

State Funding for Massachusetts Small Business Technical Assistance Program

A Health Impact Assessment

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This HIA is supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts. The views expressed are those of the author(s) and do not necessarily reflect the views of The Pew Charitable Trusts or the Robert Wood Johnson Foundation.

EXECUTIVE SUMMARY

Small businesses have a profound impact on Massachusetts' economy – that is well known. But what of their health impact? How does the Commonwealth's Small Business Technical Assistance program, which helps underserved and disadvantaged populations create and sustain businesses with fewer than 20 employees, improve the health of small business owners and employees? Can that benefit extend to customers, surrounding neighborhoods, nearby residents and other businesses? We use Health Impact Assessment (HIA), which is a method to systematically assess the potential positive and negative health consequences of proposed policies, plans and projects outside of the health sector, to answer these questions.

This HIA examines the possible health-related consequences of changing the level of state funding for Massachusetts' Small Business Technical Assistance (SBTA) Program. It finds that reducing or eliminating SBTA funding would negatively impact the health of the people and communities served by the program, while preserving funding would benefit health. It also offers recommendations for maximizing the program's potential health benefits.

This HIA was conducted through a partnership between the Harvard Center for Population and Development Studies and the Metropolitan Area Planning Council (MAPC). The HIA was supported by funding from the Health Impact Project, a national initiative designed to promote the use of HIAs as a decision-making tool for policymakers. The Health Impact Project is a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts. The views expressed are those of the authors and do not necessarily reflect the views of the Health Impact Project, The Pew Charitable Trusts and the Robert Wood Johnson Foundation.

BACKGROUND

Massachusetts established the SBTA program in 2006 in order to help small businesses succeed in underserved communities in the commonwealth, particularly low- to moderate-income communities and communities of color. A minimum of 50% of the small business clients served by the program must reflect the following target populations:

- Women- and minority-owned and operated businesses,
- Immigrant and non-native English speaking populations,
- low- to moderate-income entrepreneurs,
- Businesses located in economically disadvantaged urban and rural communities, including Gateway Cities,¹
- Small business owners or entrepreneurs who are US military veterans or are starting a business as a result of unemployment.

¹ According to the Executive Office of Housing and Economic Development (EOHED) under M.G.L. c. 23A section 3A, a Gateway City in Massachusetts is defined as a municipality with (1) a population greater than 35,000 and less than 250,000; (2) a median household income below the state average; and (3) a rate of educational attainment of a bachelor's degree or above that is below the state average. There are currently 26 cities in MA that meet this definition.

The SBTA program works by providing funding to not-for-profit grantees, largely consisting of Community Development Corporations (CDCs) or Community Development Financial Institutions (CDFIs), who then offer a range of technical assistance (TA) and financial services to small business clients.

The grantees work at various geographic scales - neighborhoods, cities and towns, regions, and even statewide - providing services to small businesses from a variety of sectors.

The communities served by the SBTA program are, on average, poorer, younger, and less healthy than other communities in Massachusetts. And while the racial and ethnic makeup of the communities vary widely, they contain a larger share of racial and ethnic minorities compared to the state as a whole. They are home to larger immigrant populations, and to populations that experience disproportionately high housing cost burdens and unemployment rates.

SBTA program funding is a public health policy thanks to the program's potential to improve beneficiaries' economic standing, and to help revitalize entire communities. In fiscal year (FY) 2014, SBTA grantees provided TA to nearly 1,100 small businesses in Massachusetts and preserved or created more than 1,000 jobs. Despite this record, the initial FY 2016 budget proposal for the Commonwealth included no funding for the SBTA program. This HIA explores the potential health impacts of eliminating funding for the SBTA program.

Equity Importance of the SBTA Program

By investing in low-income, female, and immigrant entrepreneurs as well as unemployed veterans, entrepreneurs of color, and small businesses located in economically disadvantaged communities, the SBTA program may help combat social disparities in economic opportunity that are at the heart of health disparities. Despite the potential for entrepreneurship to help narrow disparities in wealth, these groups often experience unique hurdles to building business equity. For example, black men are more likely to be denied credit for small businesses than are their white counterparts. Black-owned business survivorship rates are also comparatively lower, in part due to insufficient start-up capital. The entrepreneurial and employment opportunities supported by the SBTA program may help reduce deeply entrenched economic disparities that put traditionally underserved populations at risk for worse health outcomes.

MASSACHUSETTS' SMALL BUSINESS TECHNICAL ASSISTANCE (SBTA) PROGRAM AND HEALTH

Good jobs are crucial components of healthy communities. Research suggests that being employed and earning a higher income can help improve the health of individuals, and that improved economic conditions may benefit entire communities. This Health Impact Assessment (HIA) assesses the possible health-related consequences of changing the level of state funding for Massachusetts' Small Business Technical Assistance (SBTA) Program. The assessment draws on scholarly literature from the fields of health, economics, and social science; data on health behaviors and risk factors, hospitalizations, and social determinants of health; and was guided by input and feedback from SBTA technical assistance providers, experts from the small business and economic fields, experts from the public health field, and on the ground stakeholders.

KEY FINDINGS

Jobs: By lowering unemployment and increasing job security, the scholarly literature suggests that continued funding for the SBTA program would likely provide small protective cardiovascular and mental health benefits for those who have jobs with the small businesses SBTA creates or helps sustain. Research suggests that these individuals may also engage in healthier behaviors, such as cutting back on smoking, as a result of their employment.

Income: Supporting the SBTA program could lead to better health by providing business owners and their employees with the economic resources they need to pay for things that keep them healthy, for example, better housing. When owners and employees can afford to improve their living conditions, prior research suggests that their health is likely to improve. For example, housing quality affects respiratory distress, including asthma, self-reported overall health, and self-reported happiness and vitality.

Sleep: Small business owners who received services through the SBTA program reported that a lack of quality sleep was a health concern. By addressing stressors in entrepreneurs' lives, continued support for the SBTA program may literally help small business owners sleep better at night. Poor sleep can put individuals at higher risk of mental and physical health problems.

Stress: Funding for the SBTA program may help protect health by reducing the stress associated with job security and economic hardship. Stress has been linked in research studies to depression, cardiovascular disease, asthma, obesity and poor immune system functioning.

Small Businesses and Economic Development: Continued funding for the SBTA program would create and stabilize small businesses. Previous research suggests that improving overall socioeconomic conditions in socioeconomically disadvantaged communities would likely provide small protective benefits against obesity and diabetes for residents.

Crime: Sustained funding for the SBTA program would be expected to combat unemployment and enhance community wealth in areas heavily served by the program. Scholarly literature suggests that these types of improvements are tied to lower injury and crime rates.

Social Capital: Research shows that small businesses may be good for the social fabric of communities. Funding the SBTA program could help protect the health of residents in the communities served by the program by increasing levels of social capital. The scholarly literature suggests that a healthy and strong social environment can improve self-rated health and mental health, and even guard against obesity.

Physical Activity: To the extent that funding for the SBTA program is used to create and stabilize brick and mortar businesses, sustaining the SBTA program may also serve as an investment in a healthier built environment that encourages walking and biking.

RECOMMENDATIONS AND CONCLUSION

In summary, this HIA predicts that eliminating state funding for the Small Business Technical Assistance program would have a small but negative impact on public health, particularly in the economically disadvantaged and racially/ethnically diverse communities the program targets most heavily.

However, maintaining state funding for the SBTA program would likely provide a small protective health benefit for business owners, small business employees, and residents in the communities that the SBTA program serves.

In light of these and other research findings, we recommend the following:

- The SBTA program funding should be maintained at current levels (FY 2015 benchmark). In addition, we recommend the program should be considered for increased funding in order to amplify the protective health factors influenced by the program.
- SBTA TA providers receive guidance on how to address the physical and mental wellness of the small business owners and employees, specifically on the issues of unhealthy weight, smoking, physical activity, mental health, and sleep.
- SBTA TA providers receive guidance on how to identify and address workplace safety in small businesses who benefit from the program.
- Massachusetts Growth Capital Corporation (MGCC) should encourage TA providers working at neighborhood or municipal scale to seek opportunities to concentrate assistance in geographic clusters.
- MGCC and TA providers together to collect a limited set of additional data to increase understanding of the economic and health impacts of the program. Specifically, we would recommend that the following data be collected in the mid- and end of year reporting:
 - Number of small businesses receiving assistance in a zip code
 - Business sectors represented by the small businesses receiving assistance
- MGCC and providers pursue additional opportunities to highlight key TA topics and communicate program outcomes, such as the success stories of small businesses receiving TA and succession planning for small businesses

The SBTA HIA explores how funding for a program that supports local small businesses may benefit community health. As the Commonwealth considers its state funding priorities, it has the opportunity to more fully connect and build on the intersecting priorities of economic opportunity and better health by fostering what we know works to support connected, vibrant, and healthy communities.

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GUIDE TO THIS DOCUMENT

This Health Impact Assessment (HIA) looks at the relationship between the Small Business Technical Assistance Program (SBTA) in Massachusetts and health in order to build support for and inform administration of the program.

This document is divided into five parts. Part I provides the background and context for this HIA. It describes the SBTA program, the assistance provided by the grantees, or technical assistance (TA), and the scoping process for the HIA. Part II provides an in-depth analysis of the specific technical assistance activities conducted across the state as part of the SBTA program, and provides select baseline demographic and health characteristics of the populations who live in areas where the small businesses are receiving assistance.

Part III describes how technical assistance for the small businesses links to the health of individuals and of communities. Next, Part IV assesses the likely impacts a change in funding for the program would have for the businesses, people, and places served by the program.

Lastly, Part V provides recommendations based on the HIA findings that aim to maximize the program's impacts on health and reduce risks the program may pose. Recommendations are provided for the funding of the SBTA program. Recommendations are also provided for the administration of the program based on evidence and stakeholder input gathered during the HIA.

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PART I: INTRODUCTION

1. INTRODUCTION TO THE SMALL BUSINESS TECHNICAL ASSISTANCE PROGRAM HIA

Small business support programs and their effects on community health² are not well known. Although higher incomes and employment— which are tied to a strong business sector— have been linked to better health, the specific connections between improved health and small business support programs are not well understood. Similarly, while positive health outcomes have been associated with some community development activities, for example, affordable housing creation, the health implications of small business development has not been explored.

Health Impact Assessment (HIA) is a method to systematically assess the potential positive and negative health consequences of proposed policies, plans, and projects outside of the health sector (an overview of a HIA process is provided in Appendix A). These assessments often identify unanticipated health effects of non-health decisions, and allow stakeholders and policymakers to integrate health protection and promotion into their decisions. HIA has a particular emphasis on health equity, or how a policy or project may impact existing health inequities, in addition to a focus on population health. Our HIA assesses the potential health effects of changing state funding support for small businesses through the Massachusetts Small Business Technical Assistance (SBTA) program. Conducting this HIA is meant to both inform decision-makers about likely health consequences of funding changes to the program, and to explore the links between small business support programs and health more broadly. The latter goal fills a gap in our current understanding of whether and how small business development and support affects health.

HIA Screening

In 2006, Massachusetts Governor Romney signed into law the appropriation of \$2 million toward starting the SBTA Program to address challenges related to starting, sustaining, and growing small businesses in disadvantaged areas of the state, such as small towns, immigrant neighborhoods, and communities of color. Initially, the SBTA program relied on funding from the Commonwealth of Massachusetts at approximately \$2 million. Following the 2008 recession, the program's funding shifted first to MassDevelopment and later to the Massachusetts Growth Capital Corporation (MGCC), both of which are quasi-public agencies. Between fiscal years 2011 and 2014³, MGCC administered the SBTA program, during which time the program received funding between \$500,000 and \$700,000 annually.

² Health is defined here using the World Health Organization definition: “A complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity.”

³ The Commonwealth of Massachusetts Fiscal Year is from July 1st to June 30th and typically includes 6 months in two separate calendar years. For example, Fiscal Year 2015 is from July 1, 2014 to June 30, 2015.

In the current fiscal year (FY 2015), SBTA funding shifted back to the state and the budget increased to \$2 million with MGCC continuing to administer the program. Funding allocations for state-supported programs are subject to review during the annual state budgeting process. The SBTA program will be up for review for fiscal year 2016 (FY 2016) funding. While funding for the program has recently been increased, there is the potential for cuts to the program due to budget shortfalls as well as other competing budget priorities. The governor's FY 2016 state budget proposed no funding for the SBTA program, which, unless other funding is provided, would end the SBTA program and its technical assistance (TA) to disadvantaged areas of the state.⁴

The first phase of the HIA process involved screening and began with a series of discussions between the HIA team – the Metropolitan Area Planning Council (MAPC) and the Harvard Center for Population and Development Studies (HCPDS) – MGCC, and the Massachusetts Association of Community Development Corporations (MACDC). These discussions focused on sharing information and resources that clarified the connections between small businesses, those who provide assistance to these businesses, and health. Through these conversations, we identified opportunities to engage with technical assistance (TA) providers that serve small businesses, small businesses themselves, subject matter experts, and others who could shape the scope of the HIA and next steps.

Through screening, we determined that an HIA would add an important perspective to the discussions about funding and administration of the SBTA program, which had focused primarily on economic development and equity but had excluded health considerations. Screening activities highlighted the potential for the program to confer health benefits to both owners and employees of small businesses serving low- to moderate-income neighborhoods. Screening also suggested that these benefits may extend beyond those involved in the businesses to their customers, surrounding communities, and related business networks.

MGCC agreed to be involved with the HIA process and expressed interest in learning more about potential health connections with their work. MGCC's participation in this HIA provided access to crucial baseline information, facilitated stakeholder engagement, and informed our recommendations.

2. GOALS OF THE SBTA HIA

The primary goal of the SBTA HIA is to assess potential impacts of funding cuts on health. To do this, we explore how, and to what extent, resources to support and assist small businesses – in this case, businesses with fewer than 20 employees – impact health determinants such as employment, income, and housing, and health outcomes like obesity and injuries. In other

⁴ This HIA identified the Governor's budget proposal as the decision under consideration. While the HIA has continued beyond the FY2016 budget process, in which the program was refunded at \$2M, it will be completed and available during the FY2017 budget process which begins in January 2016.

words, the HIA aims to predict how changes to funding for the SBTA program would likely change conditions that are known to impact health, for example, income and employment, in addition to predicting likely changes in health outcomes themselves, for example cardiovascular disease. To this end, the HIA identifies ways in which its findings can influence the decisions of policymakers regarding the SBTA program's future funding levels and administration, and ways the program's TA providers can enhance their program provision to further promote healthier outcomes.

Although this HIA is specifically focused on the SBTA program, a secondary goal of this HIA is to explore and document how small businesses may affect health more generally. With the exception of conversations regarding health insurance⁵, there is little existing research on small business development as a potential health intervention. Yet, small business development likely influences a broad spectrum of upstream health determinants, from income levels to workforce development, and from self-efficacy to community social cohesion.

This HIA aims to improve our understanding of the role small businesses may play in shaping health outcomes, and to provide actionable information that can be used by small businesses, those who assist and promote small businesses, and those interested in the broader impacts of economic development, to promote community health.

⁵ Through stakeholder engagement and conversations, the issue of health insurance provision by small businesses, particularly those with less than 20 employees, continually surfaced. Input indicated that small businesses still struggle with how to best provide health insurance to their employees. Specific issues raised included meeting state and national regulations, holding down costs, and understanding the health insurance marketplace, among others.

3. SOCIAL DETERMINANTS OF HEALTH

Health is about much more than treating illness. Protecting community health starts in our homes, workplaces, neighborhoods, and communities. We use a social determinants of health framework, illustrated in Figure 1, as a starting point for considering that changes in support for the SBTA program may impact health.

The social determinants of health framework addresses the distribution of good and poor health in a population, and considers the upstream determinants of health. It examines who is ill and who is well, and the larger social and economic contexts associated with health. It recognizes that factors such as employment status, income, poverty, housing, race and racism, social connections and networks, and the neighborhood environment critically affect population health.

Figure 1 illustrates how various levels, from individual factors to larger socioeconomic and cultural conditions, influence health.

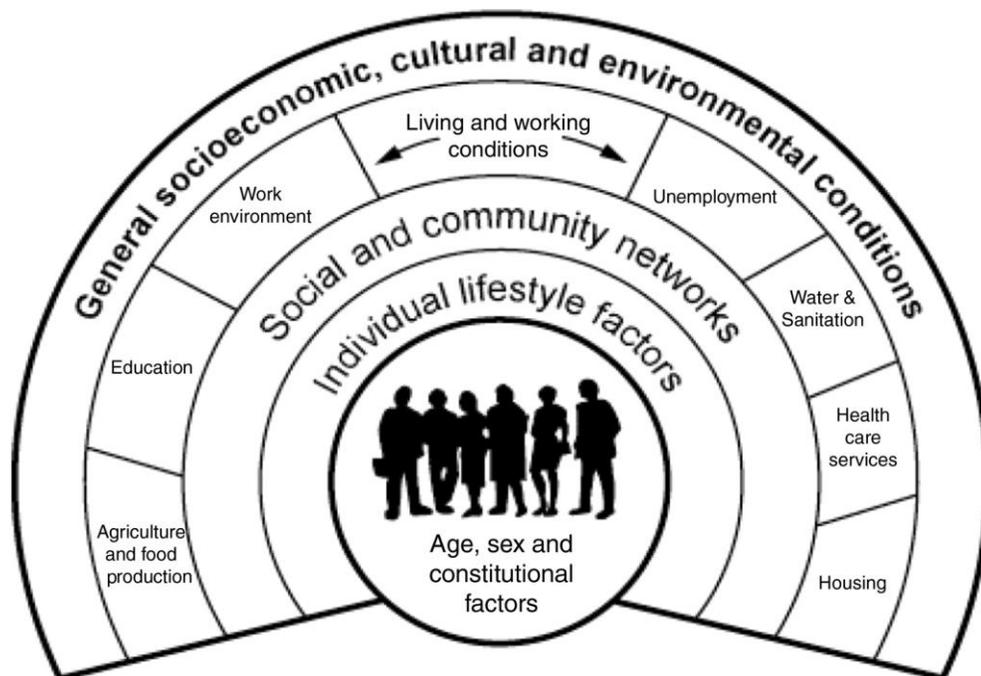


Figure 1. Social Determinants of Health Framework

Source: World Health Organization

This HIA investigates how changes to the funding for the SBTA program might influence the upstream determinants of health, particularly employment, income, and community level social environment factors. It explores how changes to these social determinants of health could potentially affect mental health and self-rated health, heart disease, and rates of asthma and other types of respiratory distress. Additionally, the HIA explores how the activities supported by the SBTA program affect these determinants in the places served by the program.

PART II: BACKGROUND

1. SBTA TECHNICAL ASSISTANCE

Providers

The SBTA program distributes grants to support not-for-profit organizations that provide technical assistance and training programs for new and existing small businesses with an emphasis on underserved businesses and entrepreneurs. The program provides supplementary funding to the TA organizations; the grant funds are not intended to be the sole source for the assistance that is offered.

These grantees, or TA providers, represent a variety of sectors. Based on input we gathered from MGCC and providers who attended a grantee meeting, the TA providers include:

- Community Development Corporations (CDCs)
- Community Development Financial Institutions (CDFIs)
- Business Networks
- Small Business Development Centers (SBDCs)
- Community Action Agencies (CAAs)

Through our review of the program and conversations with stakeholders we found that the majority of the providers are either CDCs or CDFIs. In addition, there are providers that offer specialized assistance or cater to specific business sectors. For example, two of the TA providers are the Cape Cod Commercial Fishermen's Alliance, which works with fishing-based businesses on Cape Cod, and the Carrot Project, which works with small farms and food businesses across the state.

The TA providers offer a specific set of assistance activities defined by the SBTA program. These activities are:

- 1:1 counseling: Direct service that includes advising, advocacy, and/or intervention on behalf of an individual business client
- Group training: Classes that teach business skills that result in measurable changes in business status
- Loan packaging: Assisting a client in acquiring capital from one or more lenders (includes loan guarantees)
- Direct Lending: Loan origination and portfolio management that results in business capitalization leading to business status outcome.⁶

The TA providers are required to provide a minimum of 5 hours of direct service and a minimum of 5 hours of indirect service, which includes activities such as a pre- and post-assessments of

⁶ MGCC SBTA Grant Program: Definition of Terms for Small Business Assistance Outcome Measures. <http://www.massgcc.com/grant-awards/terms-for-outcome-measures>

the business receiving TA. For each activity, process and outcome measures are identified and reported by the TA providers.⁷

Through our survey at the mid-year grantee meeting scoping discussion, we learned that most TA providers provide 2 or more of the assistance activities for small businesses (75%).

TA Provider Service Areas

We found that TA providers work at a variety of geographic scales. There is a set of providers who work at a local scale, providing assistance to small businesses in a specific city or town or within a certain neighborhood. Often the service area reflects the TA providers' organizational service expertise or capacities. Examples of TA providers from past funding cycles who work at this scale include: Center for Women and Enterprise, Dorchester Bay Economic Development Corporation, Jamaica Plain Neighborhood Corporation, and South Middlesex Opportunity Council.

Another set of providers serve regions. These providers tend to work across larger geographies – several cities and towns or across a county – in response to lower population density and having businesses scattered across many municipalities. Often, these providers are also working at a scale that is similar to the organization's service area outside the SBTA program. Quaboag Valley Community Development Corporation, Blackstone Valley Chamber of Commerce, and Twin Cities Community Development Corporation are examples of TA providers who have worked at a regional scale. Regional level TA providers tend to be the majority of providers.

A third set of providers work across the state. Their services are available to small businesses from the Berkshires to the Cape and Islands. These providers tend to offer a specialized form of TA or lending that reflects the needs of certain business sectors and not necessarily businesses within a specific place. TA providers who have worked at the state scale include Accion and Massachusetts Museum of Contemporary Art.

The following map (Figure 2) shows the TA providers and coverage areas from FY15.

⁷ MGCC SBTA Grant Program: Definition of Terms for Small Business Assistance Outcome Measures. <http://www.massgcc.com/grant-awards/terms-for-outcome-measures>

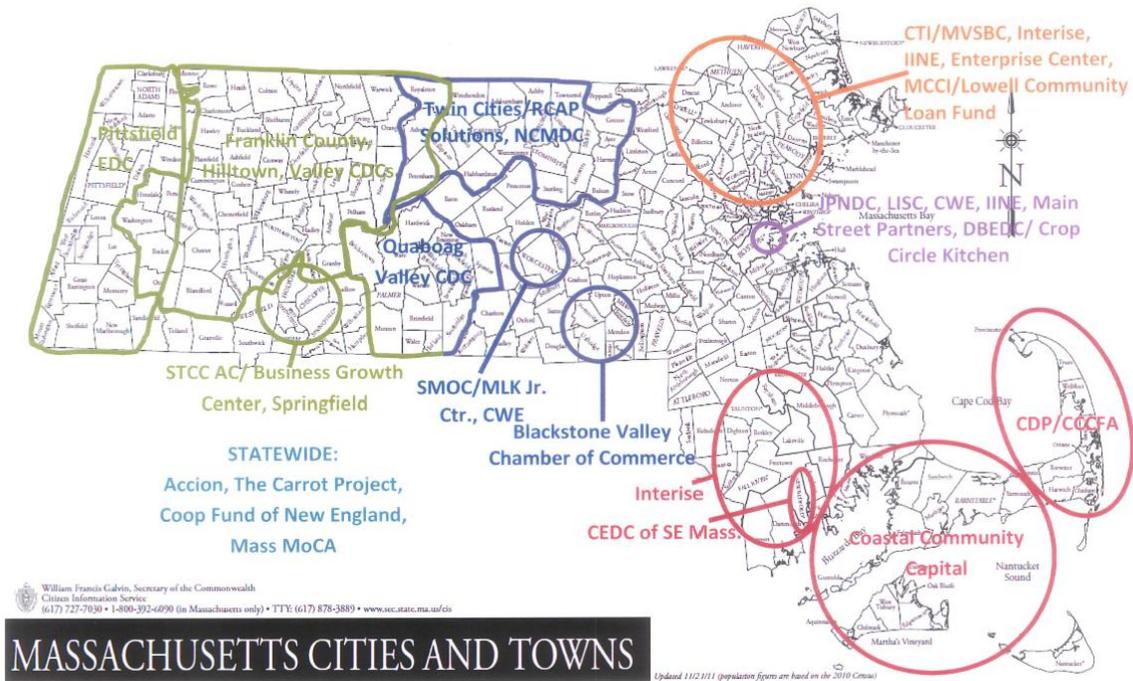


Figure 2. SBTA Program Grantee Service Areas Map, FY 2015

Source: Massachusetts Growth Capital Corporation

Small Businesses Receiving TA

The SBTA program provides technical and financial assistance and training to businesses in disadvantaged or underserved communities with 20 employees or less. At least 60% of the businesses receiving assistance must reflect the following target populations:

- Women and minority owned and operated businesses,
- Immigrant and non-native English speaking populations,
- Low- or moderate-income entrepreneurs,
- Small business owners or entrepreneurs who are US military veterans or are starting a business as a result of unemployment,
- Businesses located in economically disadvantaged urban and rural communities, including Gateway Cities.⁸

Gateway cities are defined as municipalities with: population greater than 35,000 and less than 250,000; median household income below the state average; and rate of educational attainment of a bachelor's degree or higher that is below the state average.

⁸ According to the Executive Office of Housing and Economic Development (EOHED) under M.G.L. c. 23A section 3A, a Gateway City in Massachusetts is defined as a municipality with (1) a population greater than 35,000 and less than 250,000; (2) a median household income below the state average; and (3) a rate of educational attainment of a bachelor's degree or above that is below the state average. There are currently 26 cities in MA that meet this definition.

In reporting from the FY2014 period, 87% of the small business clients served by SBTA grantees fit into at least one of the target populations.⁹

In addition to having target population goals, the program seeks that at least 85% of the businesses served by the TA providers are small businesses already operating a business or are within twelve months of opening a new business.¹⁰

We found that the types of businesses served vary greatly. Based on our review of SBTA program information and comments from stakeholders, the small business clients include, but are not limited to:

- Personal service oriented businesses (e.g., nail salons and hair salons)
- Food service businesses (e.g., bakeries, cafes, and restaurants)
- Agriculture and fishing (e.g., small farming and local commercial fishing)
- Manufacturing (e.g., handmade apparel and accessories)
- Construction (e.g., home repair and weatherization)
- Cleaning services (e.g., home cleaning and commercial cleaning)
- Remediation services (e.g., pest control)
- Health care and social assistance (e.g., nursing home)
- Retail services (e.g., clothing sales)

Of the businesses receiving assistance, stakeholders reported that the majority tend to have fewer than 10 employees. Stakeholders also reported that the biggest challenges typically facing the small businesses are: access to capital, business management, and financial administration.

⁹ FY2014 MGCC SBTA Performance Data

¹⁰ Ibid

Equity Importance of the SBTA Program

By investing in low-income, female, and immigrant entrepreneurs, unemployed veterans, entrepreneurs of color, and small businesses located in economically disadvantaged communities, the SBTA program may help combat social disparities in economic opportunity that are at the heart of health disparities. For example, non-white families earn just 65 percent of income earned by white families [2], and women continue to make 78 cents for each dollar earned by men [3]. Gaps in wealth are even greater, with African-Americans owning only 5 to 10 cents for each dollar of wealth whites have [5]. White net worth is now ten times greater than Hispanic/Latino net worth, reflecting a widening gap since the end of the recession [2]. We also observe a wealth gap between native and foreign born populations [6].

Addressing this wealth gap must be about more than equalizing incomes, although that is a crucial step, because some groups have fewer opportunities to build wealth from income earned than do others [7]. Building business equity can be an important way to establish assets and increase wealth [8].

Despite the potential for entrepreneurship to help narrow the wealth gap, members of racial and ethnic minority groups experience unique hurdles to building business equity; for example, black men are more likely to be denied credit for small businesses than are their white counterparts[9]. Data from the most recent Kauffman Index of Entrepreneurial Activity, an indicator of new business creation in the US, shows that from 1996-2012 Latinos, Asians, Blacks and immigrants all experienced rising rates of entrepreneurship. However, these rates remain behind the rate of population growth for these groups. During this period the percent of businesses created by veterans declined, largely due to a reduction in the working-age veteran population [10]. Rates of entrepreneurship among women lag far behind men [11] and men are much more likely to start a new business each month than are women [10]. Women and members of racial or ethnic minority groups are also at a disadvantage in terms of business survivorship rates [12]. For Black-owned businesses, this is largely due to lower levels of start-up capital.

The entrepreneurial and employment opportunities supported by the SBTA program may help deeply entrenched reduce economic disparities that put traditionally underserved populations at risk for worse health outcomes.

Results of TA

As mentioned earlier, the SBTA program has been in existence since 2006. Within the last three fiscal years (and continued into fiscal years 2015 and 2016), a consistent reporting process has been in place. The process includes self-reported data from the TA providers on services provided and outcomes from the assistance. MGCC has refined the reporting each year so there are some data that can be reported over the three year period and some that are available for only an individual year.

This analysis was completed using the fiscal year 2012–2014 data, which represent the three most recent years where reporting was complete¹¹. Funding for the program was \$700,000 for each year during this period.

The reach and type of services reported during this period include:

- Approximately 3,400 small businesses served
- Nearly 60% (1,921) received 1:1 TA with the remaining approximately 1,400 small businesses participating in workgroups and group trainings
- More than 600 businesses received financing support
- TA was provided to more than 600 women-owned businesses, 300 immigrant-owned businesses, and 600 business owners from low- to moderate-income backgrounds each year.¹²

Outcomes reported from the TA provided during this three-year period include:

- More than 600 new businesses were created or acquired over the three years
- Nearly 900 businesses were stabilized
- Over 1,100 new full time employment jobs created
- Nearly 1,300 full time employment jobs preserved
- More than 650 businesses received financing for a total of over \$67 million
- Loans to borrowers ranging from \$600 to \$2.5 million

2. DEMOGRAPHICS AND HEALTH STATUS IN SBTA TARGET COMMUNITIES AND THE STATE

BASELINE PROFILE

¹¹ During the HIA, we received FY 2015 summary data which represents preliminary reporting for the services provided and outcomes supported by \$2,000,000 in funding for the program. Highlights of this summary include: 25 TA providers funded, 1,486 business clients received services from TA providers, 87% of business clients were from an underserved target demographic, creation of nearly 700 new jobs; and preservation of 1,473 jobs. A full summary of the FY 2015 data is presented in Appendix X.

¹² Categories are not mutually exclusive

Part II of this HIA provides a profile of the demographic, health, and community characteristics of the places targeted by the SBTA program. In order to highlight the equity implications of SBTA funding changes, we provide data on how target places, referred to as SBTA service areas, compare to the state as a whole on key characteristics. In addition to providing baseline information on the populations potentially affected by the SBTA program funding changes for the assessment, these data allow us to better understand the populations served by SBTA and what issues they might face with respect to physical, social, and mental health.

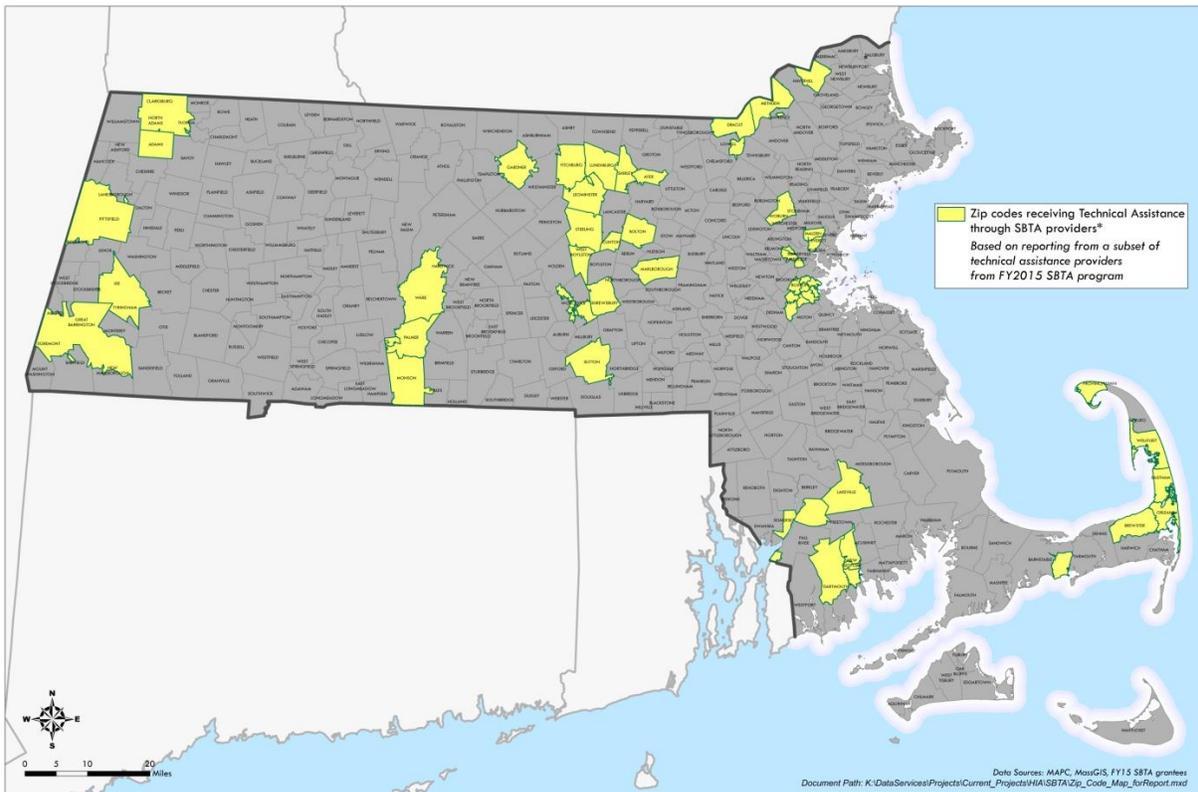


Figure 3: Subset of zip codes receiving technical assistance through the SBTA program

Source: Survey data from SBTA providers, MAPC

Methods

We developed a request to the SBTA FY15 grantees, or TA providers, for the zip codes where they have conducted a majority of the work with small businesses. The request was based on a recommendation from advisors to the HIA, and MGCC provided the request to the TA providers. Based on responses (n=12) we received by August 24, 2015, we defined SBTA service areas based on the zip code geographies (Figure 3) and these zip codes were coded to municipalities. Once each individual SBTA service area was defined, they were combined to create the collective “SBTA service area” and then rates of various demographics were aggregated across the service area. The zip codes do not cover all areas where the SBTA functions as not all TA

providers reported back with data, but are generally representative of the populations served by the SBTA.

Data sources used in this HIA include: the 2010 United States Census, the American Community Survey (ACS), the Comprehensive Housing Affordability Survey (CHAS), Massachusetts Geographic Information Services (MassGIS), hospitalization data provided by MDPH, health data drawn from the Massachusetts Community Health Information Profile (MassCHIP), the Behavioral Risk Factor Surveillance Survey (BRFSS), County Health Rankings, the Center for Disease Control, and the FBI Universal Crime Report (UCR) database.

Demographic Characteristics

The demographic characteristics evaluated in this HIA are poverty, income, unemployment, housing characteristics, nativity, and race/ethnicity. The aggregate population of the municipalities included in the SBTA service area is 1,705,967 residents, accounting for 25% of the nearly 6,750,000 Massachusetts residents.

In summary, we find that the SBTA service area is characterized by higher rates of poverty and unemployment than statewide rates, relatively older housing stock, and lower median household incomes. These factors put community members at higher health risks compared to their counterparts in more affluent communities.

Age

Overall, the areas served by the SBTA program are slightly younger than areas not served by a SBTA provider in Massachusetts. Young adults aged 20-34 and children under 18 make up a greater percentage of the SBTA Service Area population than the statewide average. The SBTA Service Area has a slightly lower proportion of seniors 65+ and adults aged 35-44 than the Massachusetts average.

Race/Ethnicity

According to 2010 Census data, the SBTA service areas are more diverse than the state as a whole (Table 1).

Table 1: Demographics of the SBTA Service Areas and Massachusetts

	SBTA Service Areas	Massachusetts
Non-Hispanic White	64%	75.1%
Non-Hispanic Black	13%	8.1%
Hispanic/Latino	13%	10.5%
Asian	6%	6%
Other	5%	3%

	SBTA Service Areas	Massachusetts
Foreign-born Population	23%	15%
Veteran Population	5%	6%
Poverty Rate	17%	12%
Unemployment Rate	5.5%	5.3%

Immigration

Because the SBTA program aims to serve foreign-born business owners, we provide limited nativity data. Between 2009 and 2013 (the most recent data available) 15% of the State was foreign born, increasingly from Latin America and Asia. In the SBTA service area, 23% of the population was foreign-born. The concentration of foreign-born residents varies across the state. Chelsea had the highest concentration of immigrants, followed by several other SBTA Gateway Cities such as Malden and Everett.

Veteran Status

Veterans, another target population for the SBTA program, make up a lower share of the SBTA service area population (5%) than of the state population as a whole (6%).

Poverty

The SBTA program largely focuses on low- to moderate-income business owners, or owners living in socioeconomically disadvantaged communities, with the intention of creating greater economic opportunity for these populations. The poverty rate, which indicates the percent of population living on an income below the poverty line (\$23,834 for a family of four), is a measure of socioeconomic disadvantage. The poverty rate in the SBTA service area (17%) exceeds the state poverty rate (12%).

Unemployment

A primary purpose of the SBTA program is to promote economic opportunity in underserved communities in the state. The average unemployment rate across the SBTA service area was 5.5% in 2014, slightly higher than the statewide rate of 5.3%. Within the SBTA municipalities, the unemployment rate ranged from a low of 2.4% to a high of 7.5%.

Unemployment rates differed by social group in Massachusetts, with racial/ethnic minority groups struggling with unemployment disproportionately. For instance, 10.8% of African-Americans were unemployed in 2014, well above the state unemployment rate of 5.3%.

Unemployment rates, however, do not tell the whole story, as they do not account for people who have stopped looking for work due to discouragement or other circumstances. Data also tell us that across the SBTA service area only 54.8% of African-Americans were employed, which, is 6.8% below the state employment rate.

Housing Characteristics

Housing quality and affordability plays an important role in promoting health. Households that pay more than 30% of their income towards housing are considered housing cost burdened, indicating that they face a housing affordability problem. Paying one third of income or more on housing leaves little money for other needs such as food, healthcare and education. Of those living in the SBTA service area, 31% are burdened by housing costs according to this definition, a higher share than in Massachusetts as a whole.

The age of the housing stock of a neighborhood can also serve as an indicator of potential housing-related health hazards because older homes are more likely to expose residents to hazards such as lead paint and may require remodeling to ensure safety and quality. Roughly 45% of all housing in the SBTA service area was built before 1939, while only 34.6% of the buildings in the state were built before that year, indicating an aging housing stock in SBTA communities.

Physical and Mental Health

The following health profile of the SBTA service area, and state overall for purposes of comparison, is based on Massachusetts Department of Public Health data.

We find that the SBTA service area bears a higher burden of disease, worse mental health, and less healthy behaviors compared to the state as a whole.

Health Behaviors

Health behaviors are important determinants of health later in life. Behaviors such as smoking, drinking, and not eating a healthy diet are all widely recognized risk factors for developing disease. Smoking, for example, is a known risk factor for developing various cancers. [13] Thus, health behaviors are a critical indicator of health.

Massachusetts residents smoke less than Americans in general. According to the Centers for Disease Control and Prevention, about 16.6% of all adults in Massachusetts identified as a “current smoker” in 2013. Among smokers, 70.9% reported smoking “every day.” Statewide, smoking rates were generally higher among individuals from lower socioeconomic backgrounds. For example, among adults aged 20 and older who did not graduate from high school, 26.9% identified as a current smoker in 2013. The prevalence of smoking is higher in and around the state's urban centers (for example, Boston, Brockton, Lowell, Fitchburg, Worcester, and

Springfield), and SBTA communities rank among the highest in the state for smoking prevalence.

SBTA communities also report some of the lowest percentages of people who eat 5 or more fruits and vegetables a day. Fitchburg, Worcester, Boston, New Bedford, Everett, Gardner and Malden, for example, have high shares of residents not eating enough produce daily. Finally, SBTA municipalities report some of the highest levels of physical inactivity in the state, with exceptions, such as Cambridge and Marblehead.

Hospitalizations

We report Massachusetts hospitalization data for the SBTA service area compared to the state as a whole.

Rates of mental health, and alcohol and substance abuse-related hospitalizations are higher in the SBTA service area compared to the rest of the state. The SBTA service area also struggles with higher rates of hospitalization for cardiovascular diseases and high blood pressure.

Table 2: Average Age-Adjusted Hospitalizations SBTA Service Area and State Wide

	SBTA SERVICE AREA AVERAGE (Age adjusted Rate per 100,000)	STATE WIDE AVERAGE (Age adjusted Rate per 100,000)
Coronary Heart Disease Hospitalizations	356.56	320.21
Ischemic Heart Disease Hospitalizations	325.97	314.54
Major Cardiovascular Disease Hospitalizations	1322.82	1352.58
Myocardial Infarction (Heart Attack) Hospitalizations	179.49	167.53
Hypertension Hospitalizations	41.71	33.344
Alcohol –Substance Abuse Hospitalizations	384.58	321.87

* Data from 2009-2011 from the Massachusetts Community Health Information Profile

Mental Health

Mental health challenges are often overlooked as a burden on society, yet mental illness is responsible for more disability in developed countries than is any other group of diseases, including cancer and heart disease. Fully one quarter of Americans suffer from some form of mental illness. The impact is so severe that, in 2002, researchers estimated that mental illness cost the American economy \$300 billion per year [14].

As with so many health challenges, mental illness strikes poor families disproportionately. Middle-aged adults living below the poverty line are five times more likely to suffer from depression than are people earning well above the poverty level. Adults in the SBTA communities report among the highest rates of depression and poor mental health in Massachusetts.

Cardiovascular Disease

Heart disease is the number one killer of Americans, according to the U.S. Center for Disease Control. More people die from it than from all types of cancer, pneumonia and influenza combined.[15]

Heart disease and related conditions, including stroke, heart attack (myocardial infarction), and hypertension [16-19] (together called “cardiovascular diseases” (CVD), affect low- to moderate-income Americans, as well as racial/ethnic minorities, more often than their wealthier and White counterparts. SBTA communities have hypertension prevalence rates near the statewide average, while overweight and obesity rates (well-known risk factors for developing cardiovascular disease) are slightly higher than the state average. Among adults, SBTA communities experience some of the highest prevalence of obesity in the state.

Mortality

Mortality rates provide a good measure of the overall health of an area. The age-adjusted all cause death rate from 2009-2012 was 708 per 100,000 in the SBTA communities, while the statewide rate was lower, at a rate of 665.16 per 100,000 persons.

The infant mortality rate is also commonly used as an indicator of population health, and is highly sensitive to the social and economic conditions of an area. Many municipalities lacked infant mortality data, but between 2009 and 2011 there were 5.17 infant deaths recorded per 1,000 live births in the SBTA service area. The statewide rate was 4.49 per 1,000 live births. Both of these rates are lower than the national statistic of 6.2 infant deaths per 1,000 live births.¹³

Summary

¹³ We use the 2009-2011 data as it is the data available at the metropolitan level. According to the CDC, the rate in Massachusetts dropped in 2013, the last year with available data, to 4.15 and national rate increased to 5.96.

These metrics illustrate the socioeconomic and health inequalities facing the SBTA target communities. In some cases the differences between the SBTA area and the state are stark; the poverty rate is 17% in the SBTA service area and 12% statewide, for example. In terms of health, rates of harmful health behaviors including smoking, physical inactivity and low fruit and vegetable consumption are much more common in the SBTA communities than in the state as a whole. In the SBTA communities, areas with high rates of adverse health outcomes tend to also suffer from high rates of social challenges, while communities with high rates of positive health behaviors and fewer adverse health outcomes tend to experience fewer economic, employment and housing issues as well.

PART III. PATHWAYS

Part III of this document describes the pathways through which SBTA activities impact health. The term "pathway" refers to the links through which a proposed change, in this case changes to the funding of the SBTA program, could impact health. Pathways are so named because their impact on health occurs through a chain of events, where one action (e.g., SBTA funding cuts) affects a determinant of health (such as housing, employment, and income) that in turn impacts one or more health-related outcomes (such as obesity, stress, cardiovascular disease, respiratory disease, injuries, and premature mortality). The following section explains how SBTA activities impact the entrepreneurs, their employees, and communities where their businesses are located, as a foundational discussion for considering how changes to SBTA funding may impact health.

1. GENERATING PATHWAYS

We began generating potential pathways by conducting a preliminary literature search for studies on small business and health, and complementing these findings with themes surfaced during scoping discussions. We explored the resulting expansive set of potential pathways more deeply against a wider body of literature (See Technical Research Guide 1 for detail) in order to narrow in on the most relevant mechanisms potentially connecting SBTA funding changes to health.

We scanned over 400 papers to identify the 149 that would form the basis for our assessment. For these 149 studies, we ranked the strength of their evidence as one of three categories: "strong" when there was large and robust body of literature that supported causal relationships, including those backed by systematic reviews or meta-analysis with agreement on the directionality; "moderate" when there were at least several strong studies (such as longitudinal studies) or a large body of literature covered the topic but with mixed evidence; and "weak" when there were a few cross-sectional or weak, associational studies.

2. PATHWAYS

Figures 4 and 5 provide a conceptual depiction of how funding the SBTA program in the future could affect health. Figure 4 shows mechanisms that surfaced during our preliminary literature review and scoping discussion, and focuses on the health of individuals directly involved with the program, for example entrepreneurs or employees of SBTA-supported businesses.

Figure 4: Individual-level pathways from SBTA funding to health

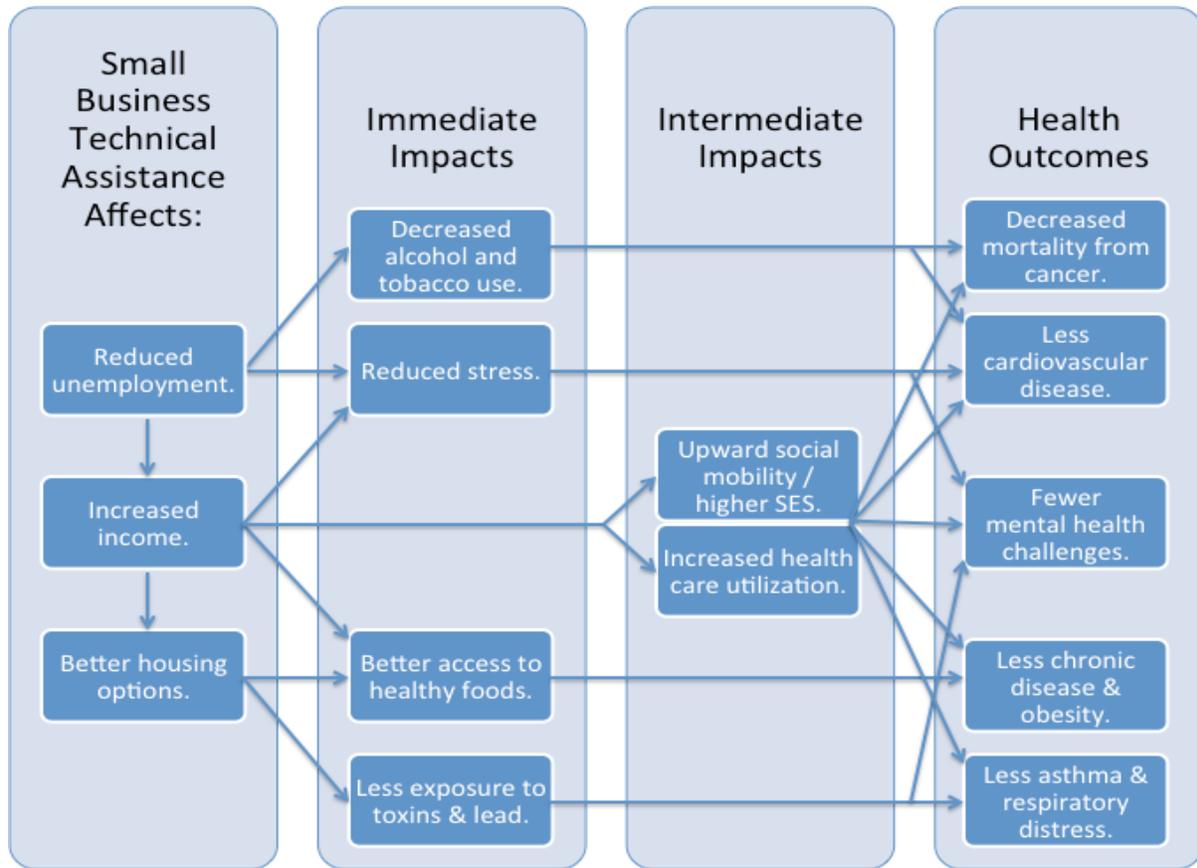
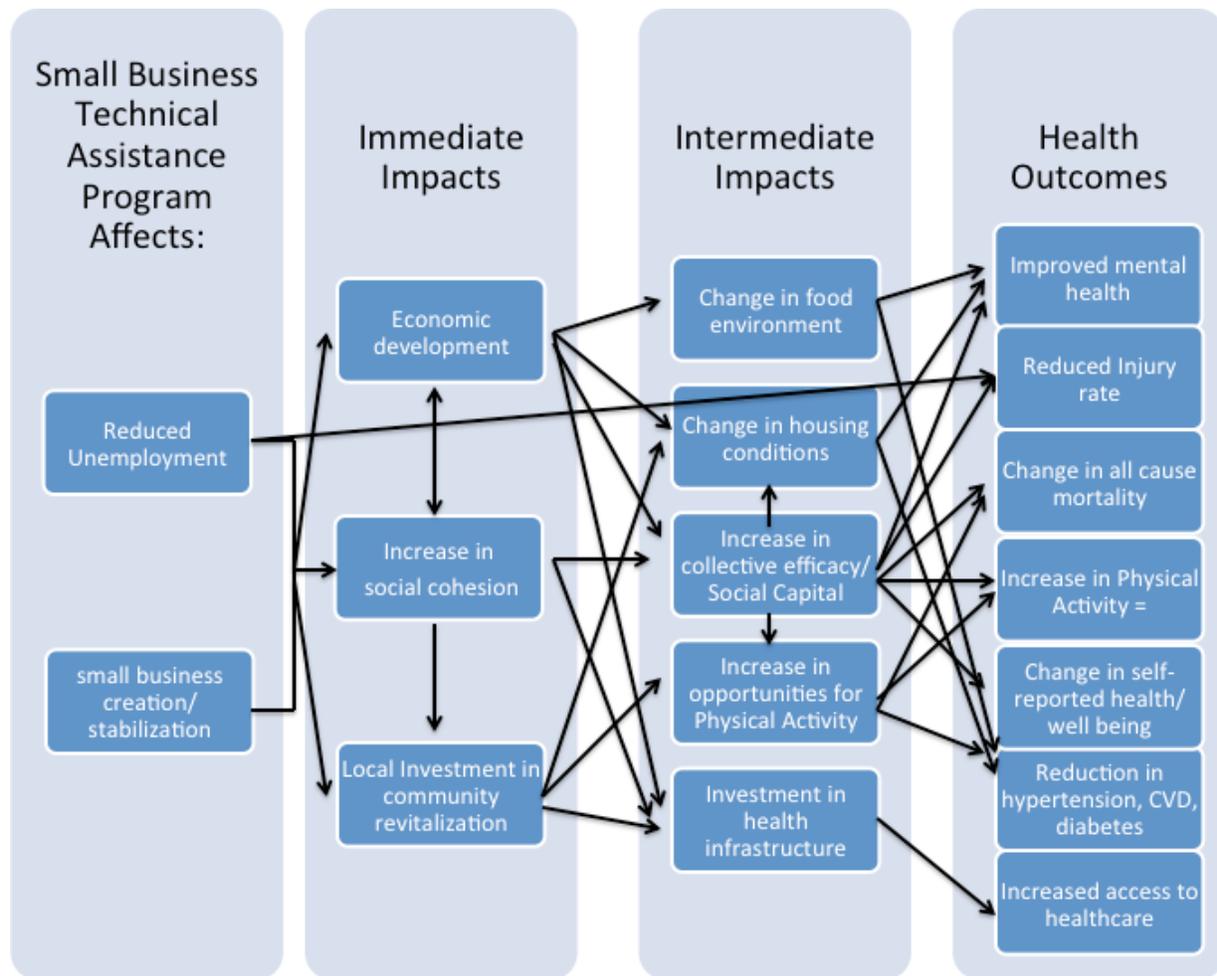


Figure 5 shows mechanisms linking SBTA funding to the health of entire communities in which SBTA-funded businesses are located. Again, these pathways were prioritized based on our preliminary literature review and scoping discussions.

Figure 5: Community-level pathways from SBTA funding to health



The following section summarizes the scholarly literature that supports these pathway diagrams. The assessment section then uses data on program outcomes (e.g., number of jobs created or stabilized) and the scholarly public health literature to consider how changes to SBTA funding could impact the health of both program beneficiaries and entire communities that are impacted by the program.

3. INDIVIDUAL- AND COMMUNITY-LEVEL HEALTH AND SMALL BUSINESS TECHNICAL ASSISTANCE

We performed two literature reviews: one for each pathway diagram. The first investigates the potential health effects individuals who benefit from the SBTA program could experience if program support was changed. For example, the literature review focused on the health effects of insecure employment and job loss. The second review explored neighborhood effects on health that stem from community environment changes, for example a loss of social capital that could result from SBTA funding changes. Appendix A provides more detail of these reviews.

Research suggests that improving economic conditions for people and communities may be a powerful health intervention, though mixed evidence on the health effects of economic recessions introduces uncertainty into the picture. Notwithstanding unanswered research questions on periodic economic contractions, evidence on individual- and community-level socioeconomic status suggests that helping businesses improve profit margins and provide stable jobs to people in traditionally underserved communities could confer a broad range of health benefits, as discussed in Part II of this HIA.

Summary

By providing opportunities for economic growth and stability, the SBTA program may confer a broad range of health benefits at both the individual and community levels.

PART IV: ASSESSMENT

1. ASSESSMENT OVERVIEW

In part IV of this HIA we assess how potential changes in the budget for the SBTA program could affect the health of SBTA recipients, their employees, and targeted communities. After reviewing the evidence from the literature on potential connections between small businesses development, related social determinants of health, and health, we apply the evidence from the literature to the SBTA program. We use the baseline data, where available, to estimate how possible changes in the economic and social conditions in the lives of program beneficiaries and SBTA service area residents could be affected by the SBTA program, and how these in turn may affect health. We use the reported metrics from the 2012-2015 program to assess program effects on economic conditions, and assume that similar funding in the future will result in similar numbers of businesses created, stabilized and grown.

We have divided the assessment into individual and community level sections. The individual section focuses on potential effects to the SBTA recipient entrepreneurs, and their employees. The community level assessment examines the communities in which these entrepreneurs work, and the influence of an increased number of small businesses in a community. We particularly focus on low-income communities and communities of color, two targeted areas for the SBTA program.

Our Technical Research Guide offers a detailed discussion of our methodology.

I. INDIVIDUAL-LEVEL IMPACTS

Below we argue that jobs are crucial to health, in large part because they help determine a person's income and access to all the resources they might need to stay healthy, for example, high quality housing and healthy food. Being employed may also affect health in other ways, for example by creating a social network, providing a comforting sense of economic stability, or instilling a sense of purpose in individuals. Because jobs impact so many areas of our lives, job loss, unemployment, and even the fear of losing one's job can have profound health consequences. SBTA funding creates and stabilizes many jobs; thus, changes to its funding could impact a range of health outcomes for business owners and employees.

Health through Increased Income

Employment status and income are important determinants of health [20] [21]. By increasing a person's access to income, employment may protect against (1) cardiovascular disease, (2) mental illness, and (3) tobacco use.

Cardiovascular disease

When people lose their jobs, their risk of developing heart disease increases substantially. Job loss and unemployment are also associated with higher rates of related conditions such as stroke, hypertension, and heart attack [16-19].

By lowering unemployment and increasing job security, the SBTA Program likely provides a protective effect against cardiovascular disease. Further, because the Program targets disadvantaged communities that suffer higher than average rates of cardiovascular disease, funding the SBTA program in the future should help fight health disparities [22, 23].

Mental Health

While sources of stress and anxiety may vary significantly across people, research shows a clear link between unemployment and mental illness, as well as between re-employment (i.e., getting a new job after a period of not working) and improved mental health. Job loss and involuntary unemployment are among the most stressful ordeals we may face in our lives [24, 25]. Even the fear of losing a job can be extraordinarily stressful [24]. Laid-off workers may experience anxiety, depression, and distress, and they may not seek medical attention because they cannot afford it or do not recognize their symptoms [24]. In the worst cases, some people may even contemplate or commit suicide [26].

We expect continued funding for the SBTA Program to stabilize some jobs and create new ones. The individuals who secure new jobs or gain increased stability of their current jobs should, in turn, experience less psychosocial stress and better overall mental health. With higher rates of poor mental health in the SBTA service area, job stabilization in SBTA target areas has the potential to help reduce health disparities in the Commonwealth, even if effects are small.

Tobacco Use

Job loss and being unemployed have been shown to increase the likelihood of smoking, as well as smoking intensity among smokers [27, 28]. First, unemployed workers appear more likely to smoke cigarettes than their employed counterparts [27, 29] and the odds of smoking among unemployed workers are 1.2 to 2.0 times greater than the odds of smoking among people currently employed [27, 30] though at least one study calls into question whether this link is causal [31].

Despite uncertainty in the evidence base, our best projection is that continued funding for the SBTA Program could decrease (1) the number of people who smoke and (2) the number of cigarettes smoked by smokers each day in Massachusetts. We expect these benefits to accrue disproportionately to people living in the SBTA service area due to higher baseline rates of smoking.

Health through Improved Housing

People spend more of their lives each day in their homes than perhaps any other place [32]. The quality of one's home can either help or hinder one's health through indoor air quality, insulation and thermal efficiency, and noise pollution. Lead paint, for example, causes cognitive and developmental problems for children [33], while dust and dirt in the air can exacerbate asthma and respiratory distress [34 1881]. Excessively cold home temperatures from poor insulation can also tax one's overall sense of wellness. In contrast, well-insulated, clean homes free of environmental toxins can provide health-promoting spaces for families to live in and grow [35].

To the extent that SBTA beneficiaries can afford higher quality housing, either by moving to a new home or retrofitting their current one, SBTA program funding could lead to enhanced respiratory health, self-rated health, and psychological wellbeing. Unfortunately, however, neither the SBTA Program nor any other state effort tracks the data necessary to determine who has gained access to better housing or other resources vital to health as a result of the SBTA Program. In turn, we are unable to forecast the direct health impact of fully funding the Program through the housing pathway, but rather highlight the potential for income gains to translate to health gains via increased spending on costs such as housing.

II. COMMUNITY-LEVEL IMPACTS

When a local economy grows, the entire community may benefit as a whole, above and beyond the benefits felt by individuals who may secure better jobs or make more money themselves [36]. In other words, even people not directly benefitting from employment or job stabilization could still benefit from the SBTA program through positive changes to the community environment. These “community-level” benefits may also extend to health, such that thriving communities are also healthy communities [37, 38]. This assessment section focuses on how changes in funding for the SBTA program could affect the health of the communities in which it operates.

Economic Growth and Health.

Small business entrepreneurs generally have strong economic ties to their communities. Their presence is associated with economic growth and local investment [39, 40], and they are more likely than larger companies to reinvest their profits locally [41]. This commitment to communities also creates local jobs. Much of this job creation occurs when existing small businesses expand, as opposed to when entrepreneurs create new businesses [41].

Small businesses do more than big business to create jobs for their communities. They also grow local economies more effectively than large businesses. For example, one study in British Columbia found that for every \$1,000,000 in sales, independent retail stores generated \$450,000 in local economic activity, while large chain businesses generated just \$170,000 in local activity [42]. Another study in Portland, Maine, found that local retailers returned a total of 52% of their revenue to the local economy, compared to just 14% for national chain retailers [43]. A third study from New Orleans, Louisiana, found similar results: the returns generated by money spent at locally owned businesses were 76% greater than those generated by money spent at national chains. The New Orleans study further found that for every \$100 spent at locally owned businesses, an additional \$58 flowed into the local economy [44].

When local economies grow, and when small businesses create good local jobs, entire communities stand to benefit. Communities may see increased revenue, more private

The protective effects of social capital against social gradients in health

Social capital may be particularly important for protecting the health of socioeconomically disadvantaged populations, while at the same time, these groups are often constrained in their opportunities to access and use social capital [1].

By targeting marginalized populations and communities, including women, people of color, immigrants and other underserved communities, the SBTA program may promote opportunities for social, economic and political participation by populations in particular need of such forms of inclusion. Assets such as small business ownership predict social inclusion and economic participation [4], which in turn impact health.

investment, and, eventually, more health-promoting resources [45]. Data shows that wealthier communities—those whose residents enjoy a higher average socioeconomic status—have healthier residents than poorer communities [37], though the causal effects of community development activities such as small business development have not been studied directly.

SBTA Impact

From 2012 through 2014, the SBTA program stabilized 892 businesses, helped grow 842 businesses, and helped create another 623 businesses within the Commonwealth, largely in low-income communities. In 2014, 87% of SBTA program beneficiaries were from underserved communities, up from 29% in 2012. This is important because poorer communities have more to gain from economic development and small business assistance [46], and also because reducing economic and social disparities may also reduce health inequities.

Because small businesses drive local economic growth through job creation and reinvestment, and because the SBTA program targets small businesses, we expect continued funding for the program to help grow local economies. Specifically, we expect communities served by the SBTA program to enjoy small gains in average income and wealth, with these gains accruing disproportionately to low-income communities, and to areas with high concentrations of immigrant, female, and other under-represented entrepreneurs. Based on data showing previous program achievements and the scholarly literature, we project that continued funding for SBTA could provide marginal protective benefits against obesity, diabetes, and overall mortality in communities targeted by SBTA.

Unemployment and Health

Many of the communities served by the SBTA program suffer from high rates of unemployment, though the statewide unemployment rate in Massachusetts has fallen in recent years. In July 2013, the Commonwealth's rate was 6.7%. By June 2014, it had fallen to 5.7%, and, one year later, it fell further to 4.6%. These rates are lower than national averages.

Neighborhoods with high levels of unemployment suffer disproportionately from higher rates of injury, violent crime, and property crime. As with the unemployment burden, injury and crime rates in Massachusetts are also lower than national averages. In 2011, state authorities counted 3,138 injury-related deaths, 69% of which were caused by unintentional injuries. Notably, unintentional injuries were the fifth-leading cause of death among all residents of Massachusetts in 2011, and they were the leading cause for men aged 15 to 44 years and women aged 15 to 24 years. A year later, in 2012, the state recorded 121 murders [47]. Between 2009 and 2011 the average crude rate of unintentional injuries (inclusive of poisonings) per 100,000 was 677 in the SBTA target area.

SBTA Impact

Efforts to reduce unemployment, including continuing to fund the SBTA program, could help protect community health in places that need it most. As part of the HIA process, we interviewed a sample of SBTA Program participants, most of whom indicated they hired employees who were previously unemployed. As such, the SBTA Program played a small but active role in reducing the Commonwealth's unemployment rate over the past three years. From a statewide perspective, the effect of increased SBTA funding will not be large; however, within the communities served by the program administrative program data suggest that there could be localized, meaningful changes.

Two studies provide limited but useful insight into the magnitude of a potential effect. Based on these previous findings, we estimate that a 10% drop in unemployment could help reduce homicide rates by roughly 40% to 80% [48-50].

Social Capital and Health

Epidemiologists, sociologists, and even economists have explored the connection between community-level social capital and health. In general, these studies uncover better health in communities with high levels of social capital. Such communities tend to have lower overall death rates, lower rates of infant mortality, and fewer cases of obesity, among other health measures, as discussed in more detail below. Residents living in communities with high levels of social capital also believe themselves to be in better health. Community-level social capital flows through several channels, many of which may involve local small businesses. These channels include (1) information-sharing networks; (2) norms of reciprocity; (3) collective action; and (4) shared identities and solidarity [51]. Separately, small businesses drive the creation of social capital by bringing people together and building relationships among institutions.

SBTA Impact

Full funding for the SBTA program is expected to foster social capital, particularly in communities most heavily served by the program (Figure 3), by integrating more people into social relationships with co-workers, creating relationships among TA providers and businesses, and more. The scholarly literature suggests that increases in social capital could then translate into a wide range of health benefits. For example, the literature identifies infant mortality [52-54] all-cause mortality [53], injury [52, 53], self-reported health [55], obesity [56, 57], mental health for some population groups [58], and even suicide [52] as potentially sensitive to levels of social capital in a community. More detail on these linkages is provided in our Technical Research Guide. While we cannot quantify how full funding for the SBTA program would affect health outcomes in each of these areas, existing literature interpreted in the context of the SBTA program's scale suggests that the effects would be small.

Built environments and Health

The built environment is thought to help shape whether and how much community members are physically active and safe.

The convenience, safety, and proximity of public or retail spaces can influence a person's ability and decision to walk rather than drive. The literature suggests that there is average increase of 60 to 80 minutes of exercise weekly per person in 'high walkable' versus 'low walkable' neighborhoods, and that residents of more walkable areas are an estimated 1.9 to 2.4 times more likely to meet recommended exercise levels[59, 60].

Furthermore, built environment may have an impact on safety. Rates of crime and fear of crime are also mitigated by environments that are walkable, visible, well-maintained, well-lit, and which provide access to a range of amenities such as retail locations and parks [61-65]. Crime Prevention through Environmental Design (CPTED) strategies have shown reductions in crime [62, 66] and may also have positive effects on mental and physical health [61], showing the potential for built environment improvements to effectively reduce crime.

SBTA Impact

It is difficult to estimate the effects of the SBTA program on walkability, as we do not expect that the limited number of businesses created in each targeted community to dramatically shift SBTA areas from a 'low walkable' to a 'high walkable' community. We suggest, however, that the SBTA program, to the extent that it invests in brick and mortar businesses, could increase walkability slightly, with positive effects on physical activity.

Similarly, it is difficult to estimate the effects of the SBTA program on safety. However, researchers have found that business improvement districts, which involve multiple businesses coming together to invest in community revitalization, have been associated with a 12% drop in robbery rates and an 8% drop in violent crime compared with areas without these districts [67].

Food Access and Health

In low-income neighborhoods, healthy food is generally less available and less affordable [68], such that those with the most limited resources pay more for healthy meals [69, 70].

SBTA Impact

The SBTA program could affect the food environment in several ways. First, some of the small businesses supported in future rounds may be grocery stores, food markets or healthy restaurants. Second, increased social capital could be harnessed to organize around issues of healthy food access. This could include bringing in community supported agricultural program, farmers markets, farm stands or mobile vendors, developing community gardens, or encouraging the sale of healthy foods in corner or convenience stores. Finally, increased social capital and local economic development could actually help attract or develop new healthy food retailers [69]. New investments are thought to reinforce a positive cycle of development where

investments stimulate economic growth and development by offering local jobs, encouraging local spending (known as the multiplier effect), and catalyzing further commercial revitalization[71].

Overall Community Strength

As communities grow and thrive, they attract new business and investment, benefit from strengthened community groups, and, in general, develop more power to attract what they need for their health and wellbeing. This community power often tends to be correlated with community wealth. For instance, higher-income neighborhoods have more access to healthy foods, better housing, and health care [72].

SBTA Impact

Funding for the SBTA program has the potential to improve health through its contribution to overall community strength and improvement of social and economic opportunity in disadvantaged communities. For instance, by increasing social capital and civic engagement, the SBTA could contribute to a community's ability to advocate for, and achieve, housing, health care or other community goals.

Major changes in broad community context would require long-term investments from multiple complementary programs, as well as policy changes and community action. We do not expect any dramatic shifts to result from the SBTA program in isolation. Instead, we highlight potential effects given sustained investment in improving general socioeconomic opportunity in disadvantage communities.

Summary of Findings

We summarize the findings described in the assessment in Table 3.

The table can be read as follows:

Impact Table Legend				
Direction	↑ Increase	↓ Decrease		
Magnitude	Small change in the rate/proportion /incidence of outcome will be minimal	Modest change in rate/proportion /incidence of outcome will be moderate	Large change in the rate/proportion/incidence of outcome will be substantial	
Strength of Evidence	Weak when there are a few cross-sectional or weakly associational studies	Moderate when there are a few strong studies or there is a larger body of literature but the evidence is mixed or lacking in stronger studies that bolster a case for causality (such as longitudinal studies)	Strong when there is large robust body of literature that supports causal relationships	Anecdotal when program recipients reported particular challenges or outcomes

Table 3: Predicted health consequences of continued funding for the SBTA program

Individual Level Health Impacts

Health Outcome/Behavior	Direction in which SBTA may affect health	Magnitude of effect of SBTA*	Strength of Evidence
Cardiovascular Disease	↓	Modest	Strong
Mental Health Challenges	↓	Small	Strong
Tobacco Use	↓	Small	Weak to Moderate
Respiratory Distress	↓	Small	Weak to Moderate
Self-Report health and “Vitality”	↑	Small	Strong
Sleep	↑	Small	Anecdotal (based on feedback from stakeholders)
Stress	↓	Modest	Moderate

Community Level Health Impacts

Health Outcome/Behavior	Direction in which SBTA may affect health	Magnitude of effect of SBTA*	Strength of Evidence
Self-reported Health	↑	Small	Moderate
Physical Activity	↑	Modest	Strong (area economic conditions; business concentration) Weak (social capital)
Mental Health Challenges	↓	Small	Strong (physical activity) Weak (social capital)
Obesity	↓	Small	Strong (physical activity) Weak (social capital)
Type 2 Diabetes	↓	Small	Strong (physical activity)
Hypertension	↓	Small	Strong (physical activity)
CVD	↓	Small	Strong (physical activity)
Intentional Injury	↓	Small	Strong (social capital) Moderate (area employment)
Unintentional Injury	↓	Small	Strong (area employment) Moderate (social capital) Moderate (physical activity)
All-cause Mortality	↓	Small	Moderate

Health Outcome/Behavior	Direction in which SBTA may affect health	Magnitude of effect of SBTA*	Strength of Evidence
Infant Mortality	↓	Small	Moderate
Access to Healthcare	↑	Modest	Weak

*Where the outcome is associated with more than one upstream health determinant, it is listed in parenthesis.

Part V: Recommendations

1. Summary of Findings

This HIA predicts that eliminating state funding for the Small Business Technical Assistance program would have a small but negative impact on public health, particularly in the economically disadvantaged and racially/ethnically diverse communities the program targets most heavily.

However, maintaining state funding for the SBTA program would likely provide a small protective health benefit for business owners, small business employees, and residents in the communities that the SBTA program serves.

This finding is based on available evidence, demographic and health data, and input from stakeholders. The prediction relies on literature and research from the fields of health, economics, and social science; it uses data on health behaviors and risk factors, hospitalizations, and social determinants of health; and it is guided by input and feedback from SBTA technical assistance providers, experts from the small business and economic fields, experts from the public health field, and on the ground stakeholders.

Our assessment explored how assisting small businesses to grow and stay in business affects individuals and the communities where they are located. The ways these effects occur are through the impacts of having a job, feeling secure in one's employment, earning higher wages, and living in a neighborhood or area with a higher concentration of local small businesses. We looked at what this could mean for individuals in the small business, in particular the owners of the businesses. We also looked at how these mechanisms could play out across the populations living in neighborhoods with concentrations of local small businesses.

Through this assessment, we determined that current SBTA program funding for businesses allowed new businesses to start, existing businesses to stay open, and existing businesses to grow. Likewise, this effort created and saved jobs and served owners who were from low- to moderate-income backgrounds, who were minorities, and who operated businesses in places where unemployment was high and health issues are worse relative to the state.

Our findings suggest that funding the program improves physical, social, and mental health outcomes for those working in the small businesses that receive assistance as well as for the surrounding neighborhood. In particular, the TA will contribute positively to changes in physical activity, social capital, and unintentional injuries, changes that are associated with improved mental health and reduced rates of chronic disease and mortality. Our findings also suggest that additional funding for the program, as demonstrated in Fiscal Year 2015 funding, will result in greater reach of the program and the ability to provide specialized support. These in turn are associated with a compounding of positive impacts.

This assessment characterizes the full funding for the program at \$2M. However, as described above, the governor's budget proposal for FY15 completely defunded the SBTA program. Under

this scenario, a reduction or full defunding of the program would be expected to adversely limit the reach and overall impacts on economic performances as well as the associated changes in physical, social, and mental health outcomes.

2. Recommendation Context

We propose these recommendations as means to enhance the overall positive impacts associated with the program and, where needed, mitigate potential negative health impacts that the SBTA program may produce. Wherever possible, recommendations are based on evidence that have been shown or associated with a proven effect. Where evidence does not exist, we have proposed monitoring in order to inform future evaluations and contribute to the evidence base for this work.

3. Recommendation Targets

The primary focus of our recommendations relates to SBTA program funding. The SBTA program is subject to annual funding allocations and the legislative budgeting process that dictates state funding.

The secondary focus of our recommendations relates to SBTA program administration. We are fortunate to have the Massachusetts Growth Capital Corporation, who administers the SBTA program, as a partner in the HIA. We provide recommendations for how administration of the program could lead to better health and economic outcomes as well as understanding of the programs immediate outputs.

4. Recommendation Specific to the SBTA Program Funding

This recommendation addresses the funding levels proposed for the program as part of the state budgeting process that occurs annually.

Recommendation	<i>Rationale and Impact</i>
<p>We recommend that the Small Business Technical Assistance program be funded at the level in the original program proposal from 2006 (\$2,000,000). In addition, we recommend that the program be considered for increased funding over the base level of \$2,000,000 when possible due to the programs impact on disadvantaged populations and locations.</p>	<p><i>With funding at the \$2,000,000 level, the SBTA program has supported more TA providers and correspondingly seen more small businesses receive assistance than in previous years. As this assistance occurs among disadvantaged populations and businesses, it is predicted to spur and sustain positive economic changes which are associated with positive health behaviors and outcomes. In addition, in places with businesses that receive assistance, it is expected that others will experience positive health impacts and those in the small businesses would accrue additional positive</i></p>

Recommendation	Rationale and Impact
	<i>health impacts.</i>

For monitoring and evaluation of the funding recommendation, we propose that the following indicators be tracked:

Indicator	Source	Timeframe
Line Item for SBTA Program in Governor, House, and Senate Annual Budget Proposals	Annual Budget Proposals	Beginning each February 2016 – Spring 2018
Line Item for SBTA Program Annual State Budget	Adopted State Budget	Each July 1 from 2016 - 2018
Total number of business clients receiving services	MGCC Annual Reporting	Final reporting from TA providers for fiscal years 2016 - 2019
Total number of new businesses created/acquired	MGCC Annual Reporting	Final reporting from TA providers for fiscal years 2016 - 2019
Total number of businesses stabilized	MGCC Annual Reporting	Final reporting from TA providers for fiscal years 2016 - 2019
Total number of businesses assisted located in low- to moderate-income community ¹⁴	MGCC Annual Reporting	Final reporting from TA providers for fiscal years 2016 - 2019
Total number of low- to moderate-income business owners assisted	MGCC Annual Reporting	Final reporting from TA providers for fiscal years 2016 - 2019

Information on most of these indicators will be collected by MGCC through their annual program reporting. MAPC proposes to assist MGCC in monitoring these changes over time as well as tracking the budget-related items.

5. Recommendations Specific to SBTA Program Administration

This set of recommendations is intended for the Massachusetts Growth Capital Corporation and for the TA providers who are supported by the program.

Recommendation	Rationale and Impact
We recommend SBTA Technical Assistance providers receive guidance on how to address the physical and mental wellness of the small	<i>A number of risk behaviors and chronic health issues for owners and employees were identified through the assessment and</i>

¹⁴ As defined by SBTA program.

Recommendation	Rationale and Impact
<p>business owners and employees. Through the program or outside support, we propose that the TA providers have access to resources (see Appendix X) related to addressing unhealthy weight, smoking, physical activity, mental health, and sleep. These materials can then be shared with their clients to build capacity and workplace-based changes.</p>	<p><i>stakeholder input. These issues include unhealthy eating, stress, and lack of sleep. This recommendation would allow TA providers to share resources with small businesses – owners and employees - that identify easy steps they could take in their daily routines to feel better and enjoy better health.</i></p> <p><i>This recommendation could be tested in the short-term by providing a resource page or materials to TA providers. These resources would serve as information that they could share with the businesses receiving assistance. It could then be evaluated as part of the end of year reporting for FY 2016 and inform what and how resources could be provided in FY 2017.</i></p>
<p>We recommend SBTA Technical Assistance providers receive guidance on how to address workplace safety (see Appendix X). Through the program or outside support, we propose that the TA providers learn to recognize workplace safety concerns and refer their clients to resources that assist in making changes.</p>	<p><i>The TA providers work with a diverse set of small businesses. Even so, there are certain types of businesses that more routinely participate each year based on feedback from stakeholders. These businesses include nail salons, fishing and agriculture, and food services. As the small businesses juggle many responsibilities and have limited time, the provision of easily accessible resources from a familiar party – the TA provider – it is more likely the small businesses can learn and act on practices that reduce the risk of injury on the job.</i></p> <p><i>This recommendation could be tested in the short-term by providing resources to TA providers based on some common business types receiving assistance. The TA providers could share them as they work with their small businesses. These materials and their impact could then be evaluated as part of the end of year reporting for FY 2016 and inform what and how resources could be provided in</i></p>

Recommendation	Rationale and Impact
	<i>FY 2017.</i>
<p>We recommend that MGCC should encourage TA providers working at neighborhood or municipal scale to seek opportunities to concentrate assistance in geographic clusters.</p>	<p><i>Having a concentrated mixture of thriving small local businesses in an area is associated with neighborhoods that experience healthier outcomes, according to research reviewed in this HIA. This recommendation seeks to build on the place-based aspect and associated impacts of the work.</i></p> <p><i>This work likely means an approach that seeks both to attract and recruit businesses where TA is available. And, this work may mean a shift in how a provider currently offers or provides assistance. As a result, we think in the short-term an approach that concentrates TA should be encouraged or incentivized as a means to have providers act on the recommendations and to test the impact. If the results are positive, we would suggest this recommendation be considered more formally.</i></p> <p><i>This recommendation could also apply to TA providers working at a regional or state scale or in a particular sector. These providers should seek to align their work with other TA occurring in specific locations in order to stimulate the impacts of place-based work.</i></p>
<p>We recommend that MGCC and TA providers work together to collect a limited set of additional data to increase understanding of the economic and health impacts of the program. Specifically, we would recommend that the following data be collected in the mid- and end of year reporting:</p> <ul style="list-style-type: none"> • Number of small businesses receiving assistance in a zip code • Business sectors represented by the small businesses receiving assistance 	<p><i>This recommendation is based on stakeholder feedback from the process, the literature review, and the opportunity to better define the impact of the program. This additional data would assist in understanding worksite health challenges and opportunities, the place-based impacts of the program, and the relative economic impacts of the program based on business size.</i></p> <p><i>We recognize that reporting should be an efficient and targeted process that allows the</i></p>

Recommendation	Rationale and Impact
	<p><i>providers to focus on providing TA and does not place an undue burden on resources. That is why we propose only three additional data points, each of which responds to stakeholder input and has a relation to known economic and health impacts.</i></p>
<p>We recommend that MGCC and providers pursue additional opportunities to communicate program outcomes and highlight key TA topics. In particular, we recommend that communications occur in the next year to share success stories of small businesses receiving TA and highlight succession planning for small businesses.</p>	<p><i>Through our conversations with stakeholders, we learned that the SBTA program is unique in the breadth of small businesses in can assist and in its focus on businesses in disadvantaged neighborhoods and owned by those of diverse ethnic and economic backgrounds. In addition, the program reporting provides ample material for sharing quantitative outcomes and stories of individual businesses receiving assistance and building from the added capacity. This information can easily be turned in success stories for the program similar the communication pieces developed during the HIA.</i></p> <p><i>Additionally, there are cross-cutting topics that each TA provider and small business could be made aware of. Succession planning for small businesses is one that was identified by many stakeholders. This type of planning is key to sustaining small local businesses, especially those with physical locations, and to providing opportunities within families and to recent immigrants. Given Massachusetts aging population, succession planning is a topic that is relevant both economically and from a health perspective.</i></p>

For monitoring and evaluation of this recommendation, we propose that the following indicators be tracked:

Indicators	Source	Timeframe
Type and number of paper and electronic materials provided or shared with program grantees relative to workplace wellness	Mid-year grantee meeting materials, web resources for program, and communications with the TA providers	FY16 – 18 program materials
Type and number of paper and electronic materials provided or shared with program grantees relative to worksite safety	Mid-year grantee meeting materials, web resources for program, and communications with the TA providers	FY16 – 18 program materials
Changes to annual request for proposals that encourage focused TA efforts for neighborhood- and municipal-level providers	Annual request for proposals and reporting form	FY17 – FY19 SBTA program requests for proposals
Changes to TA provider reporting forms to include: zip codes, business sectors, or business sizes	Mid-year and annual reporting form	FY16 – 19 program reporting forms
Number of communication pieces disseminated featuring success stories or outcome data during each funding cycle	Annual report, social media, and electronic media for the program	FY16 – 19 program materials
Number of communication pieces disseminated featuring succession planning related information and resources during each funding cycle	Program communications to grantees and from grantees to small businesses in service area	FY16 – 19 program materials

6. Future Considerations

We provide below a set of considerations that reflect broader themes we heard from stakeholders (SBTA technical assistance providers, experts from the small business and economic fields, and experts from the public health field) during the HIA. We hope that MGCC, the TA providers, and others involved with SBTA program will consider these items as the program continues to grow and evolve.

- Immigrant integration:** The TA providers work with immigrant- owned or -started businesses each year. The assistance helps address potential obstacles such as learning about new business regulations and accessing capital to grow a small business. There are other obstacles that immigrants face, some of which fall outside of operations and financing. These other obstacles relate to discrimination that can be faced in a new society and the potential of behaviors and relationships that support health. We would recommend that the program and TA providers continue their work to welcome new

immigrants similar to programs run through Office of New Bostonians in the City of Boston and Immigrant Learning Center. These programs provide cultural support for new immigrants while welcoming them through assistance and connections into the community in which they are integrating.

- Connect small businesses with buy local campaigns: There are a number of initiatives across Massachusetts that promote and market the opportunity to buy local goods and services. Given that this program focuses on supporting local small businesses, we propose that there be an opportunity to have SBTA-assisted businesses connected with and, where possible, highlighted as programs that encourage patronizing local goods and services. This step could be a way to create more local connections among communities and provide more economic support to the small businesses assisted by the program.
- Placemaking and design guidance for place-based businesses: There are a number of initiatives that seek to create more vibrant, safe, and attractive spaces. These initiatives include placemaking, which are quick and low-cost changes that activate unused spaces by capitalizing on local assets, and assistance with design of store facades and grounds. These initiatives are complementary to activating and making more attractive, and culturally responsive, physical environments for place-based small businesses. Information and assistance via these initiatives could also be provided as resources to TA providers.
- Health Insurance guidance for small businesses: Stakeholders reported that small businesses like those targeted by the SBTA program still struggle with issues related to health insurance.

Finally, we note that the SBTA TA providers tend to be small business themselves. While they can be larger than 20 employees, they do their work and are typically located in the places addressed by the SBTA program. They are non-profits with missions that revolve around community and economic development.

Through the HIA stakeholder engagement process, we heard that the TA providers deal with many of the same issues we noted with the small businesses served by the SBTA program. Therefore, we would be remiss to not highlight that the providers may be dealing with similar health concerns and opportunities for wellness. We would suggest that the TA providers consider how they might apply some of the small business recommendations to their own organizations. Such changes would have similar positive outcomes of staff wellness and working conditions.

7. Broader Landscape of Business Assistance and Health

The intersection of economic opportunity and health includes many existing programs that provide support to small businesses and new initiatives that are looking to better understand and share information about impacts.

There are many programs that look to assist small businesses in Massachusetts and the SBTA program is just one of these. There are programs offered through cities and towns, colleges and

universities, community-based organizations, and, most importantly, through the Massachusetts Small Business Development Center. There are also additional programs offered by the state. Each program has certain targets – certain types of business sectors, businesses of certain sizes, certain areas of the state – and together they form a network of assistance services across the Commonwealth. The SBTA program, and its economic and health impacts, fits within this network of small business assistance programs. Its focus on disadvantaged neighborhoods and owners from diverse ethnic and economic backgrounds makes its impact unique as well as complementary to other programs.

The assessment approach and findings from this HIA can be expanded to explore the impacts of these other programs. We think this is a worthwhile action to better understand how our support of small businesses could be supporting better health and doing so in a more comprehensive fashion.

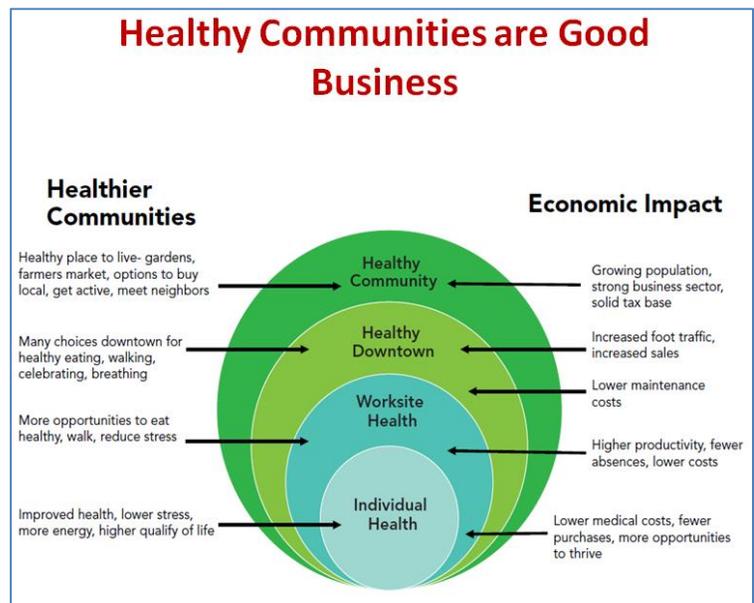
A similar effort to look at how businesses and health are connected was initiated during the SBTA HIA timeline. The New Health and Economic Opportunity Initiative was announced in April 2015 and is a Robert Wood Johnson Foundation- supported project with the U.S. Chamber of Commerce Foundation.¹⁵ The initiative is engaging business networks across the US about the overlap of health and economic opportunity. In addition to holding multiple forums on the topic, the initiative also involves research into the connections between health and economic growth and will produce toolkits to help local businesses participate in improving the health of their communities (see *Spotlight for an example of a successful local business and health project in Maine*). The SBTA HIA plans to contribute to this research, dialogue, and development of informational resources.

¹⁵ <http://www.rwjf.org/en/library/articles-and-news/2015/04/u-s--chamber-foundation-and-robert-wood-johnson-foundation-annou.html>

Spotlight: Healthy Maine Streets

Healthy Maine Streets (HMS) builds on the Maine Downtown Center's proven downtown revitalization framework to leverage community health improvements in a number of Maine towns. The program is the result of a collaboration between the Maine Downtown Center (MDC) and MCD Public Health and was made possible by a grant through Center for Disease Control and Prevention (CDC) Community Transformation Grant.

The HMS program established local Wellness Committee that worked to address the disparate health access and outcomes for employees of small businesses that are the heart and soul of small town centers. The grant allowed MDC and MCD Public Health to bring communities and small businesses together to create wellness programs shared by small businesses and downtowns. This work was used to transform the communities into more healthy, vibrant places to live and work. More information on the HMS program can be found at <http://www.healthymainestreets.org/>.



8. Conclusion

The purpose of the SBTA program is to address challenges related to starting, sustaining, and growing small businesses in disadvantaged areas of the state, including small towns, immigrant neighborhoods, and communities of color. The SBTA program has supported TA in many neighborhoods and regions of the Commonwealth and demonstrated positive outcomes related to new small business start-ups, maintenance and creation of employment opportunities, and support for businesses owned by women, people of color, and immigrants.

These economic outcomes are important. However, they only tell part of the story of the program's impacts. This assessment finds that TA support that sustains and grows local small businesses also has positive effects on the health of individuals and communities served by these businesses. The health of owners and employees is served by new and ongoing employment, changes in income, and business improvements that reduce stress and lack of sleep. These changes in turn have effects on their cardiovascular, mental, and overall physical health. Likewise, the places where local small business grow and thrive experience stronger economic ties within the community, more local jobs, and more prosperous local economies.

The HIA shows that these conditions are associated with reduced crime, fewer injuries, and more physical activity, each of which has been found to improve opportunities for longer, healthier lives of residents in the community.

Economic changes such as whether someone gets a job or whether a small business receives capital to grow are those that are tracked and experienced in the present or the immediate future. While these are important in and of themselves, their consequences for longer term impacts on health are becoming more apparent – and should be tracked. As the SBTA HIA reveals, support for local small businesses contributes to community health as well as community prosperity. We have the opportunity to more fully connect and build on the intersection of economic opportunity and public health and take a more comprehensive approach to addressing the factors that support connected, vibrant, and healthy communities.

APPENDIX A. Health Impact Assessment Process

The six steps of HIA are:

1. Screening: Determine whether the HIA is likely to add value and influence decision-making.
2. Scoping: Create objectives for the HIA in consultation with stakeholders; outline process to identify potential health risks and benefits.
3. Assessment: Describe the current health of people and groups affected by the proposed change and predict the potential health effects if the change were to occur.
4. Recommendations: Produce practical solutions and strategies that can be implemented within the political, economic, or technical limitations of the proposed change.
5. Reporting: Share the findings with decision makers, affected communities, and other stakeholders.
6. Monitoring and Evaluation: Monitor the changes in health and evaluates the usefulness of the measures that are implemented and the HIA process as a whole.

Based on the HIA process description from the Health Impact Project.

<http://www.pewtrusts.org/en/projects/health-impact-project/health-impact-assessment/hia-process>

For more information on HIAs and the HIA process, please visit:

<http://www.pewtrusts.org/en/projects/health-impact-project/health-impact-assessment/hia-process>.

APPENDIX B. LITERATURE REVIEW OF INDIVIDUAL- AND COMMUNITY-LEVEL HEALTH AND SMALL BUSINESS TECHNICAL ASSISTANCE

We review the literature to understand the relationship between small business development and health. Our review focuses on 149 relevant papers investigating aspects of this relationship either at the individual or the community level.

1. INDIVIDUAL-LEVEL

The SBT program supports the creation of new jobs and the stabilization of existing ones. We review how job loss, unemployment, and even the fear of losing one's job can have health consequences. This section of the literature review investigates the health effects on individuals who experience or are at risk of insecure employment and job loss.

Mental Health

Two comprehensive meta-analyses [24] [73], or studies of studies, show that unemployment is a likely risk factor for psychological distress and worsened mental health. In one, researchers combined data from eight longitudinal studies involving a total of 660 participants who were followed throughout employment changes, and showed unemployment to have a statistically significant negative effect on mental health [24]. As part of the same study, the researchers also examined whether, and to what extent, the length of unemployment affected wellbeing. Their analysis, which included 5,122 people from 23 different samples, revealed negative correlations between unemployment for six months or more and mental health and life satisfaction. Workers who were unemployed for at least six months demonstrated lower levels of mental wellbeing compared to workers who were unemployed for less than six months. Finally, these researchers combined the data of 19 samples from 15 longitudinal studies, which include a total of 1,911 study participants to show that reemployment was associated with improved mental health.

Another meta-analysis incorporating 19 samples, which together include data on 1,933 total study participants, also tracked individuals over times during which they lost their jobs. Comparing participants who lost their jobs with those who did not, results indicated that individuals who lost their jobs during the study periods experienced a statistically significant increase in distress compared to those who did not lose their jobs [73]. The same meta-analysis also investigated the link between reemployment and psychological distress based on 4,513 individual study participants from 45 different samples. Comparing reemployed individuals to those who remained unemployed in longitudinal studies, they found that reemployed workers suffered lower levels of psychological distress than did the average unemployed worker. Our team's calculations based on their findings found this was a small to moderate effect size, in terms of relative importance of this effect.

Smoking

In addition to worsened mental health, unemployment may also be associated with an increase in tobacco use, though the relationship is complex and subject to some debate. Researchers examining multiple indicators of tobacco use, including smoking status, smoking cessation and relapse, and smoking intensity as measured by cigarettes smoked per day, informs our understanding of this complex relationship.

Data from a nationally representative, longitudinal study of older Americans found that among participants who smoked before losing their job, job loss and continued unemployment was associated with an average additional seven cigarettes per day [29]. The study also found that smokers who lost their job and were later reemployed within two years did not increase the number of cigarettes they smoked per day, highlighting the importance of regaining a job for health, while job loss itself was also associated with smoking relapse among smokers who had previously quit [29].

Separate research has followed employed and unemployed workers and found that unemployed men had 1.7 times higher odds of smoking and unemployed women had twice the odds of smoking compared to those with jobs [30]. Separately, a large cross-sectional study of 68,501 American adults found that both job-seeking and non-job-seeking unemployed individuals were more likely to smoke than employed individuals. The direction of these results is consistent with another large cross-sectional study [74] which investigated the smoking habits of American construction workers, who are generally more likely to smoke than those outside the construction industry. Using data from 52,418 construction workers and controlling for a wide array of social and economic variables, the researchers found that the odds of smoking for unemployed workers was 51% percent higher than the odds for employed construction workers [74].

Finally, in another study, researchers used over 20 years of data from 5,124 subjects followed over time and used prior unemployment status to predict smoking status approximately four years later. The study found that the odds ratio of smoking for workers who were unemployed during the preceding wave of data collection compared to those who were employed was 72% higher. The same study also found that one's likelihood of smoking was elevated if he or she had lost his or her job during the preceding wave of data collection [28].

While results on the relationship between smoking and unemployment have been mixed, the weight of the evidence suggests that unemployment is associated with—and may well cause—an increase in smoking odds and smoking intensity [27, 28, 75]. This effect appears to be greater among men. Moreover, these results are consistent with the theory that people experience greater levels of stress in unemployment [24], and that some people smoke cigarettes to relieve that stress [76].

Sleep

SBTA technical assistance providers and other associated with the program reported that entrepreneurs assisted by SBTA considered sleep deprivation to be a primary health concern

and also associated with their roles as small business owners. While our preliminary literature search did not surface sleep as a central link between SBTA assistance and health, research does indicate that disadvantaged groups are more likely to suffer from less or poorer sleep [77], and the SBTA targets its assistance to disadvantaged communities throughout the Commonwealth. Research has associated several health outcomes with short sleep. Short sleep may have a reciprocal relationship with many of the health challenges discussed below; sleep may contribute to health challenges, but these health challenges may also be determinants of poor health[78]. Nevertheless, many of the associations are strong enough to suggest causal relationships. Relevant health outcomes of poor sleep include:

- **All Cause Mortality:** Two meta-analyses of longitudinal studies report elevated risk of all-cause mortality among short sleepers. The first analysis was based on 1,382,999 people from 16 different longitudinal studies in 8 countries. It found that short sleep duration was associated a 12% higher relative risk of death from any cause [79]. A separate analysis also combined the results of 16 different longitudinal studies and found similar results of a 10% increase in risk of all-cause mortality [80].
- **Obesity, Diabetes, and Metabolic Dysregulation:** Research suggests that short sleep may heighten the risk of obesity and diabetes. A meta-analysis of 604,509 adults from 12 different countries showed 55% higher odds of obesity among short sleepers [81]. This association was based on cross-sectional studies, and the meta-analysis was incapable of determining whether short sleep causes obesity. Smaller longitudinal studies, however, have shown similar results. For example, a 13-year prospective study of 496 young adults in Switzerland found that short sleep duration corresponded to higher odds of obesity [82]. Separately, several longitudinal studies found an association between short sleep and diabetes, though no meta-analysis has yet combined their results [83, 84, 85 1914, 86], while at least one paper has found no relationship between “sleep disturbances,” and diabetes [87]. On the whole, however, most studies have found that short sleeping may act as a risk factor for diabetes [78]. Research continues to elucidate the precise biological mechanisms underpinning the relationships between short sleep, obesity, and diabetes. Current studies suggest there are at least 3 possible causal pathways: (1) alterations in glucose metabolism; (2) up-regulation of appetite; and (3) decreased energy expenditure [88, 89].
- **Cardiovascular Disease:** Short sleep has also been correlated with cardiovascular disease such as stroke, myocardial infarction, or sudden cardiac death [90]. For example, a longitudinal study of 4,810 American adults found a link between short sleep and hypertension[91], a finding confirmed in a separate cross-sectional study [92]. Short sleep may also play a role in increasing the risk of stroke [93], heart attack [94], and overall cardiovascular-related mortality [80].
- **Mental Health:** Short sleeping has been associated with a range of mental health challenges in both epidemiological and laboratory studies [77]. Researchers hypothesize that insufficient sleep may sensitize people to stress-related disorders [95]. Prior research has also linked short sleeping to anxiety [96], coping difficulties [97], and generally poor overall mental health [98, 99].

Stress

Stress is another possible pathway linking small business programs such as SBTA to health, by reduction of stress through employment, higher earnings, or housing improvements paid or by higher earnings [24, 100] [24, 101]. Stress is known to act as a risk factor for depression [101-104], specifically when stressful “major life events” occur [101, 105]. Perceived stress is also thought to heighten risk of cardiovascular disease [101,106, 107]. Looking across a range of studies, researchers have estimated that the risk of coronary heart disease may be up to a quarter higher among those with high versus low perceived stress [108]. High levels of psychological stress have also been linked to worse immune system function [109]. Most relevant to the SBTA program, other research examines stress resulting specifically from job strain [110, 111]. For example, some research shows that high job strain is associated with an elevated risk of coronary heart disease [112].

Cardiovascular Disease

Unemployment and perceived job insecurity have also been linked to cardiovascular disease. Whether cardiovascular disease was measured as coronary heart disease incidence [113], myocardial infarction incidence, stroke incidence [17], stroke mortality, ischemic heart disease mortality [114], ischemic heart disease incidence [19], acute myocardial infarctions[16], or hospital admissions due to myocardial infarction [75], most studies—although not all of them—have found harmful associations between job insecurity or unemployment [115] and cardiovascular health.

Housing

The links between poor housing and poor health are well established [116-120]. We include this literature because of possible links between SBTA's economic impact on individuals and their ability to afford better housing, which is one of a family's largest monthly expenses. Better housing has been linked to fewer symptoms of respiratory distress [116], lower rates of wheezing and self-reported cases of the flu or a cold [121], and lower asthma symptom scores. [122] However, some researchers have found no effect on some measures of respiratory distress from housing improvements [122]. People living in improved housing have also reported themselves [121], and their children [123], to be in better health. Housing improvements have also been linked with happiness. [121]

2. COMMUNITY LEVEL

Many of the factors that most shape health are community-level factors that lie outside of the health care and medical field. This review draws on a large body of evidence examining community and neighborhood effects on both individual and population health [124]. We begin with the assumption, verified from previous years of SBTA administrative data, that the program helps create jobs and supports small business growth, and that these improved economic conditions can affect the broader community. Some of this projected change functions as a

direct result of improved economic circumstances, but other outcomes are the indirect result of projected increases to social capital that come from a stronger small business sector. Community social capital refers to the formal and informal civic structures that allow for community cooperation and activity [125]. This area social fabric can foster interaction and support between individuals in a community.

Job Creation

Small businesses together employ more people in the US than do businesses with more than 100 employees [126], and they play an important role in business and job growth [127, 128]. Some of the most relevant health impacts of job creation from the perspective of the SBTA program are as follows:

Social Cohesion

Researchers in the mid 20th century proposed that cities with a concentration of small businesses fostered more social capital, which in turn provided for the city's positive civic well-being [129]. In communities with many small locally owned firms, interests of the business owners and community are often congruent, as the place of business and residence overlap, resulting in greater community engagement and interest in community problem solving [130].

Local capitalism, another way to describe small business activity, is associated with stronger local resources such as the education system, social services, health care, and locally controlled financial institutions. Small, locally owned retail locations can help create spaces, often referred to as “third-places,” for community members to gather and interact [36]. Due to their physical locale and locally based ties, such businesses are less likely to leave a community during an economic downturn [131]. Together, these various positive economic forces and locally based ties help foster greater social cohesion, or interactions between community members. Neighborhood institutions and small businesses also play important roles in social capital formation, particularly in communities that lack more formal community assets [132]. These in turn can further enhance economic development and local investment in community revitalization.

Social Capital

Stronger social fabric may consist of higher levels of social capital and/or collective efficacy: the ability to help control behaviors and actions in a community. Collective efficacy is a community-level form of social capital, which has been linked to a variety of health outcomes, [1] and a large body of evidence recognizes the positive relationship between collective efficacy and population health.

Social capital is generally regarded as the value that arises from social networks and the tendency for people within networks to support each other [51], and is often measured by the strength of familial, friendship, neighborhood, religious and community ties. Research has found

that social capital is associated with economic development and crime prevention, and can help explain variations in health outcomes between communities and nations [133]. Other literature has shown that high levels of social capital are associated with lower levels of infant mortality, all-cause mortality, suicide, and injuries [133], and better health [134], including child wellbeing, total mortality, and subjective well-being [135]. Studies have also found that it can moderate the relationship between income inequality and health [136].

Studies also find that the quality of the social environment protects community health in part by lowering the expected homicide rate [137]. For example, improved social trust was associated with lower area-level homicide rates and firearm homicide rates [138]. Likewise, interpersonal mistrust among community members has been linked to higher homicide, assault, robbery, and burglary rates [139].

In addition to its links with violent crime, higher levels of community level trust have been associated with a lower chance of reporting poor health [55]. Studies find beneficial effects of social ties on mental health, particularly its ability to help buffer stress,[140] and conversely find that lack of social capital is associated with higher rates of common mental disorders. [141] Finally, higher levels of trust in a community has been associated with lower mortality rates [53].

Local Economic Development

Small business owners can act as agents of local economic development. Community ties can be particularly advantageous for them, as they often rely on one another for support and information, and form networks that allow them to compete with larger producers [41]. This further augments small businesses' ties to place, and contributes to greater investment in local institutions and resources. Local businesses' products are also often consumed in their community, boosting the local economy and making the entrepreneurs economically invested in encouraging community capital and purchasing ability [130].

Further, these informal social networks play important roles in job search patterns, helping local businesses hire local employees. O'Regan (1993) [142], found that white and male workers were associated with larger networks than minority and female workers, and her previous research found that individuals who were part of networks with richer employment information and more employed people tended to have improved employment opportunities [143]. Given that the SBTA program targets women and minority business owners, enhanced employment networks may be particularly impactful for these groups. Thus, increases in social cohesion and networks, as a result of increased employment and small business, may help to facilitate further increases in employment.

Local Investment and Health Care Resources

Building social capital and fostering community cohesion enables communities to organize and generate resources and energy to drive local investment. One potential beneficiary of this type

of activity is the local health care sector [144], which is directly associated with improved community health [45] and has substantial implications for health care disparities [145].

Local investment in other resources such as recreational facilities, affordable housing and food infrastructure may also enhance the health of residents [146]. Overall, there are important non-economic benefits of small business growth that communities receive. Though not explored in depth here, there is also potential for improved community health to cycle back into increased productivity and further economic development [45].

Improved Economic Conditions

At a national level there is clear evidence of improvements to population health through economic development [147]. This relationship has been less explored at a local level in the United States [148, 149], but there is a robust body of evidence showing consistent and powerful graded associations between economic indicators and many health outcomes [150, 151].

Several studies have attempted to quantify these community-level health effects. For example, a recent meta-analysis found that the relative risk of death from any cause for residents of lower SES communities was 7% higher than that for residents of higher SES communities. This was true notwithstanding the effect of the socioeconomic status of individual residents [37]. Thus, according to the study, wealthier communities conferred benefits on their residents separate and apart from the benefits that individuals gained when they found social and economic success.

Another recent study of 3,060 counties across the United States established similar result [45]. The authors found that counties with a substantial small business sector had lower rates of all-cause mortality, obesity, and diabetes. In contrast, counties with large retail stores had higher rates of mortality and obesity. Based on the study, the researchers theorized that the entrepreneurial culture of small businesses creates an environment in which local residents are able to solve specific health challenges. A second study determined that higher levels of employment and better wages at locally oriented retail establishments were associated with lower infant mortality rates.[38] In sum, these studies evince a direct link between the economic benefits conferred by small businesses and the health of the communities in which they operate.

Unemployment Rate

The jobs created and/or stabilized through the SBTA program may help to reduce overall unemployment in targeted communities. Large cross-sectional studies at various geographic levels consistently show that unemployment is associated with various adverse health outcomes [152], including increased risk of cardiovascular disease [153], suicide [154], all-cause mortality [155], and type two diabetes [156]. Despite similar findings across studies, it is challenging to determine if unemployment causes these negative effects or is simply correlated with them. However, methodologically strong studies also point in a similar direction [157] and when

combined with cross sectional research, provide moderately strong evidence that higher unemployment rates contribute to worse community level health outcomes, while less unemployment contributes to better population health.

Built Environment

To the extent that the SBTA supports 'brick and mortar' business establishments, the program may also impact health through built environment impacts on physical activity levels and safety.

The presence of, distance to, and density of retail are all associated with walking behavior, and people are more likely to walk in areas with dining, retail and other shopping destinations [158]. Locating businesses in neighborhoods may also reduce vehicle travel and increase physical activity levels of neighborhood residents [159]. Density and land use mix, as well as the presence of stores and other non-residential properties have also been found to encourage physical activity by increasing “eyes on the street,” which in turn fosters perceptions of safety [158, 160]. Studies have generally found a positive association between density, walkability and physical activity [59], with residents walking over 30 minutes more per week in highly walkable areas versus less walkable areas [161].

Through its impact on physical activity, the built environment may ultimately be associated with improved health and reduced risk of all-cause mortality, breast cancer, cardiovascular disease, stroke, hypertension, type 2 Diabetes, and osteoporosis, [162, 163]. Conversely, physical inactivity (sedentary time) causes a variety of negative health conditions, including all-cause mortality, cardiovascular disease, cancer, and type 2 diabetes [164, 165] and additional chronic conditions [165, 166].

Ties between unfavorable built environment conditions and poor health have been seen in some studies in low-income communities. Research suggests that some aspects of the neighborhood environment associated with socioeconomic deprivation such as inadequate lighting and public transport may be correlated with increased obesity among residents. A study by Singh et al found that in neighborhoods with unfavorable social conditions such as poor housing, trash, graffiti, no sidewalks, parks or recreation centers children experienced 20-60% higher rates of obesity [167]. Features of the environment can also encourage activity; access to locations for recreation seem to be a particularly important correlate of physical activity especially among youth [168], but research has found fewer recreational facilities in low-income neighborhoods [169].

Rates of crime and fear of crime are also mitigated by environments that are walkable, visible, well-maintained, well-lit, and which provide access to a range of amenities such as retail locations and parks [61-65]. Crime Prevention through Environmental Design (CPTED) strategies have shown reductions in crime [62, 66] and may also have positive effects on mental and physical health [61], showing the potential for built environment improvements to effectively reduce crime. Researchers also determined that business improvement districts, which involve multiple businesses coming together to invest in community revitalization, were associated with

a 12% drop in robbery rates and an 8% drop in violent crime compared with areas without these districts [67].

Low-resource neighborhoods, which are targeted by the SBTA program, may suffer from higher perceptions of crime [124] due to environmental cues alone, as well as real problems with violence [48, 139]. Low-resource neighborhoods also grapple with a disproportionate share of hazards such as traffic, crime, and poor housing, which increases the risk of many types of injuries [48, 170]. Fear of crime and violence is further linked with reduced physical activities and increases in stress [171], both of which have health implications. This demonstrates a particular need for programs that spur community reinvestment, to address these determinants of crime and the associated health challenges.

Food Access

Low-income neighborhoods generally have worse access to full service grocery stores and supermarkets in comparison to more affluent areas [172], and often struggle with higher obesity rates [173]. Residents with neighborhood supermarkets have been shown to enjoy lower obesity and hypertension rates [174], though the implications of neighborhood food environment on health have been mixed overall. What is clear, however, is that improvements to economic conditions in socioeconomically disadvantaged neighborhood may carry important benefits for the built, social, and food environments, as these poor health outcomes are also associated with unfavorable social conditions at the neighborhood level [175].

Housing

The final community-level pathway we review revolves around housing. To the extent that broad economic improvements flowing from the SBTA program translate into housing investments, this literature is relevant to the upcoming assessment. Poor housing is associated with a multitude of health challenges including lead poisoning, injuries, asthma and respiratory infections [176]. A review of 10 housing interventions -including housing vouchers, green spacing, demolishing poor quality housing, and density bonuses- found weak support for a connection between housing interventions and improved health, though many of the interventions could not be assessed for health impacts due to lack of health metrics [177]. Various studies have found positive health effects of investments in housing at an individual level [120, 178, 179], but little research has considered community level effects. Though general improvements to neighborhood housing quality shows some promise in improving population health, greater research is needed.

APPENDIX C. ASSESSMENT METHODOLOGY

For each section of the assessment we attempted to derive a single point estimate based on the literature. For these point estimates we examined each pathway, and tried to find a direct connection between the exposure (i.e. decreased unemployment or increased number of small businesses) and the chosen health outcomes. Where direct relationships were not available in the literature, which was the case for most relationships, intermediate associations were found between steps in the pathway.

To extract point estimates we prioritized meta-analyses, when not available we relied on systematic reviews and reviews, and finally individual articles. If we combined estimates for individual articles ourselves, we took the lower and upper bounds provided by each paper and transformed the point estimate so that they were comparable (e.g., turned standardized coefficients into betas with standard errors, and ORs to percentage increases). Our point estimates therefore represent the range of potential point estimates available from methodologically strong studies.

We ranked of the strength of evidence as follows: Randomized Control Trials (RCTs), natural experiments and instrumental variables analysis, longitudinal analysis, and finally cross-sectional studies. Where only cross-sectional studies were available we deferred to multilevel models, then ecological models, and excluded individual level models in our community level assessment. We additionally favored nationally representative articles over locally-based ones, unless the study population was in Massachusetts. We generally reported unadjusted estimates (where available), but generally only include studies or estimates that remained significant after adjustment.

We collected zip code, program outcome data, and priority health concerns from funding CDCs and CDFIs across the state. Our team decided in partnership with these stakeholder to avoid making quantitative predictions about health changes that could be expected to follow from changes in SBTA funding. Instead, we provide baseline rates of various health outcome, effect estimates linking small business supports or its corollaries to health from the literature, and suggest the direction and magnitude of change associated with differences in the SBTA funding.

To estimate the economic effects of the SBTA program we analyzed the annual job creation and business outcomes of the program recipients. The number of businesses created, stabilized or grown from 2012-2014 are reported annually by the SBTA funding recipients to the SBTA administrators. Some demographics for the recipients are also reported. Our assessment numbers therefore assume that the small businesses credited towards SBTA outcomes in administrative data would otherwise not have existed, would not have grown, or would not be stabilized if the program did not exist.

For individual level estimates we lack any data on the health characteristics of the business owners or employees supported by the SBTA program. Instead we present overall statistics for the state and areas the SBTA primarily functioned in, and then focus in on the demographic

groups targeted by the program, using group level data as representative of the individuals within particular demographic groups.

We similarly extend this logic to the community level assessments. We contacted CDC provider organizations and asked them to provide us with the zip codes where they work. We then aggregated these zip codes up to the municipal level. Our community level estimates then use a population based weighted average across these areas to represent the health demographics of the SBTA targeted communities. Despite likely greater variance in the characteristics of the areas where the SBTA functions, for brevity and general applicability of the program, we use averages to represent all areas.

APPENDIX D. FY 2015 SBTA PROGRAM REPORTING

- \$1,594,045 awarded in grants ranging from \$30,000 to \$125,000
- \$67,750 additional grants
- \$154,139 Mini Professional Grants to 68 businesses
- 25 proposals (representing 30 agencies) funded from 27 applications
- 7 grantees are new (did not receive funding in FY2014)
- 11 CDCs; 9 CDFIs
- Regional distribution (agencies):
 - Western Mass: 6
 - Central Mass: 7
 - Northeast: 5
 - Southeast/Cape: 5
 - Boston: 7
 - Statewide: 5

FY15 Statewide Performance (12 Months)

- 1,486 business clients received services from our grantee small business assistance providers, which represents 40.45 %, increase over last fiscal year.
- 87% of business clients from an underserved target demographic (women, minorities, immigrants, low/moderate community, low/moderate income business owner, unemployed, veteran or a business cooperative)
 - 56% of those were women owned
- 53% of business clients are established or within one year of opening

FY15 Statewide Outcomes (12 Months)

- 287 (19%) New businesses created
- 348 (23%) Businesses stabilized
- 453 (30 %) Businesses that grew as a result of services provided by our grantees
- 701 new jobs created and 1,473 jobs preserved
- For every business served at least 1.46 jobs were created or preserved. The ratio is 1 business client to 1.46 jobs.
- 331 (22%) Businesses received financing for a total of \$32,503,124. It represents an average of \$98,197.
- Loans to borrowers ranged in size from \$1,655 minimum to \$600,000 maximum.

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