staff: healthy food access, healthy economy, and equitable community development.

Healthy Food Access

Objective 1. Improve local Indian Orchard and Springfield residents' access to fresh produce and consumption of vegetables

How will the greenhouse contribute to improved access to fresh produce and its consumption?

Key HIA findings:

- Robust anchor institution collaboration
- Potential gap between short-term and intermediate health outcomes
- Increased access to healthy foods for school children

Recommendations:

- Programming collaboration to address the potential gap in healthy food access
- Expand sales to include more diverse food retailers
- Collaborate on the creation of a hospital-based farmers market
- Create a Community Supported Agriculture (CSA) Program
- Create a mobile CSA

Objective 2. Increase community support for local and sustainable agricultural practices

What is Wellspring Harvest's role and position in Springfield's community garden and sustainable agricultural movement?

Key HIA findings:

- The greenhouse is seen as a "catalyst for community engagement"
- Springfield has robust community support for environmental justice and local agriculture
- Food systems educational programs will be available for a variety of audiences
- Wellspring Harvest will create a community garden adjacent to the greenhouse
- Sodexo's nutrition center and processing plant is underway

Recommendations:

- Provide educational classes for residents who wish to grow their own produce
- Collaborate with Gardening The Community and the Springfield Public School System
- Explore more ways to collaborate with Sodexo

Healthy Economy

Objective 3. Increase the number of employment opportunities for low-income individuals and provide a supportive workplace

How will Wellspring Harvest increase employment opportunities? How can workplace conditions support positive health behaviors, such as healthy eating and moderate physical activity?

HIA findings:

- Finite employment opportunities
- Extensive workforce training, education, and skill-sharing opportunities
- Strategic partnerships for dissemination of Co-op Bootcamp Curriculum
- Wellspring Harvest activities effectively position the business to serve as proof of concept for worker-owned cooperatives

Recommendations:

- WCC Co-op Bootcamp training and urban agriculture education should be accessible to the broader community
- Integrate elements of a career pathways program into partnership with Putnam Vocational School and Springfield Technical Community College
- WCC can provide additional vocational job training

Objective 4. Provide supportive workplace to improve self- and collective efficacy in the workplace and promote civic engagement

How can Wellspring Harvest improve self- and collective efficacy in the workplace and promote civic engagement?

HIA findings:

- Greater sense of confidence and pride
- Ability to effect greater civic engagement is uncertain
- Plethora of workplace training and collective decision-making opportunities

Recommendations:

- Conduct longitudinal evaluations
- Provide a workplace that aligns with WHO healthy workplace model
- Encourage and incentivize workers to participate in the Indian Orchard Neighborhood Council or other community activities

Equitable Community Development

Objective 5. Improve neighborhood environmental conditions and sense of pride by catalyzing brownfield redevelopment

Will Wellspring's re-use of the Chapman Valve site result in reduced exposure to health harms and catalyze future brownfield clean-up and reuse?

HIA findings:

- Reduced blight and risk of exposure to harmful substances
- Potential exposure risk related to cleanup standards
- Ability to catalyze adjacent brownfield redevelopment & siting of incubated businesses within Indian Orchard uncertain

Recommendations:

- Mitigate Brownfield Contamination Exposure
- Engage and Support Capacity of Indian Orchard Neighborhood Council

Objective 6. Leverage economic development and onsite community programming to enhance social capital and civic engagement

How can Wellspring Harvest promote neighborhood level social capital and empower co-op worker-owners and residents to engage in

local community development decision-making?

HIA findings:

- Community Garden & Educational Programs Match Community Interests
- with Wellspring's strengths
- Improved Perceptions of Neighborhood Quality

Recommendations:

- Ensure Adequate Staffing Community Programming
- Encourage and Participate in Neighborhood Planning

The HIA provides a snapshot of Wellspring Harvest's health impacts and challenges. The assessment is not definitive or exhaustive, but it includes illustrative examples and timely recommendations.



Introduction

Communities are increasingly looking for alternatives to traditional economic development approaches that largely measure success in number of jobs created without attention to whether those jobs provide family-supportive wages or whether they go to individuals with barriers to employment. One alternative that has garnered renewed enthusiasm is worker cooperatives. Worker cooperatives are for-profit businesses that achieve economic inclusion and access to living wages through direct ownership and democratic management by their workers. A majority of new cooperative worker-owners since 2010 are people of color, underscoring their value to addressing racial economic inequality (Policy Link 2017). Their impact is even greater when combined with anchor institution investing, whereby local institutions – hospitals, universities, local government – leverage their procurement practices to support local wealth creation. This development coincides with the emergence of a new paradigm within public health, which emphasizes the social determinants of health.

Hampden County ranks last among Massachusetts counties for health outcomes (RWJF 2017). Economic security is a major determinant of health, especially in the county's major city of Springfield. Low incomes and high unemployment rates plague Springfield, but the city is young and diverse. These are assets upon which the city can build a more inclusive economy. A coalition of organizations led by the region's

anchor institutions began meeting in 2010 with the goal of developing strategies for implementing community-based economic development that would create good-paying, entry-level jobs, enable residents to build personal assets, and revitalize Springfield's blighted neighborhoods. The Wellspring Collaborative Corporation (WCC) emerged from these efforts.

WCC is a non-profit that aims to create stable employment opportunities for Springfield's marginalized communities and build a network of mutually supportive cooperative and worker-owned businesses. WCC currently creates entry-level jobs and builds wealth for inner-city residents through an upholstery and a window repair cooperative. WCC's newest venture, Wellspring Harvest, is a hydroponic, greenhouse business that aims to increase access to local, fresh produce on a year-round basis.

Harvesting Health: A Health Impact Assessment

The successful deployment of this new worker-cooperative has the potential to improve economic security and the health status of Springfield residents. In the interest of realizing these outcomes, the Wellspring Collaborative Corporation partnered with a team of students at Harvard University to conduct a Health Impact Assessment of Wellspring Harvest. This document describes an assessment of Wellspring Harvest's

capacity to ensure better health outcomes and offers recommendations to mitigate challenges to the realization of this mission. The goal of this Health Impact Assessment is to assess Wellspring Harvest’s impact on:

Individual-Level Health Outcomes

Changing the nutrition of local residents

Environment-Level Changes

Creation of jobs and environmental sustainability

Community Development

Bringing different sectors together

What is a Health Impact Assessment?

The National Research Council Committee on Health Impact Assessment (HIA) defines HIA as a, “systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of the effects within the population. HIA provides recommendations on monitoring and managing those effects (National Research Council 2011)”. HIA brings together local and expert knowledge into one streamlined process that draws upon the connections between health and the built environment. The process can include participation from diverse stakeholders, such as departments of planning and transportation, local, state, or tribal health departments, community members, universities, and hospitals (National Research Council Committee 2011; Quigley 2006). HIA goes beyond collecting and analyzing data on health disparities and health impacts. It can serve as a strategy to engage and co-create with community members. HIA can empower communities and facilitate multi-sectoral relationships and collaborations. Equity is at the core HIA as practitioners aim to carefully consider and weigh all stakeholder input equally (Malekafzali 2011).

Why Health Matters

The Preamble to the Constitution of the World Health Organization (WHO) (1948) defines health

as “state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.” It is well-documented that “good” health is a prerequisite to work, play, and thrive individually and collectively as a society. However, there is not equal opportunity for all Americans to have “good” health. Ultimately, health outcomes are deeply entrenched in education, occupation, and income and account for 80% of premature mortality (Schroeder 2016).

The Social Ecological Model (Figure 1), proposed by Bronfenbrenner in 1986, outlines how multiple levels of influence affect one’s health, including intrapersonal factors, interpersonal processes, institutional factors, community factors, and public policy (Stokols 1996).

There is a robust body of literature illuminating social determinants of health, the conditions and environments in which “people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.” Social determinants include: access to educational, economic, and vocational training, job opportunities, transportation, healthcare services, emerging healthcare technologies, availability of community-based resources, basic resources to meet daily living needs, language services, and social support, exposure to crime, social disorder, community and concentrated poverty, and residential segregation (McGinnis et al. 2002; Cole and Fielding 2007).



*Some groups may fit within multiple levels of this model.

Figure 1. Social Ecological Model (CDC 2017).



Reader's Guide

This report is written for Wellspring Harvest, anchor institutions (e.g., hospitals, public schools), community-based organizations, and policy advocates in Springfield and in Hampden County. The document serves as a roadmap to demonstrate clear connections between sustainable economic development and health and equity outcomes. In this document you will find the following components:

Methods:

Describes the process and resources used to develop the health impact assessment.

Background:

Contextualizes the findings and recommendations of the health impact assessment in a brief description of Springfield's history, demographics, and health conditions. This sections also includes a discussion of the worker cooperative model, anchor institution investment, and the Wellspring Cooperative Corporation.

Health Impact Assessment & Findings:

Includes analysis of the existing conditions and leverages health and planning literature to explore the connections between Wellspring Harvest activities and health. HIA topics are organized according to project themes and objectives.

Conclusion & Summary of Recommendations:

Summarizes key takeaways from the assessment and lists actions that the HIA team considers valuable for the implementation of Wellspring Harvest's health objectives.



Methods

HIA consist of the following steps:

1. Screening

Determines whether a proposal is likely to have health effects and what type of information is needed.

2. Scoping

Establishes the objectives, target population, data sources, methodologies, and team members.

3. Assessment

Consists of a two-step process to first describe the baseline health status of the affected population and then to assess potential impacts.

4. Recommendations

Based on steps 1-3, provides design alternatives and identify barriers and facilitators influencing the variable of interest.

5. Reporting

Documents and presents the findings and recommendations (National Research Council Committee 2011)

The team embarked on a rapid HIA process (Forsyth et al 2010). It includes steps 1-5 with key informant interviews rather than a participatory workshop. While a workshop was not conducted for the purposes of this report, WCC could consider a workshop following this process. Participants were identified by the WCC leadership as key stakeholders willing to contribute expertise and critical local knowledge. We spoke to the following individuals:

Doreen Fadus

Vice President of Mission Integration and Community Health and Wellbeing at Mercy Medical Center

Zaida Govan

President of Indian Orchard Neighborhood Council & Wellspring Harvest Board Member

Brennan Tierney (telephone interview)

UMass Amherst Student and WCC intern

Frank Robinson, Ph.D.

Vice President at Baystate Medical Center

Fred Rose, Ph.D.

WCC Founder and Co-Director, and Lecturer at UMass Amherst Center for Public Policy and Administration



Background

Springfield, Massachusetts

Springfield developed along the eastern bank of the Connecticut River and is the economic and cultural link between Hartford, Connecticut and the Five Colleges region to the north. At 154,000 people, it is the third largest city in Massachusetts and fourth largest in New England. Springfield is also the largest city in the Springfield Metropolitan Area, which has a population of 658,000 (Census Reporter 2017).

Suburban development and migration have dramatically transformed Springfield over the last few decades. Housing development on surrounding agricultural lands spread population growth to Springfield's suburbs. Between 2000 and 2010, Springfield grew by less than one percent. In contrast, the nearby communities of Belchertown and East Longmeadow grew by 13% and 11.5%, respectively (Pioneer Valley Planning Commission 2014). The Springfield Metropolitan Statistical Area is the most segregated in the U.S. for Latino/Hispanics and 22nd in the country for Blacks according to the University of Michigan's Center for Population Studies' analysis of dissimilarity, which examines the degree to which people of color are distributed differently than Whites across census tracts (Partners for a Healthier Community 2015). Clear disparities in wealth, levels of educational attainment, and poverty exist between Springfield and its suburbs.

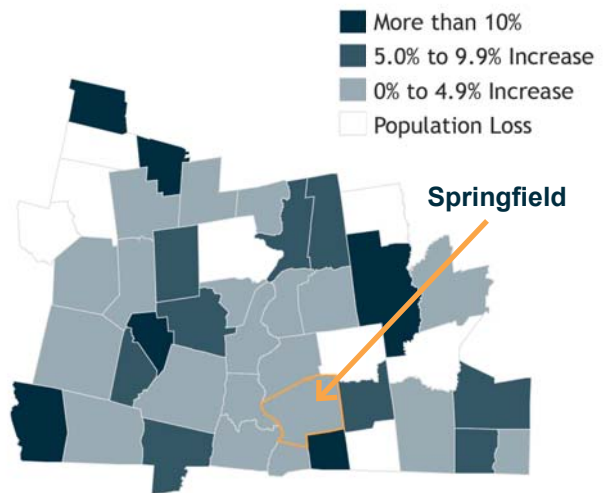


Figure 2. 2000-2010 Population Growth (Pioneer Valley Planning Commission 2014).

The arrival of new immigrants to Springfield's urban core kept the city's population stable and injected greater diversity into its economic and cultural fabric. Springfield is a diverse, culturally rich, multi-ethnic city. People of color compose a majority share of the population in most of Springfield's neighborhoods and in Springfield overall (66%). An estimated 10% of Springfield's residents are foreign-born and 39% of residents speak a language other than English at home, most frequently Spanish. The city's Hispanic community nearly double in size between 2000 and 2010, from 27% to 42% making them the largest ethnic group in Springfield. Puerto Ricans make up much of the Latino population (82%). Over the

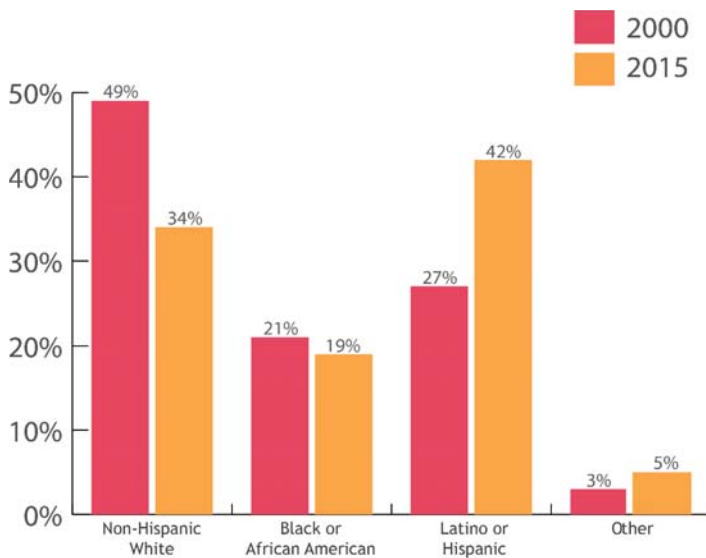


Figure 3. Change in Race/Ethnic Composition 2000-2015 (US Census Bureau 2010 and 2015).

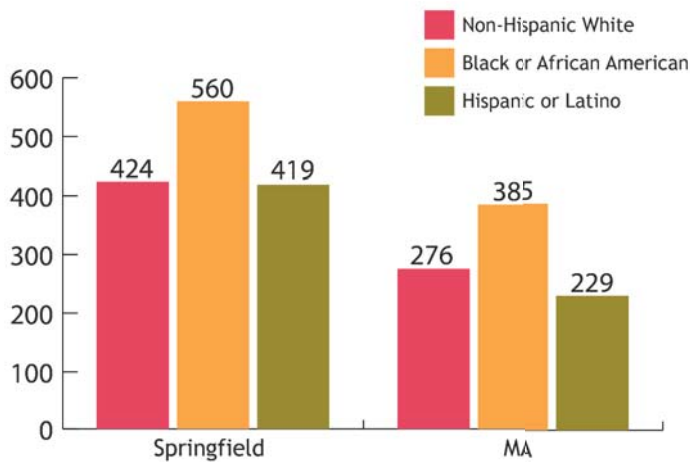


Figure 4. 2010 Age-adjusted Premature Mortality Rates by Race/Ethnicity (per 100,000) (Partners for a Healthier Community 2015).

same period, the city experienced a drop in Black residents (21% to 19%) and Non-Hispanic White residents (49% to 34%) (US Census Bureau 2000 & 2015). These shifts have profound implications for health services and drive a need for culturally and linguistically competent communication, environments, and methods.

Springfield is also a city of families. Approximately 57 percent of all households in Springfield comprise of families with children. In comparison, about 48 percent of households in Massachusetts are family households with children. The population of Springfield also skews younger than the rest of the Commonwealth. The median age is 32, and 27 percent of the population is under 18 years of age

compared to 39 and 21 percent in Massachusetts, overall (US Census Bureau ACS 2015).

Hampden County has been ranked last in Massachusetts by the County Health Rankings for six years in a row. Springfield is home to three major hospitals: Baystate Medical Center, Mercy Medical Center, and Vibra Hospital of Western Massachusetts. Baystate Medical Center is a not-for-profit, integrated health care system that serves over 800,000 people in western Massachusetts and New England. It is a teaching hospital with the region's only level 1 trauma center. Mercy Medical Center is a faith-based, non-profit organization and a member of the Trinity Health System. Vibra Hospital of Western Massachusetts specializes in rehabilitation and long-term acute care. Unfortunately, having hospitals and medical centers in Springfield does not translate to equal access to medical services or widespread improved health outcomes. Springfield has high rates of:

Poor physical activity and nutrition: In the 2013 Center for Disease Control and Prevention (CDC)'s Behavioral Risk Factor Surveillance System (BRFSS) survey in Massachusetts, only 9% of respondents met the vegetable consumption recommendation and 14% met the fruit consumption recommendations. Only half of Hampden County adults (53%) met the guidelines for aerobic physical activity, and less than a quarter (21%) met the guidelines for both aerobic and muscle-strengthening activity. Interestingly, these percentages are comparable to national rates (Hampden County HIP 2017).

Chronic conditions (e.g., obesity, diabetes, heart disease): Approximately 30% of adults are obese while 60% of Springfield's K-12 students are overweight or obese. Excess weight, especially in childhood and adolescence, is a major risk factor for a myriad of medical, social, and psychological conditions with serious short- and long-term implications (Ogden 2011). Springfield has high rates of heart disease and diabetes and higher mortality rates resulting from these conditions. Heart disease is the leading cause of death and diabetes mortality rate is 52.3 per 100,000 compared to 35.3/100,000 in

Massachusetts (Szegda 2014; Hampden County Health Improvement Plan 2017).

“The 2014 Springfield Health Equity Report - Looking at Health through Race and Ethnicity” identified priority community needs related to these health outcomes. They include:

Poverty Reduction: Residents of Springfield are among the most economically stressed in the Commonwealth. The Census Bureau reported that in 2015, Springfield’s per capita income in past 12 months was \$18,553, which 30% lower than the rest of Massachusetts. The median household income in the city at \$34,728 is about half that of the state and poverty rate, at 30%, is almost three times as common among Springfield residents as among residents of Massachusetts, overall. Employment rates and individual incomes are a major social determinant of health. Median income levels are lower, and unemployment and poverty rates are higher among Latinos and Blacks (Community Health Needs Assessment 2016). Springfield’s poverty rate is especially high among children (44%), Hispanic residents (45%), and residents with less than a high school diploma (41%). Raising incomes is critical to ensuring improved health outcomes and quality of life (Hampden County Health Improvement Plan 2017).

Elimination of Institutional Racism: Springfield residents note that institutional racism, defined as

racial/ethnic inequities in access to goods, services, and opportunities such as quality education, housing, employment opportunities, medical care and facilities, and a healthy physical environment, plagues people of color in their community (APA 2014). Institutional racism is closely correlated with racial residential segregation, which has already been described as severe in Springfield. Racial residential segregation is a key determinant of access to education and employment opportunities (Williams and Collins 2001). Both institutional racism and segregation are fundamental contributors to racial/ethnic disparities in health.

The loss of manufacturing and outmigration of employment are key contributors to Springfield’s economic challenges. Springfield has a long, cherished history of innovation and manufacturing. Less than 10 percent of the community now works in manufacturing, down from 14% in 2000. The labor force participation rate (59%) is lower than that of the state, and unemployment hovers around 7.8 percent. Unemployment is worse in neighborhoods nearest the downtown, where levels are as high as 15.3 percent (US Census Bureau 2015). Present conditions contrast dramatically from the early 1980s, when the city boasted more jobs in manufacturing than there were residents working in this industry. Many of these jobs were eliminated or moved out into neighboring suburbs (Federal Reserve 2010). Springfield’s economy and ability to provide essential services was

Springfield Compared to Massachusetts Overall

-\$33,835
Lower Household Median Income

-13.4%
Fewer Adults with a High School Diploma

+8.2%
Higher Unemployment Rate

+18.4%
Higher Poverty Rate

Source for all statistics: US Census Bureau 2015

further undermined in 1992 when state funding changes cause Springfield to lose approximately 80 percent of its non-school state aid (Urban Land Institute 2006).

However, Springfield's young, diverse population and location among the greatest concentration of educational, financial, and medical institutions in western Massachusetts are strong foundations upon which to build a better future for its residents.

Worker-Owned Cooperative Model

Worker-owned cooperatives have a long history, stemming from the Industrial Revolution in England during 1750-1850s. An exemplary model is the Mondragon Corporation. Formed in 1956 as a response to high rates of poverty, loss of jobs due to globalization, and economic instability. Over several decades, the model expanded from a single cooperative polytechnic school to a network of 256 industrial, retail, finance, educational, research, development firms internationally (Errasti et al 2003; Arando et al 2010).

Mondragon inspired several other cooperatives. Two notable examples are the Women's Action to Gain Economic Security (WAGES), now Prospera in California's Bay Area, and the Evergreen Cooperative Initiative in Cleveland, Ohio. Prospera is a non-profit 501c (3) that partners with low-income Latina immigrants to build collectively owned, local cleaning businesses. Prospera addresses the inequality and lack of economic mobility for low-wage workers, especially Latinas. In addition to stable employment, cooperatives provides multiple avenues to enhance their members' talents, leadership, and creativity to advance social justice, women's empowerment, and community transformation (Prospera 2017).

The healthcare industry growing. The American Hospital Association reported that annually hospitals spend nearly \$340 billion on goods and services alone. Rather than contracting out to major corporations for their goods and services, local institutions can employ and invest in local businesses (Norris and Howard 2015).

The Evergreen Cooperative Initiative was created in 2009 to tap into the institutional capacity of Cleveland's large university and medical centers as a means to address the city's economic challenges and community concerns about lack of job opportunities (Howard and Kuri 2010).

Similar to Springfield, Cleveland is a post-industrial city that has faced significant financial hardships. In 2009, Cleveland ranked second in lowest median income among American Cities. As a part of the Greater University Circle Initiative, the Cleveland Foundation helped found the Evergreen Cooperative Initiative to create living wage jobs and asset building opportunities in six low-income neighborhoods in the Greater University Circle area (Alpertovitz et al 2009).

Evergreen is tapping into medical centers' resource and service needs, such as laundered linens, energy, and fresh produce (Evergreen 2017; Alperovitz et al 2009). Evergreen's laundry service is the region's first LEED-certified industrial laundry facility. The laundry business quickly demonstrated viability. The cooperative expanded to solar panels by forming Ohio Solar to meet the need of clean energy for these large institutions. After only one year of operation, the Evergreen Laundry and Ohio Solar each employed more than twenty residents. Based on their rapid growth and success indicators, Both organizations are expected to double the number of employees. Ohio Solar is expected to employ more than 100 people in the next 3-4 years. Most recently, they created a five acre-hydroponic greenhouse, Green City Growers Cooperative, that sells lettuce and herbs to large institutions (Evergreen 2017).

Evergreen's alternative business model is reallocating funds to the local community. It is "restor[ing] local economic vitality, providing jobs for hard-to-employ people, and rebuilding urban fabrics and rural value chains," (Norris and Howard 2015).

Case Study: Hospital Anchor-Institution Economic Development



“As a trusted partner in total health, we need to collaborate with local business and community leaders, and even our competitors, to create communities that are among the healthiest in the nation. This is critical to fulfill our mission and to make healthcare more affordable for all.” - Bernard Tyson, CEO of Kaiser Permanente

Kaiser Permanente is the nation’s largest non-profit integrated health system. It advances a concept of “total health,” which encompasses the physical, mental, and social well-being of its members and the communities it serves. The institution embarked on an environmental stewardship campaign with the goal of procuring all of the food it serves in its facilities locally or from farms and producers that use sustainable practices, including the responsible use of antibiotics, by 2025. Kaiser Permanente is also deeply committed to serving the local community and prioritizes supplier diversity. It purchased more than \$1.5 billion from women and minority-owned firms in 2014 alone.

The institution is also a leader in the farmers market movement. It hosts more than 50 farmers markets at its facilities and in its communities that help staff and local residents eat well and make good choices by increasing access to fresh produce. Kaiser Permanente’s food procurement practices have tremendous social, economic,

and environmental impact. By investing in the community, they are addressing the non-clinical determinants of health, such as food access and economic stability and vitality (Heiman and Artiga 2015; Norris and Howard 2015).

Other cities and institutions are following suit. In Detroit, MI, the Henry Ford Health System, in partnership with Detroit Medical Center and Wayne State University, are working to localize procurement. Their primary objective is to revitalize a de-industrialized city by investing in the local community. Although the relationship is still in its infancy, it was reported that the health care organizations already redirected more than \$18 million to support local businesses (Norris and Howard 2015).

In La Crosse, WI, Gundersen Lutheran Health System co-founded the multi-stakeholder owned Fifth Season Coop. It is a full-service, local food broker serving Madison, Milwaukee, Chicago, and Minneapolis. Fifth Season’s sustainable, local product line includes more than 130 products and a full line of quality fresh, frozen and specialty items (Fifth Season Coop 2017). Currently, it includes 33 independent farms, three producer groups, and seven processors, (Norris and Howard 2015). Gleaning from Kaiser Permanente, there are tremendous opportunities to improve population health by supporting a community’s economic vitality and access to healthy foods.

Figure 5. Wellspring Harvest Site Plan



Wellspring Collaborative Corporation and Wellspring Harvest

Wellspring Collaborative Corporation (WCC) is a non-profit that aims to create stable employment opportunities for Springfield's marginalized communities and build a network of mutually supportive cooperative and worker-owned businesses.

- WCC's upholstery and window repair cooperatives have proved successful in leveraging local institution procurement to employ Springfield residents.
- Wellspring Upholstery Cooperative delivers high-quality and affordable re-upholstery services while the Old Window Workshop is a women-owned window restoration cooperative offering a less expensive and more environmentally friendly alternative to window replacement.

This report focuses on WCC's most recent venture, Wellspring Harvest, a 10,400 square foot innovative, hydroponic urban greenhouse cooperative business. Wellspring Harvest will cater to local anchor institutions' procurement needs through an estimated production of 250,000 pounds of produce each year, including lettuce varieties, baby bok choy, baby kale, basil and other herbs (Rose and Kawano 2017).

Wellspring Harvest addresses job creation needs while providing fresh, local year-round produce for the community. It is expected to increase access to produce for Indian Orchard and Springfield residents, create new jobs, spur future worker-owned cooperatives, and bridge anchor institutions and other stakeholders together. It is a catalyst to community capacity and wealth building.



Assessment & Findings

WellspringHarvest is expected to impact community conditions and improve health outcomes over time. Leveraging our aforementioned scoping research and our key informant interviews, we created logic models to conceptualize and track potential health impacts over time (see attachment). A logic model is a road map that presents the “shared relationships among the resources, activities, outputs, outcomes, and impact for your program. It depicts the relationship between your program’s

activities and its intended effects.” Logic models help answer the where, how, what questions: Where are you going? How will you get there? What will show that you’ve arrived (CDC 2017)? In assessing the impact, the HIA team developed the following priorities: healthy food access, healthy economy, and equitable community development. We identified two community objectives and probing question(s) for each impact priority.

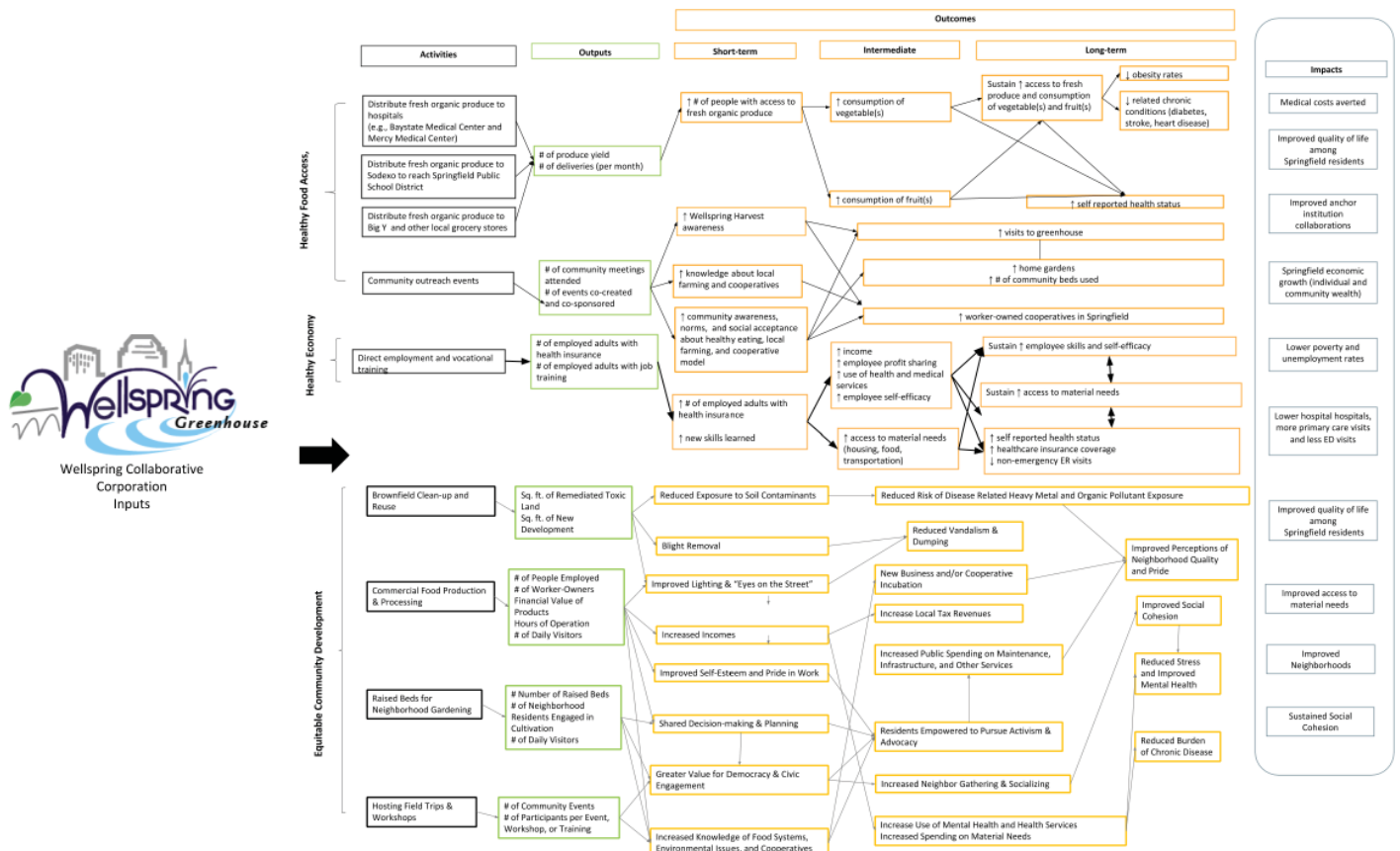


Figure 6. Wellspring Harvest Logic Model

Health Impact Priorities & Objectives

Healthy Food Access

Objective 1.

Improve local Indian Orchard and Springfield residents' access to fresh produce and consumption of vegetables

How will the greenhouse contribute to improved access to fresh produce and its consumption?

Objective 2.

Increase community support for local and sustainable agricultural practices

What is Wellspring Harvest's role and position in Springfield's community garden and sustainable agricultural movement?

Healthy Economy

Objective 3.

Increase the number of employment opportunities for low-income individuals and provide a supportive workplace

How will Wellspring Harvest increase employment opportunities? How can workplace conditions support positive health behaviors, such as healthy eating and moderate physical activity?

Objective 4.

Provide supportive workplace to improve self- and collective efficacy in the workplace and promote civic engagement

How can Wellspring Harvest improve self- and collective efficacy in the workplace and promote civic engagement?

Equitable Community Development

Objective 5.

Improve neighborhood environmental conditions and sense of pride by catalyzing brownfield redevelopment

Will Wellspring's reuse of the Chapman Valve site result in reduced exposure to health harms and catalyze future brownfield clean-up and reuse?

Objective 6.

Leverage economic development and onsite community programming to enhance social capital and civic engagement

How can Wellspring Harvest promote neighborhood level social capital and empower co-op worker-owners and residents to engage in local community development decision-making?



Healthy Food Access

Objective 1. Improve local Indian Orchard and Springfield residents' access to fresh produce and consumption of vegetables

Existing Conditions

Nearly 15% of Springfield residents experience food insecurity (i.e. lack of access and/or quantity of nutritious food for household members) and nearly 16,000 residents live in food deserts, which are areas that lack access to nutritious and affordable food (Urban Agriculture Committee 2014; Luan 2015). Food desert neighborhoods include Bay, Pine Point, Metro Center, and Upper Hill (Figure 7). Without grocery stores, many residents rely on corner stores and convenience stores, which mostly include energy dense food products and a limited selection of fruits and vegetables. The Springfield Food Policy Council reports that in the Mason Square community, households experience moderate to severe food insecurity and fall into the “meal gap,” where they

miss meals due to economic constraints and need to turn to charitable food assistance.

Additionally, several of the key informants attested to high rate of school children eligible for free or reduced lunch and the poor quality of food in local schools. Schools lack on-site processing capacity and most of the school currently served in the schools is processed in Rhode Island. One informant shared the telling “sweet potato” anecdote. One group of elementary school students grew sweet potatoes in their school’s garden. Since the processing plant is in Rhode Island, the locally grown sweet potatoes traveled over 85 miles to Sodexo’s processing facility. The students had to wait several days to enjoy the fruit of their labor, and in the process, much time, money, and energy was expended. This anecdote is a snapshot of the frustration of food access issues in Springfield and especially in Springfield Public Schools. There is a lot of interest among various Springfield institutions to dramatically improve the quality of food prepared.

Connections to Health

A large body of evidence supports that inequitable food access contributes to “chronic health conditions [such as obesity] and is related to higher mortality rates and years of potential life lost (Gallagher, 2007).” Black, Moon, and Baird (2014) conducted a literature review to analyze the body of evidence on the role of the food environment on dietary differences in developed countries among adults aged 18-60 years of age. Overall, they found strong evidence for inequities in food access in the U.S. Neighborhood median income is closely correlated with food access. More affluent neighborhoods typically have more grocery stores and food outlets (Black et al 2014). However, trends are not as strong for other high-

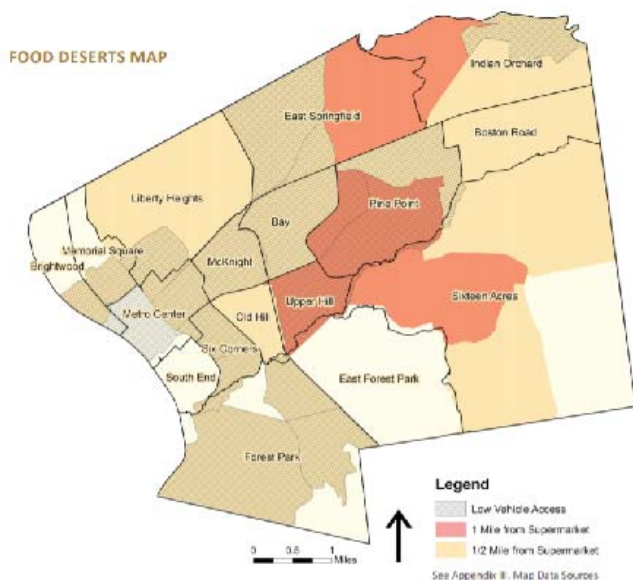


Figure 7. Springfield Food Desert Map (Partners for a Healthier Community 2014)

income countries. Their analysis also highlighted the role of racial segregation and food access. Specifically, retailers are less likely to move into black neighborhoods. This finding is directly applicable to Springfield, since it is one of the most racially and ethnically segregated cities (Szegda 2014).

Potential Health Impacts

Since Wellspring Harvest is contracting with two medical centers and Springfield's public schools (i.e. Sodexo) and select grocery stores and food cooperatives, such as Big Y Supermarkets, River Valley Market, Green Fields Market, and Squash Trucking, the produce will reach Springfield residents. Equitable and sustained access to healthy foods is the first step in improving individuals' dietary patterns. However, it is important to note that access to produce bridges one gap while additional support is needed to inform, engage, and empower individuals to consume the produce and/or prepare healthy meals.

Key Impact Assessment Findings

Robust anchor institution collaboration: Wellspring Harvest's business plan highlights long-term and sustainable contracts, which are expected to increase food access in Springfield and Indian Orchard's food deserts.

Potential gap between short-term and intermediate health outcomes: Providing food access does not directly translate into health behaviors. There is an implicit assumption of, "if we build it, they will come" mentality.

Increased access to healthy foods for school children: Key informants highlight pre-existing healthy food options at hospitals. However, the procurement of local produce is expected to result in a net benefit for Springfield Public Schools, which lack an alternative local option.

Recommendations

To ensure equitable food access and consumption, the HIA team recommends:

Programming collaboration to address the potential gap in healthy food access: Wellspring Harvest could collaborate with Baystate or Mercy Medical Centers' nutrition staff and community health workers to conduct food preparation and cooking demonstrations and share recipes.

Expand sales to include more diverse food retailers: Wellspring Harvest can contract to other grocery stores serving Springfield, such as Stop & Shop, C-Town, or ShopRite to ensure its produce is available to more neighborhoods.

Collaborate on the creation of a hospital-based farmers market: Similar to Kaiser Permanente's model, a permanent farmers market at the hospital can provide continued food access for patients and caregivers. A key informant mentioned how hospitals can prescribe "eating and healthy food," and how this initiative can bridge healthy food access once patients leave the hospital.

Create a Community Supported Agriculture (CSA) Program: Wellspring Harvest can expand access to include CSA programs for Springfield residents at hospitals and community centers. CSA is a long-term sustainable solution to food access for community members and to facilitate continued healthy food access. Similarly, this initiative can bridge healthy food access one patients leave the hospital. It is recommended to work with the Indian Orchard Neighborhood Council to identify best how to reach additional Springfield residents.

Create a Mobile CSA: A key informant recommended a mobile CSA truck as a best practice. Collaborate with Go Fresh, a mobile farmers market that visits food deserts throughout Springfield.

.....

Objective 2. Increase community support for local and sustainable agricultural practices

Existing Conditions

Over the last decade, there has been growing interest and support for local and sustainable agricultural practices in Springfield. There are over ten community gardens. Most prominently, Gardening The Community (GTC), is a food justice organization that engages youth to grow their own produce. GTC uses urban agriculture to promote sustainable living and build healthy and equitable communities. Located in Mason Square, GTC uses vacant and abandoned lots to grow produce for their participants' use. They also sell their crops to Mason Square Farmers Market, local restaurants, and bodegas/corner stores (Gardening The Community 2017). GTC was highlighted as a premier organization by all of our key informants. In addition to GTC, the Putnam Vocational School also offers an educational greenhouse program. Students can concentrate in arboriculture, greenhouse management, floriculture, landscaping and turf management, and natural resources – park management.

Connections to Health

Local agriculture is noted to improve a variety of health variables. The Sustainable Agriculture Research and Education Program and the Agricultural Sustainability Institute at UC Davis conducted a literature review and found that local agricultural practices improve food access and security, increase fruit and vegetable consumption, improve food and health literacy as well as general well-being which includes mental health and physical activity (Labrador 2016).

Potential Health Impacts

Community partnerships and outreach events play a large role in improving awareness of local agriculture practices which then shapes food access as well as norms about healthy foods.

A large study in Flint, Michigan, a post-industrial and majority low-income city found that when individuals or their family members partake in a

community garden they are three and a half times more likely to consume more fruits and vegetables than individuals without a community gardener in their network (Alaimo et al. 2008).

Key Impact Assessment Findings

The greenhouse is seen as a “catalyst for community engagement”: The stakeholders want to leverage the greenhouse as an incubator for learning and community engagement. A key informant noted that if successful, the greenhouse will be “contagious.”

Springfield has robust community support for environmental justice and local agriculture: Multiple key informants highlighted GTC as a leading organization.

Food systems educational programs will be available for a variety of audiences: The program will include tours of the greenhouse to teach residents and students about hydroponic growing and to test new crops for production.

Wellspring Harvest will create a community garden adjacent to the greenhouse: Community garden beds and community section of the greenhouse are underway but need to be executed promptly to address community needs and requests.

Sodexo’s nutrition center and processing plant is underway: (Springfield Public Schools 2017), it is seen as an much needed infrastructure to foster agricultural education, employment opportunities, and culinary training.

Recommendations

Leveraging Springfield's strengths and already strong support for community gardens, it is recommended that Wellspring Harvest:

Provide educational classes for residents who wish to grow their own produce: A key informant highlighted how food can be grown “everywhere” but residents need the knowledge and resources to do so. If possible, couple gardening demonstrations with a mini-garden starter kit. Engage local community centers to provide adult gardening classes and pilot new produce that are both culturally specific and seasonal. Explore a collaboration with Springfield Housing Authority to ensure opportunities reach residents of the nearby public housing developments.

Collaborate with Gardening The Community and the Springfield Public School System: to build and sustain community gardens tailored to children and youth and to share food systems educational resources and opportunities.

Explore more ways to collaborate with Sodexo: Sodexo is building a 62,000 square foot culinary and nutrition center at 75 Cadwell Drive, only 2.5 miles from Wellspring Harvest, 121 Pinevale St. Sodexo is a leading food services and facilities management company. Forging a working relationship could be both financial viable and advance community programming goals.



Healthy Economy

Objective 3. Increase the number of employment opportunities for low-income individuals and provide a supportive workplace

Existing Conditions

Many Springfield residents face significant barriers to being hired into and/or remaining employed in area jobs, especially individuals with low educational attainment or a criminal record (Hampden County Health Improvement Plan 2017). Springfield's labor force participation rate (59%) is lower than that of the state, and unemployment rates range from 7.8-15.3% for different neighborhoods. Unemployment also varies greatly by race. The unemployment rate hovers around 13.3% overall, but non-Hispanic whites have a rate of 7.9% compared to 17% for Hispanics/Latinos (US Census Bureau 2015). Springfield's employment landscape has deteriorated in the last few decades. Manufacturing, once the core of the city's industrial sector, only employs 9.8% of Springfield workers. It employed 34 percent of Springfield workers in 1960. Many employers closed shop, but a significant proportion moved to Springfield's outskirts, where they continue to provide employment for semi-skilled workers in the Springfield metro area. Almost half of Springfield workers are employed outside of the city (US Census Bureau 2015). The distance between Springfield's residential neighborhoods and these jobs is especially a barrier for Springfield's poorest workers, which are concentrated near downtown (Federal Reserve 2010).

Connections to Health

Unemployment and lack of occupational opportunities influence health on several levels.

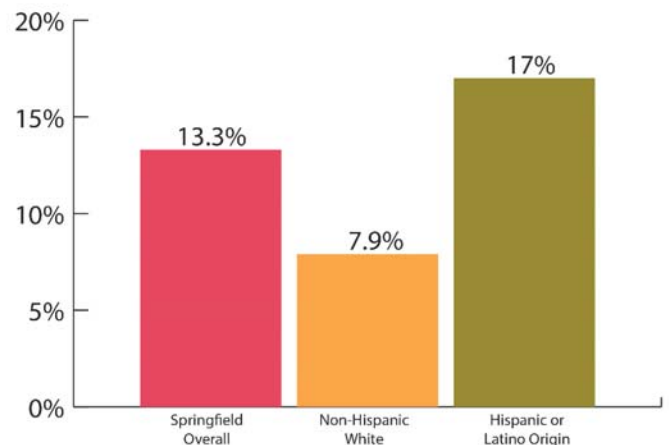


Figure 8. Springfield Unemployment 2015 (US Census Bureau 2015)

The seminal Whitehall Study in the UK found that job insecurity has been linked to several adverse health outcomes, such as mental health, psychosomatic symptoms, loss of self-esteem, anxiety, and minor psychiatric symptoms, lower levels of self-reported health, and increased incidence rates of hypertension, coronary heart disease, and myocardial death (Marmot and Allen 2014; Schroeder 2016). In contrast, better wages make it easier for individuals and families to access quality housing in a healthy neighborhood, childcare, more nutritious foods, and healthcare services. Good jobs provide safe working conditions and opportunities for upward mobility (RWJF 2013). Workforce training and elimination of barriers to for individuals of different abilities are key to promoting access to good employment.

Potential Health Impacts

Wellspring Harvest proposes to grow from five to nine employees within three years of operation. Employees will receive significant on-site training, and some training opportunities will also be available

to students at Putnam Vocational High School and Springfield Technical Community College. Long term, Wellspring Harvest is anticipating incubation of other food related businesses employing 50 people within five years (Rose and Kawano 2017).

Harvest is expected to employ 5 to 9 employees in the first three years, there is a limited reach of improving income inequities on a large scale. If feasible, provide opportunities to develop capacity around worker co-ops more frequently and in diverse settings (e.g. churches and community events) to attract and reach more individuals and to bring different sectors together.

Key Impact Assessment Findings

Finite employment opportunities: Since Wellspring Harvest expects to employ 5-9 employees in the next three years, the co-op is unlikely to address community-level income inequities in the near to mid-term.

Extensive workforce training, education, and skill-sharing opportunities: Task rotation maximizes on-the-job learning. Similar skill building opportunities will be extended to local students. These skills can empower students and workers to move into jobs with higher skill requirements and pay, or alternatively, transfer this knowledge to the development of a business.

Strategic partnerships for dissemination of Co-op Bootcamp Curriculum : WCC offers a wealth of affordable opportunities for training in the development of a worker-owned cooperative and has established partnerships with key entities, such as the Springfield Technical Community College.

Wellspring Harvest activities effectively position the business to serve as proof of concept for worker-owned cooperatives: Its financial viability and community-oriented business model are intended to inspire other cooperatives. A key informant highlighted two additional worker co-op opportunities: housecleaning and lawn care. Another informant noted that Wellspring's Harvest eventual success will be measured "not in the number of employees, but number of worker cooperatives in the community."

Integrate elements of a career pathways program into partnership with Putnam Vocational School and Springfield Technical Community College: Capitalize on educational and internship collaboration with these institutions to ensure that participating students are well positioned for WCC or alternative worker-cooperative business growth or incubation job opportunities. Incentivize their participation in Co-op Bootcamp or similar training.

WCC can provide additional vocational job training: Collaborate with medical centers' Human Resources department to provide additional vocational job training, such as food processing, catering, and retail sales.



Objective 4. Provide supportive workplace to improve self- and collective efficacy in the workplace and promote civic engagement

Existing Conditions

A supportive workplace can drastically influence one's health and well-being. Research identified the importance of being able to set the pace of work, task variation, autonomy, learning new skills and the opportunity to apply them, and sense of meaning and connection in the workplace (Griep et al. 2015). Finding research literature about self- and collective-efficacy among members of worker-owned cooperatives was a challenge for the HIA team. A study of unionized food cooperative employees in Vermont, found that a union, rather than the cooperative structure, was a primary vehicle for employees to influence workplace decisions and encourages civic engagement outside the workplace (Reuge and Mares 2016).

Recommendations

WCC Co-op Bootcamp training and urban agriculture education should be accessible to the broader community: Since Wellspring

Connections to Health

Leading health theorist, Albert Bandura proposed that self-efficacy and collective-efficacy, more simply understood as confidence, are key factors for achieving all types of behavior change, from health behaviors to civic engagement. Self-efficacy is a person's confidence in his/her ability to perform behavior that leads to outcome while collective efficacy is belief in the ability of group of individuals to perform a concerted action to achieve an outcome (Bandura 2001). Perceived confidence to fulfill occupational demands affects both the psychosocial (e.g. stress) and physical health of employees. Individuals who perceive low confidence exhibit physical and emotional exhaustion, lack of any sense of personal accomplishment, and occupational disengagement through cynicism about one's work (Bandura 2000). Low occupational confidence can lead to job-strain. First discussed in Karasek's Job Demand-Control Model, job strain is the physical and psychological hardships embedded in inadequate power to respond to occupational demands and expectations. Job strain is shown to increase heart disease, poor job satisfaction, and "burn-out" (Egger and Dixon 2014).

Potential Health Impacts

The worker-owned cooperative model strives to encompass both supportive activities that foster productivity as well as confidence. These activities are building blocks to promote civic engagement outside of the workplace (Reuge and Mares 2016). For example, worker owners engage in on the job democratic decision making that provides insights into their capacity for mutual governance and operational agreements. Exposure to and intimate knowledge of these processes are expected enhance employees' agency to advance equitable practices and community transformation (Reuge and Mares 2016). Melissa Hoover, Executive Director of the U.S. Federation of Worker Cooperatives highlights that the cooperative model is inextricably linked to addressing social justice. Specifically, "co-ops are a way to build equity in society – not just financial equity but societal equity for people who have traditionally been left out," (Casper-Futterman 2011).

Key Impact Assessment Findings

Greater sense of confidence and pride: Digital story telling project focused on other WCC businesses has captured some evidence of improved worker self-confidence. Continuity of leadership and institutional culture likely to produce similar impact at Wellspring Harvest.

Ability to effect greater civic engagement is uncertain: There is a paucity of research that evaluates the effects, both short- and long-term, of workplace democratic organizations and worker-owned cooperatives on collective efficacy and civic engagement. (Hatcher 2007)

Plethora of workplace training and collective decision-making opportunities: Enhances sense of pride and belonging while developing skills transferable to civic spaces

Recommendations

Conduct longitudinal evaluations: WCC's connections to UMass and other local educational institutions are an opportunity to fill the gap in research linking worker-ownership to better health and civic engagement. Track employees health outcomes, confidence, and civic engagement over time.

Provide a workplace that aligns with WHO healthy workplace model: The World Health Organization (WHO) proposed a healthy workplace model, where "workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being," (WHO 2010). Their model includes health and safety concerns regarding the physical work environment. This includes work organization, workplace culture, providing support and encouragement of healthy lifestyles, and various pathways to participate in the community to improve the health of workers, their families, and members of the community (WHO 2010).

Encourage and incentivize workers to participate in the Indian Orchard Neighborhood Council or other community activities.



Equitable Community Development

Objective 5. Improve neighborhood environmental conditions and sense of pride by catalyzing brownfield redevelopment

Existing Conditions

This section specifically focuses on the potential impacts of neighborhood development associated with the siting of Wellspring Harvest in the Indian Orchard neighborhood (Figure 9). Indian Orchard is located on the northeast corner of Springfield. The ability to generate power from the Chicopee River attracted many large textile operations starting in the mid-1800s and spurred Indian Orchard's early growth. Housing and commercial development soon followed to meet the need of the factories' workers. As a result, Indian Orchard developed separately from Springfield and features a diverse mix of uses and residential densities (Springfield 2015). The neighborhood has its own identity and main street.

Wellspring Harvest is located on 1.5 acres of the old Chapman Valve site. There have been several efforts to redevelop the site within the past 20 years (masslive.com 2015). The Indian Orchard Neighborhood Council has indicated a preference for development with jobs and is engaging local businesses to generate ideas for future uses of the neighborhood's vacant sites.

Chapman Valve employed nearly 3,500 people at its peak. The manufacturer left a legacy of contamination, which includes uranium, oils, asbestos, and polychlorinated biphenyl (PCBs). The city has made extraordinary efforts to remediate the 54 acre site and find new users.

In 2015, the city released an request for bids on a portion of the site with no success. That same year, WCC approached the city with a proposal to locate Wellspring's new greenhouse venture on the site (masslive.com 2015 and 2016).

Connections to Health

The elements of a healthy neighborhood include protection from harmful exposures including pollution and crime, improved walkability and transit to community resources, and diverse housing opportunities. Older neighborhoods with a legacy of industrial activity often face barriers to redevelopment stemming from a prevalence of brownfield sites, which can expose nearby residents to harmful substances. Indirectly, vacant and blighted lots may provide opportunities for crime and can discourage local economic activity (Berman and Forrester 2013).

Good planning can catalyze remediation of brownfield sites and prevent future exposures through careful siting of new industrial and commercial land uses. Redevelopment can also enhance access to community resources, including jobs and recreational spaces, through the creation of new sites and improved mobility and public realm infrastructure.

Potential Health Impacts

WCC purchased 1.6 acres from the Springfield Redevelopment Authority. After several months of remediation activities, construction of the first phase of the greenhouse facilities is currently underway. Most production will occur on a 40-hour workday, bringing regular activity to a site that has sat vacant for many years. The Wellspring Harvest property and an adjacent 16-acre portion of Chapman Valve site form part of the Indian Orchard Business Park.

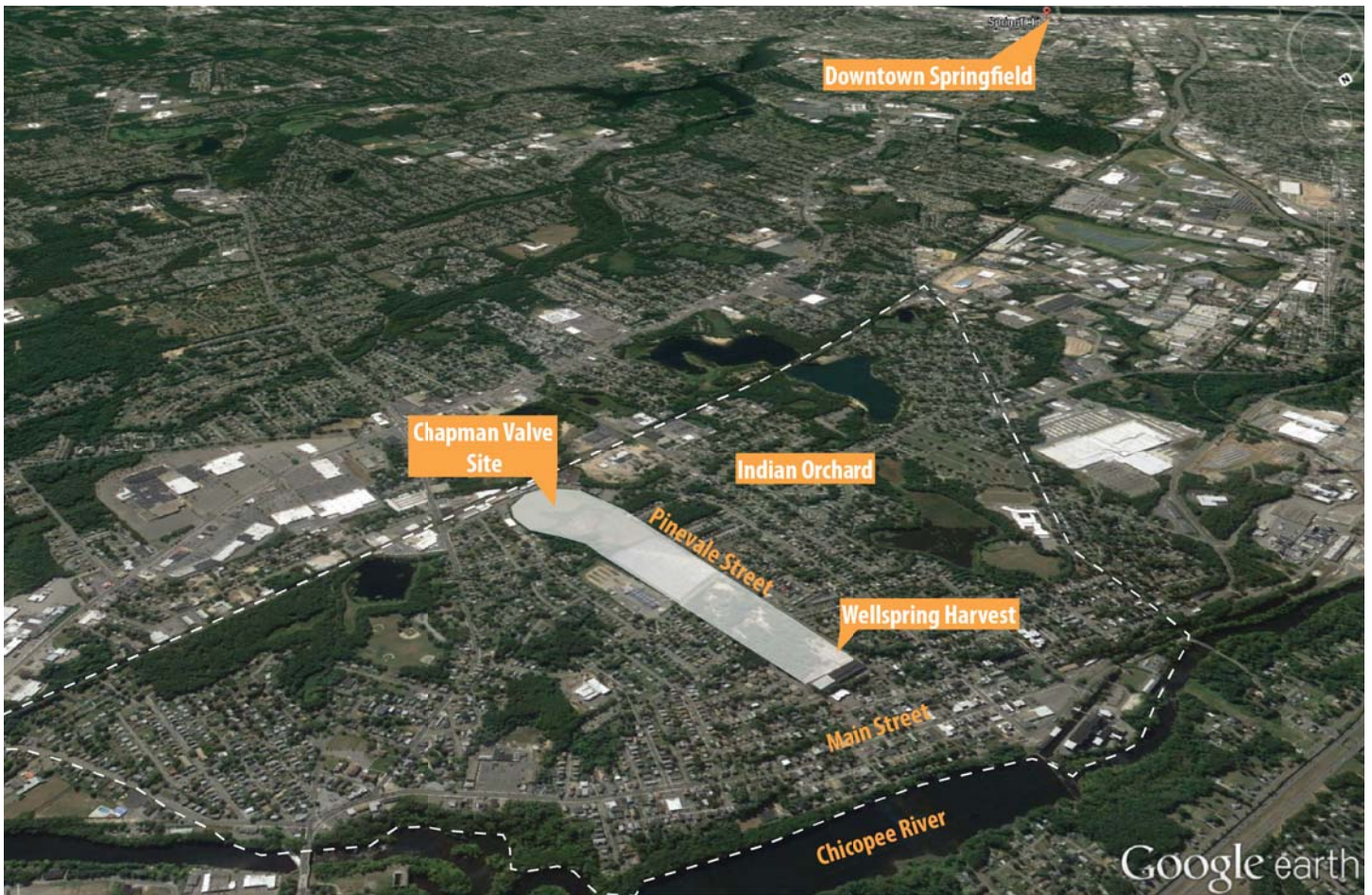


Figure 9. Wellspring Harvest and Indian Orchard Site Map (Google Earth 2017; Masslive.com 2016)

Key Impact Assessment Findings

Reduced blight and risk of exposure to harmful substances: 1.6 acre site has been redesignated as ‘No Significant Risk’ to human health. Active use also discourages vandalism through increased ‘eyes on the street.’

Potential exposure risk related to cleanup standards: Literature emphasized distinction of cleanup standards adequate for employment versus recreational reuse. Also, unremediated adjacent site still poses a risk. Care will be needed to ensure general public is not adversely exposed.

Ability to catalyze adjacent brownfield redevelopment & siting of incubated businesses within Indian Orchard uncertain: Additional sites are larger and under different ownership. Their remediation and redevelopment may be more challenging.

Recommendations

Mitigate Brownfield Contamination Exposure: Ensure community garden participants are properly trained and protected from exposure to contamination stemming from adjacent sites or potential resurfacing soil contamination.

Engage and Support Capacity of Indian Orchard Neighborhood Council: The Council’s economic development subcommittee is actively engaging with local businesses to ascertain what kind of future economic activity they’d like to see in the neighborhood, specifically in relation to the neighborhood’s vacant parcels. Participate in and develop the subcommittee’s capacity around worker cooperatives.

Objective 6. Leverage economic development and onsite community programming to enhance social capital and civic engagement

Existing Conditions

A neighborhood of 8,518 people, Indian Orchard is majority persons of color. It trends slightly worse for median household income (\$32,759), unemployment (14.7%), and poverty (33.4%). Indian Orchard is unique in its prevalence of young people. The population of people under 18 is 31.6%, which contributes to a lower median age (29.9) in Indian Orchard compared to Springfield (32.4). The neighborhood's younger population suggests a need for ensuring that on site programming and opportunities are available to youth. The neighborhood also has a significantly larger renter population compared to the city overall (64.8% vs. 52.2%) (US Census Bureau 2015). The higher prevalence of renters may be due to the large public housing developments in the neighborhood, but it also indicates a need to simultaneously pursue preservation and development of affordable housing with any redevelopment activity in the neighborhood.

The Indian Orchard Neighborhood Council formally engages in local planning activities on behalf of the neighborhood. According to the Council's president, the group is most active on issues of economic development. It hopes to encourage new business activity in the neighborhood while maintaining the community's character and would like to see greater participation in Council activities as a result of Wellspring Harvest's development.

Connections to Health

Redevelopment that results in new opportunities for urban agriculture increases property values and reduces the need for public spending on illegal dumping and vandalism. Community gardens also create opportunities for planning and shared decision-making, which foster democratic values and civic engagement (Golden 2013). Evidence shows that this kind of neighborhood change contributes to a greater sense of neighborhood quality, which is associated with elevated social capital and sense of belonging (HAPI 2015).

Potential Health Impacts

Wellspring's plans demonstrate and interest to engage in the community as much more than an employer. WCC has secured funding to realize educational programming for students and residents. A portion of the site will be dedicated for the development of a community garden and the Indian Orchard Neighborhood Council President sits on the transitional board of Wellspring Harvest.

Key Impact Assessment Findings

Community Garden & Educational Programs Match Community Interests with Wellspring's strengths: WCC has proposed and is organizing neighborhood wide workshops and a community garden. Literature supports findings of increased social capital and civic engagement resulting from these investments, but staff and site capacity is limited.

Improved Perceptions of Neighborhood Quality: Construction activities have already generated expressions of pride and optimism. Wellspring Harvest worker-owner shared anecdote of local neighbor keeping watch in evenings to ensure security of construction equipment, demonstrating some initial evidence of increased social capital.

Recommendations

Ensure Adequate Staffing Community Programming: Community garden will require staff support at least initially. The half-time position identified in the business plan for this activity may be insufficient to maximize engagement.

Encourage and Participate in Neighborhood Planning: Participatory planning can facilitate community visioning around equitable future brownfield redevelopment and worker-coop incubation.



Conclusion & Summary of Recommendations

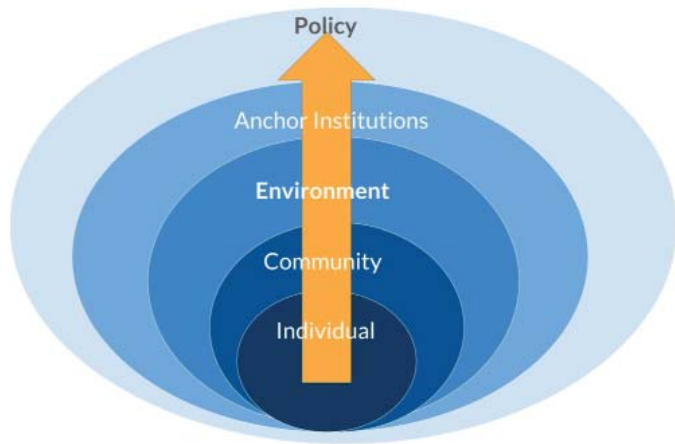


Figure 10. Wellspring Harvest Universe of Benefitted Stakeholders (Based on Stokols 1996 Social Ecological Model).

Figure 10 builds upon Stokols Social Ecological Model to map the expected universe of benefitted stakeholders and environments. These groups range from individuals directly engaging with Wellspring Harvest and its products to the surrounding community, institutions, and policy environment.

Individual-Level Health Outcomes

Wellspring Harvest is expected impact individuals through the creation of job and food systems workforce training opportunities. Wellspring also expects to improve access to fresh produce for Springfield metro area consumers, specifically students in local public schools and individuals residing in food deserts. Employment and access

to healthy foods are both key drivers to improve health outcomes.

Community Development

At the broader community-level, Wellspring Harvest will contribute to stronger multi-sectoral partnerships and Indian Orchard neighborhood revitalization efforts. Wellspring’s environmentally sensitive operations also provide a model for local agricultural production that reduces food miles and water consumption.

Environment-Level Changes

Wellspring Harvest will also help anchor institutions maximize their community impact. Investments in and partnerships with WCC complement a transition in health care services that highlights “volume to value” approaches. Wellspring’s success can help local hospitals fulfill their ACA mandates and qualify for certain tax benefits. Through its programming, Wellspring Harvest is expected to act as a catalyst for improved nutrition and food systems education in public schools, colleges, and universities.

Lastly, Wellspring Harvest has major policy implications. It is a new business model that addresses community needs and social determinants of health. Over time, it is expected to exhibit regional food self-sufficiency and inspire other worker-owned cooperatives. As

one informant underscores Wellspring Harvest's success is expected to be "contagious" throughout Springfield and in the Pioneer Valley.

Achieving the Outcomes

Wellspring Harvest's success as a business and ability to realize the health impacts and recommendations outlined in this assessment hinge on the cooperation of diverse sectors and stakeholders.

Bryson and colleagues (2006) underscore how multisectoral collaborations often tackle society's most difficult public challenges. Yet, such collaborations are complex and sometimes circuitous. Many factors, including varying responsibilities, policies, values, leadership, institutional capacities, levels of trust, levels of conflict, funding, and negotiating risk, often complicate and/or hinder the use and viability of these collaborative endeavors. In response to the laundry list of challenges, Bryson identifies key variables that increase cross-collaborations' success. They include:

- 1. One or more linking mechanisms, such as powerful sponsors, general agreement on the problem, or existing networks in place at the beginning of the partnership*
- 2. Committed sponsors and effective leaders and champions both informal and formal at various levels*
- 3. Collaboration's legitimacy is established and viewed as a form of organizing, as a separate entity, and as a source of trusted interaction.*
- 4. Trust-building activities, such as cross-cultural understanding are continuous*
- 5. Equalized power and conflict*
- 6. Combination of deliberate and emergent planning*
- 7. Stakeholder analyses*

Wellspring Harvest and WCC practices reflect and internalization of many of these recommendations. However, just like most things in life, there are factors that can affect relationships and even change collaboration's function and purpose. WCC must be flexible and responsive to such possibilities.

"[In Springfield] we exhibit pride, we are a close-knit community - people come together when they need too."

This sentiment was shared by several of the key informants and highlights one of Wellspring Harvest's and WCC's core assets. Wellspring Harvest has robust support from local healthcare institutions and community organizations. These relationships are critical in reaching Wellspring Harvest's mission of increasing access to local, fresh produce, creating entry-level jobs and training for Springfield residents, and contributing to the Pioneer Valley's sustainable food system for the health, economic vitality and environmental well-being of the region (Rose and Kawano 2017).

Summary of Recommendations

Healthy Food Access

1. Programming collaboration to address the potential gap in healthy food access
2. Expand sales to include more diverse food retailers
3. Collaborate on the creation of a hospital-based farmers market
4. Create a Community Supported Agriculture (CSA) Program
5. Create a mobile CSA
6. Provide educational classes for residents who wish to grow their own produce
7. Collaborate with Gardening The Community and the Springfield Public School System
8. Explore more ways to collaborate with Sodexo

Healthy Economy

9. WCC Co-op Bootcamp training and urban agriculture education should be accessible to the broader community
10. Integrate elements of a career pathways program into partnership with Putnam Vocational School and Springfield Technical Community College
11. WCC can provide additional vocational job training
12. Conduct longitudinal evaluations
13. Provide a workplace that aligns with WHO healthy workplace model
14. Encourage and incentivize workers to participate in the Indian Orchard Neighborhood Council or other community activities

Equitable Community Development

15. Ensure Adequate Staffing for Educational Programming & Community Garden
16. Mitigate Brownfield Contamination Exposure
17. Engage and Support Capacity of Indian Orchard Neighborhood Council
18. Encourage Neighborhood Planning

Sources

- Alaimo K, Packnett E, Miles RA, Kruger DJ. Fruit and Vegetable Intake among Urban Community Gardeners. *J Nutr Educ Behav.* 2008;40(2):94-101. doi:10.1016/j.jneb.2006.12.003.
- Alperovitz G, Howard T, Williamson T. The Cleveland model (cooperatives). *The Nation.* 2010;290(8):21.
- Alumni Co-ops | Prospera. <http://prosperacoops.org/alumni-co-ops>. Accessed October 10, 2017.
- APA Office on Socioeconomic Status. <https://www.apa.org/pi/ses/resources/publications/poverty-and-inequality.pdf>. Accessed December 6, 2017.
- Arando S, Gago M, Kato T, Jones DC, Freundlich F. Assessing Mondragon: Stability, Managed Change in the Face of Globalization. *SSRN Electron J.* 2010;(100). doi:10.2139/ssrn.1726449.
- Bandura, A. (2000). Cultivate self-efficacy for personal and organizational effectiveness. In E. A. Locke (Ed.), *Handbook of principles of organization behavior.* (pp. 120-136). Oxford, UK: Blackwell.
- Bandura A. Bandura / Health Promotion Health Promotion by Social Cognitive Means. *Artic Heal Educ Behav.* 1177. doi:10.1177/1090198104263660.
- Berman, Laurel, and Tina Forrester. "An Indicator Framework to Measure Effects of Brownfields Redevelopment on Public Health." *Journal of Environmental Health*, vol. 76, no. 1, 2013.
- Black C, Moon G, Baird J. Dietary inequalities: what is the evidence for the effect of the neighbourhood food environment? *Health Place.* 2014;27:229-242. doi:10.1016/j.healthplace.2013.09.015.
- Cantley LF, Tessier-Sherman B, Slade MD, Galusha D, Cullen MR. Expert ratings of job demand and job control as predictors of injury and musculoskeletal disorder risk in a manufacturing cohort. *Occup Environ Med.* 2016;73(4):229-236. doi:10.1136/oemed-2015-102831.
- Cameron K, Mora C, Leutscher T, Calarco M. Effects of Positive Practices on Organizational Effectiveness. *J Appl Behav Sci.* 2011;47(3):266-308. doi:10.1177/0021886310395514.
- Casper-Futterman E. Back to (Non)Basics: Worker Cooperatives as Economic Development 1. *J Issue Berkeley Plan J North Am Rev.* 1937;24(1). <http://www.escholarship.org/uc/item/7p1006r7>. Accessed September 15, 2017.
- CDC - Social Ecological Model - CRCCP. <https://www.cdc.gov/cancer/crccp/sem.htm>. Accessed December 2, 2017.
- CDC -Logic Models - Program Evaluation <https://www.cdc.gov/eval/logicmodels/index.htm>. Accessed December 6, 2017.
- City of Springfield. *Open Space & Recovery Action Plan 2015-2022.* 2015.
- Cole BL, Fielding JE. Health Impact Assessment: A Tool to Help Policy Makers Understand Health Beyond Health Care. *Annu Rev Public Health.* 2007;28(1):393-412. doi:10.1146/annurev.publhealth.28.083006.131942.
- Community Health Needs Assessment 2016. 2016. http://www.mercycares.com/documents/Mercy_CHNA_2016.pdf.
- Dwight B. Shepard. "Springfield Gets Ready to Demolish Last Building of Former Chapman Valve Property in Indian Orchard." *Masslive.com*, Masslive.com, 27 Aug. 2009, www.masslive.com/news/index.ssf/2009/08/springfield_gets_ready_to_demo.html?FORM=ZZNR2
- Egger G, Dixon J. Beyond obesity and lifestyle: A review of 21st century chronic disease determinants. *Biomed Res Int.* 2014;2014. doi:10.1155/2014/731685.

Errasti AM, Heras I, Bakaikoa B, Elgoibar P. The Internationalisation of Cooperatives: The Case of the Mondragon Cooperative Corporation. *Ann Public Coop Econ.* 2003;74(4):553-584. doi:10.1111/j.1467-8292.2003.00235.x.

Evergreen Cooperatives. <http://www.evgo.com/>. Accessed December 2, 2017.

Fifth Season Coop 2017. <http://www.fifthseason-coop.com/> Accessed December 2, 2017.

Food in the City: an old way in a new time. http://www.partnersforahealthiercommunity.org/sites/default/files/Springfield_Final_Project_4.24.pdf. Accessed November 5, 2017.

Forsyth A, Schively Slotterback C, Krizek K. Health Impact Assessment (HIA) for Planners: What Tools Are Useful? *Artic J Plan Lit.* 24(3):231-245. doi:10.1177/0885412209358047.

Gardening The Community (GTC) - Gardening The Community | Fresh Produce | Youth Leadership. <http://www.gardeningthecommunity.org/>. Accessed December 2, 2017.

Geboers B, Andrea de Winter BF, Sophie W Spoorenberg BL, Wynia K, Sijmen Reijneveld BA. The association between health literacy and self-management abilities in adults aged 75 and older, and its moderators. *Qual Life Res.* doi:10.1007/s11136-016-1298-2.

Goldstein B, Dyson L. Edited by Brett Goldstein with Lauren Dyson Open Data and the Future of Civic Innovation.

Griep RH, Nobre AA, Alves MG de M, et al. Job strain and unhealthy lifestyle: results from the baseline cohort study, Brazilian Longitudinal Study of Adult Health (ELSA-Brasil). *BMC Public Health.* 2015;15:309. doi:10.1186/s12889-015-1626-4.

Hager ER, Cockerham A, O'Reilly N, et al. Food swamps and food deserts in Baltimore City, MD, USA: associations with dietary behaviours among urban adolescent girls. *Public*

Health Nutr. September 2016:1-10. doi:10.1017/S1368980016002123.

Hampden County Health Improvement Plan. 2017. <http://www.pvpc.org/sites/default/files/doc-hampden-county-health-improvement-plan-chip2932.pdf>. Accessed November 5, 2017.

Hatcher T. Workplace Democracy: A Review of Literature and Implications for Human Resource Development. <https://files.eric.ed.gov/fulltext/ED504672.pdf>. Accessed December 6, 2017.

Health and Places Initiative. 2015. Access to Community Resources, Health, and Place. A Research Brief. Version 1.1. <http://research.gsd.harvard.edu/hapi/>

Health and Places Initiative. 2014. Toxics, Health, and Place. A Research Brief. Version 1.0. <http://research.gsd.harvard.edu/hapi/>

Health and Places Initiative. 2015. Social Capital, Health, and Place. A Research Brief. Version 1.1. <http://research.gsd.harvard.edu/hapi/>

Heiman and Artiga. Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. 2015: <https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>

Howard T, Kuri L. The Evergreen Cooperative Initiative of Cleveland, Ohio. *Neighborhood Funders Gr Annu Conf.* 2010:1-11.

Kinney, Jim. "Wellspring Harvest Breaks Ground for Greenhouse in Springfield (Photos, Video)." *Masslive.com*, *Masslive.com*, 8 June 2017, www.masslive.com/business-news/index.ssf/2017/06/wellspring_harvest_cuts_ribbon_for_food-.html.

Kinney, Jim. "Wellspring Harvest Plans to Grow Vegetables, Wealth at Chapman Valve Site." *Masslive.com*, *Masslive.com*, 15 Nov. 2017, www.masslive.com/business-news/index.ssf/2017/11/wellspring_harvest_plans_to_grow_veggies.html.

Labrador J. UC Sustain Agric Res Educ Pro-

gr. 2016;(March):22. <http://asi.ucdavis.edu/programs/sarep/publications/food-and-society/ualitreview-2013.pdf>[http://asi.ucdavis.edu/resources/publications/UA Lit Review- Golden Reduced 11-15.pdf](http://asi.ucdavis.edu/resources/publications/UA%20Lit%20Review-Golden%20Reduced%2011-15.pdf).

Lee, Sangyun, and Paul Mohai. "Environmental Justice Implications of Brownfield Redevelopment in the United States." *Society & Natural Resources*, vol. 25, no. 6, 2012, pp. 602–609., doi:10.1080/08941920.2011.566600.

Luan H, Law J, Quick M. Identifying food deserts and swamps based on relative healthy food access: a spatio-temporal Bayesian approach. *Int J Health Geogr*. 2015;14:37. doi:10.1186/s12942-015-0030-8.

Malekafzali S, Bergstrom D. Healthy Corridor for All: A Community Health Impact Assessment of Transit-Oriented Development Policy in Saint Paul, Minnesota. *PolicyLink*. 2011.

Marmot M, Allen JJ. Social determinants of health equity. *Am J Public Health*. 2014;104 Suppl 4(Suppl 4):S517-9. doi:10.2105/AJPH.2014.302200.

McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Aff*. 2002;21(2):78-93. doi:10.1377/hlthaff.21.2.78.

Norris T, Howard T. Can Hospitals Heal America's Communities? "All in for Mission" is the Emerging Model for Impact. *Democr Collab*. 2015:1-34. <http://democracycollaborative.org/content/can-hospitals-heal-americas-communities-0>.

Ogden CL, Carroll MD, Fryar CD, Flegal KM. Key findings What was the prevalence of obesity among adults in 2011–2014? 2011.

Peter Goonan. "Springfield Seeks Bids for Re-use of 2 Industrial Properties, Old Fire Station in Indian Orchard." *Masslive.com*, *Masslive.com*, 30 Mar. 2016, www.masslive.com/news/index.ssf/2016/03/springfield_seeks_bids_for_ind.html.

Pioneer Valley Planning Commission. Valley Vi-

sion 4: The Regional Land Use Plan for the Pioneer Valley. 2014.

Reuge C, Mares T. Workplace Democracy and Civic Engagement in Vermont Food Cooperatives. *WorkingUSA*. 2016;19(2):207-227. doi:10.1111/wusa.12237.

Schroeder SA. American health improvement depends upon addressing class disparities. *Prev Med (Baltim)*. 2016;92:6-15. doi:10.1016/j.ypmed.2016.02.024.

Springfield, MA - Profile data - Census Reporter. <https://censusreporter.org/profiles/16000US2567000-springfield-ma/>. Accessed December 2, 2017.

Springfield, Massachusetts. Strategies for a Sustainable City. September 24–29, 2006. An Advisory Services Panel Report. ULI—the Urban Land Institute.

SPS announces Culinary and Nutrition Center | Springfield Public Schools. <http://www.springfieldpublicschools.com/news/sps-announces-culinary-and-nutrition-center>. Accessed December 2, 2017.

Stokols D. Translating social ecological theory into guidelines for community health promotion. *Am J Heal Promot*. 1996. doi:10.4278/0890-1171-10.4.282.

Szegda K, Contributing F, Robinson J, Collins S, Hudson MTS. Springfield Health Equity Report Looking at Health through Race and Ethnicity. *Fig Cty Heal Rank Roadmaps*. 2014;2. http://www.euro.who.int/__data/assets/pdf_file/0018/103824/E89384.pdf. Accessed October 24, 2017.

WHO. Health Impact Assessment. *Determ Heal*. 2010;302(3):315-317. http://www.who.int/social_determinants/en/.

Williams DR, Collins C. Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Rep*. 2001;116(5):404-416. doi:10.1093/phr/116.5.404.

Attachment:

Logic Models



Wellspring Collaborative Corporation
Inputs

