



## Development of a wellness trust to improve population health: Case-study of a United States urban center

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### ABSTRACT

Across the United States health systems are recognizing the urgency of addressing the social determinants of health in order to improve population health. Wellness trusts, modeled after financial trusts support primary health prevention in community settings, provide an innovative opportunity for better community-clinical linkages, collaboration, and impact. This study aimed to understand the necessary tenets for a wellness trust in Brooklyn, New York (USA) and examined community interest and political will; administrative, financing, and leadership structures; and metrics and data sources to monitor and assess impact. We employed a multi-method design. Key informant interviews (KIIs) (n = 15) were conducted from 7/2016 to 1/2017. A content analysis of grey literature was used to analyze community interest and political will (n = 38). Extant datasets, such as New York City Community District profiles, were reviewed, and a narrative review was used to assess cost-effectiveness of prevention interventions (n = 33). The KIIs and grey literature underwent thematic analysis. Findings indicated healthcare issues dominated the health agenda despite recognition of social determinants of health. Braided funding (discrete funds that are coordinated but tracked separately) and blended funding (funds pooled from multiple sources tracked together) are common funding mechanisms. Robust data systems exist to assess impact. Indicators should address social determinants, performance and impact, be measurable, geographically specific, and include communities. Wellness trusts should be sustainable, engage communities, foster collaboration, and have adequate capacity. The Collective Impact Framework, a mechanism to coordinate and maximize efforts, offers this organizational structure. Wellness trusts are promising mechanisms to advance population health.

Across the United States significant avoidable health and social inequalities persist, resulting in profound effects on wellbeing and life expectancy. This is particularly true for large urban centers that have growing income inequalities (US Census Bureau, 2016; Holmes and Berube, 2016). In Brooklyn, New York, many of the factors that influence health—physical and socio-economic environments and access to clinical care—vary widely by neighborhood and disproportionately affect racially/ethnically diverse groups (University of Wisconsin Population Health Institute, Robert Wood Johnson Foundation, n.d.; King et al., 2015a, 2015b, 2015c, 2015d). East and Central Brooklyn neighborhoods face rates of unemployment and poverty above the borough average. Residents experience worse health, including rates of diabetes and obesity that are three to four times that of the healthiest Brooklyn neighborhoods (University of Wisconsin Population Health

Institute, Robert Wood Johnson Foundation, n.d.; King et al., 2015a, 2015b, 2015c, 2015d) Health systems serving these neighborhoods face financial challenges and forthcoming restructuring (Berger et al., 2016). City and state resources have recently focused on health system stabilization, community development, and wellness in these neighborhoods (Cuomo, 2017, 2016). This context offers an opportunity to focus on prevention, community health, and enhanced community-clinical linkages. As Brooklyn seeks to align clinical and community efforts to improve population health, a long-term commitment is required. Population health financing models offer a mechanism for structuring, prioritizing, and coordinating these efforts.

Wellness trusts provide the financial and conceptual infrastructure to address social determinants of health. Broadly defined, wellness trusts are funds raised or allocated (by governments or private sources)

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to support primary prevention interventions in community settings to improve population health (Georgia Health Policy Center, Robert Wood Johnson Foundation, 2016; Cohen et al., 2015; Timmons, 2007; Cheadle et al., 2008). Emphasizing prevention is mutually beneficial to community-based and health systems sectors as it fosters linkages between healthcare, community and social services while saving \$15–\$72 billion in healthcare costs within 10 years (Segal and Martin, 2017). Evidence suggests that a national investment in prevention-based community programming of \$10 per person—such as promoting physical activity and improved nutrition—would result in a 5-year national return on investment of over \$16 billion annually (Levi et al., 2010). Wellness trusts include diverse stakeholders working collaboratively toward specific health targets, and can assume diverse functions depending on the scope, financial and administrative infrastructure, and assessment resources selected (Cohen et al., 2015).

We present a case study of planning efforts to implement a Wellness Trust (*Trust*) in East and Central Brooklyn. The research goal was to identify the tenets upon which a *Trust* should be designed and implemented. Specifically, our research aimed to: 1) understand existing community interest and political will; 2) examine organizational infrastructure, including financing and leadership; and 3) evaluate available metrics and data sources to assess impact. Tackling deeply entrenched societal issues requires multi-sector, multi-level partnerships that face administrative, capacity, and coordination challenges (Harris, 2016; Hoying et al., n.d.). As such, we examined if the Collective Impact Framework (CIF), a model emphasizing collective efforts to address complex issues, could guide efforts to develop a *Trust* (Kania and Kramer, 2011).

The CIF has been applied to several pressing health and social issues, such as childhood obesity and unemployment (Hanleybrown et al., 2012). The CIF operates through five principles: 1) a common agenda, or agreement of the issue, 2) shared metrics to define, track, and disseminate progress, 3) continuous communication, 4) a backbone agency to manage activities, 5) mutually reinforcing activities to coordinate approaches. Three pre-conditions are required: 1) an urgent need for action, 2) adequate resources, and 3) prominent champions (Hanleybrown et al., 2012).

## 1. Methods

### 1.1. Study design

We implemented a multi-method research approach involving a multidisciplinary research team of five members who assumed primary responsibility for different components of the project (with graduate research assistants). Primary data collection (DR, MD) occurred with stakeholders regarding organizational, operational, and community-related factors for a *Trust*. Secondary data sources were assessed to support potential outcomes measurement (SE) and assess community and political will (LR). A narrative review was conducted (AP) on cost-effectiveness research pertaining to prevention interventions and financing mechanisms.

### 1.2. Sample and data collection

#### 1.2.1. Primary data

A Key Informant (KI) Interview (KII) guide was developed addressing Brooklyn health priorities; utility, organization, administration, and outcomes for a *Trust*; and potential barriers and best practices for creating a *Trust*. Interview guide content was informed by early conversations with stakeholders and tailored to different sectors. After obtaining informed consent, one-hour in-person or telephone KIIs were conducted (9/2016–1/2017). Interviews were audio recorded, anonymized, and transcribed. Criterion sampling (selecting informants based on predetermined criteria) was applied (Supplemental Table 1) to an initial list of diverse stakeholders (Patton and Patton, 2002).

Snowball sampling identified other stakeholders, for a total of 15 KIIs. The KIIs represented healthcare (n = 5), community-based organizations (CBOs) (n = 5), government/policy (n = 2), and city planning/development (n = 3) sectors.

#### 1.2.2. Secondary data

Newspaper articles and grey literature from 2009 forward focused on Brooklyn and New York City (NYC) and involved over 15 databases, including newspaper archives (*The New York Times*, *Daily News*, *The Brooklyn Daily Eagle*, New York State newspapers, *Gannett Newsstand*) and PubMed, Social Sciences, Ethnic Newswatch, MedLine, ERIC, and the New York Academy of Medicine's Grey Literature Report databases. Approximately 20 search-term combinations related to health care, trusts, and Brooklyn were utilized.

Google web browser searched for mention of these terms by policymakers<sup>1</sup>. The year 2009 signifies the beginning of the Brooklyn hospital crisis and corresponding local and state strategies to improve population health. In total, 65 documents were reviewed; 38 were relevant and analyzed. The data review included geographic boundaries of Community Districts 3, 4, 5 and 16<sup>2</sup>; health report systems through the NYC Department of Health and Mental Hygiene (NYCDOHMH), NY State Department of Health, and local hospitals; meetings with local and state stakeholders.<sup>3</sup> From these, a list of publicly available health indicators was generated. To complement finance-related questions for KIIs, a narrative review assessed academic and grey literature on possible financing models and the cost-effectiveness of prevention interventions.

### 1.3. Analysis

Qualitative data analysis was conducted by three members of the research team (DR, MD and ML, a graduate research assistant). Transcribed interviews and documents were uploaded into Dedoose (v 7.0.23) for thematic analysis, or systematic identification and interpretation of patterns representing key themes (Ritchie and Lewis, 2014). Specifically, we developed a preliminary code list from the interview domains. Each analyst coded two transcripts for 'repeating ideas,' wrote analytic memos noting emergent concepts, and all met to discuss the revised code list from these six transcripts. The remaining nine transcripts were divided evenly among the three analysts and coded, with additional analytic meetings to discuss new codes, changes to existing codes and the overall hierarchical structure. This iterative process is typical of qualitative analysis where coding differences are discussed, reconciled and result in a coding structure used with all the transcripts, which are updated as new codes emerge. Following coding, extensive thematic analysis was conducted (DR, MD), discussed with the full research team, and further refined resulting in the final set of overarching themes.

## 2. Results

We grouped findings from the various data collection and review methods employed under four categories. The development and operational needs for a *Trust*, as well as community and political will for it, were informed by the KIIs. The narrative review revealed key elements of financing and cost effectiveness of prevention initiatives.

<sup>1</sup> Brooklyn, East Brooklyn, Central Brooklyn, New York, prevention, wellness, hospital closing, wellness program, community will, community, community health assessment, health disparities, health equity, community perspective, healthcare, preventive care, prevention, public health, and Brooklyn Health Improvement Plan.

<sup>2</sup> CD3: Bedford-Stuyvesant, Stuyvesant Heights, Tompkins Park North; CD4: Bushwick; CD5: East New York, Starrett City, Broadway Junction, City Line, Cypress Hills, New Lots, Spring Creek; CD16: Broadway Junction, Brownsville, Ocean Hill.

<sup>3</sup> As a result of the Affordable Care Act, all hospitals in New York State are mandated by federal law to conduct a Community Health Needs Assessment and develop a Community Service Plan.

While the review of extant data sources generated insights on mechanisms for monitoring and evaluating *Trusts*. Finally, we present how the findings align with and can be moved forward utilizing the Collective Impact Framework.

### 2.1. Development and operational needs

Interviews revealed four themes for a Brooklyn *Trust*: 1) the current context; 2) need for community engagement; 3) capacity needs and requirements; and, 4) implementation factors. Comments regarding the current context could be paraphrased as follows: In East and Central Brooklyn, social factors have a strong impact on poor health status, yet hospitals dominate the health agenda and related efforts. Previous efforts and current activities to improve health exist, yet there remains a need for leadership, adequate funding, and timing of efforts to align with state initiatives.

Community engagement is a critical first step echoed across stakeholders. Creating structures for engagement could reduce interagency competition and mistrust resulting from limited resources and offer opportunities for community-identified health priorities to emerge. As one KI with previous *Trust* experience advised, “...if you are really going to see change in these communities, you have got to engage the people who actually live there and if you don't, you are coming in and you are doing your thing on top of them and it just keeps not working...” [KII 11]

Capacity needs and requirements for a *Trust* had five sequential elements from requiring multi-sectoral efforts in need of coordination, to shared decision-making and resources emanating from adequate and sustainable funding. While these elements capture capacity requirements, one KI highlighted the practical difficulties of capacity development: “... at the health department we were in a good position because of the skills people had to do capacity building and support but, in reality, everybody was so busy that it was very hard to carve out time ...or that core infrastructure stuff is, hard to get money for. ... while the city has a lot of the experience and expertise, it is very hard to free it up, to actually do it.” [KII 02]

Implementation-related factors highlighted issues regarding data, time and resources. Informants warned that data collection and analysis can be burdensome to CBOs, whose missions and areas of expertise may not include such activities. Furthermore, sharing data can be challenging across different systems. Among other things, the sheer size of organizational collaborations may slow efforts; thus, realistic time horizons are needed to realize preliminary objectives. Ultimately, favorable *initial* outcomes and adequate *continued* resources are needed for scale-up. As was the case with other key themes, the need for funding was reiterated by multiple KIs: “I think making sure that there are adequate resources so that we're not competing with one another is a main issue that needs to be addressed” [KII 05] and ... “that some of those funding sources are going to community-based organizations to continue their work.” [KII 03]

### 2.2. Community and political will

Positive community will toward a *Trust* was expressed through three themes: 1) community recognition of social determinants of health and emphasis on prevention; 2) existing network of community-based partnerships devoted to public health; and 3) support for engagement of CBOs as equal partners. Brooklyn residents have a long history of community mobilization and partnerships to improve health. Substantial awareness exists that health is largely determined by social conditions. Advocates hypothesize that the success of the state's Medicaid Delivery System Reform Incentive Payment (DSRIP) program (whose primary goal is to reduce avoidable hospital use) is dependent upon meaningful engagement of CBOs: “DSRIP's potential to be remarkable hinges on healthcare providers, especially hospitals accepting community-based organizations as equal partners and embracing true and meaningful community engagement.” (Feliciano, n.d.). Notably, dismay was

expressed with the substantially larger share of DSRIP incentive payments to safety-net providers are allocated to hospitals. Regarding political will, little emphasis was placed on prevention, instead focusing on improving healthcare quality, access, and services (Katinas, 2016; Wessler and Li, n.d.). A hospital administrator stated that preventative care is the right goal “...but the payback is long term. Sixty-two percent of school children are obese in Sunset Park right now. Hospitals need money to cope now with, not instead of, ambulatory care. It's a fallacy that we can teach people to eat vegetables and won't have to pay for the nursing staff of the ICU.” (Frost, 2013)

### 2.3. Financing and cost effectiveness of prevention initiatives

Various approaches to financing primary prevention initiatives have been proposed or attempted. On the state level, the Massachusetts Wellness Trust was funded using a one-time assessment on health insurers (Institute on Urban Health Research and Practice, 2013). While at the county level, the Pennsylvania Public Health Improvement Fund is financed through local foundations (Pennsylvania Health Department, 2015). Typically, braided and blended funding approaches are used for wellness trusts consisting of pooling capital from federal, state, local levels and/or non-profit organizations, for community and public programs (Timmons, 2007). Other financing approaches include taxation, tobacco settlement funds, community-benefit funds, savings from Accountable Care Organizations, Social Impact Bonds, and Community Development Financial Institutions (Cohen et al., 2015; Parsons et al., 2017; The California Endowment, Social Finance, Collective Health, 2013; Cantor et al., 2013; Hester et al., 2015).

The narrative review on cost-effectiveness of prevention initiatives was limited as most research has focused on targeted health conditions. In total, 33 studies on cost-effectiveness were reviewed: systematic reviews (n = 9) (Baicker et al., 2010; Chapman, 2012; Edwards et al., 2013; Goetzel et al., 2005; Grosse et al., 2007; Korczak et al., 2011; Krause, 2005; Mattke et al., 2007; Weatherly et al., 2009), observational studies (n = 13) (Ahn et al., 2015; Billings and Mijanovich, 2007; Brown, 2014; Diaz et al., 2015; Hung et al., 2007; Linden, 2006; Mays and Smith, 2011; Ormond et al., 2011; Phillips et al., 2013; Schwartz et al., 2010; Thorpe and Yang, 2011; Wang et al., 2003; Zhuo et al., 2012), randomized controlled trials (n = 2) (Ackermann et al., 2008; Holmes et al., 2008), white papers (n = 4) (Levi et al., 2010; Institute on Urban Health Research and Practice, 2013; Chen et al., 2016; Schmidt et al., 2012), and perspective pieces (n = 5) (Baxter, 2010; Brush, 2013; Bodenheimer, 2003; Jacobs, 2012; Russell, 2009). This literature revealed that: 1) clinical settings are not as cost-effective as community-based settings, 2) while programs can be cost-effective, they are rarely cost-saving, and 3) extended time horizons are suitable for prevention programming as benefits (and costs) may not be realized for some time.

### 2.4. Mechanisms for monitoring and evaluating a Trust

Various data collection systems exist for monitoring and evaluation of a *Trust*. The NYCDOHMH prepares ‘community health profiles’ including demographic, neighborhood condition, social and economic condition, healthcare and health outcome measures. The state *Prevention Agenda* specifies measures on reducing health disparities (Table 1). These data sources would not require additional resources or expertise to assess outcomes of a *Trust*. Available indicators span multiple datasets and can be analyzed at the community district level or combined across several districts to meet estimation criteria. Finally, measures of community engagement are also included. One KI involved in development of a trust noted, “...it was a little bit experimental because there is a community process involved. We wanted to also involve strengthening communities' abilities to organize and create the change that would make healthier communities so that was a built-in variable.” [KII 13]

Complementing community health profile data, KIs identified

**Table 1**

Community health profile indicators and the NYS prevention agenda as available data sources for a potential wellness trust, Brooklyn, New York, 2016.

Community health profiles (# of Indicators)	Prevention agenda (# of Indicators)
Demographics (5)	Improve health status and reduce health disparities (6)
Neighborhood conditions (4)	Promote healthy and safe environments (6)
Social and economic conditions (9)	Prevent chronic diseases (6)
Healthy living (9)	Prevent HIV, sexually transmitted diseases, vaccine-preventable diseases and healthcare associated infections (6)
Healthcare (6)	Promote healthy women, infants and children (6)
Health outcomes (9)	Promote mental health and prevent substance abuse (6)

community and health system issues and possible indicators for a *Trust*. Specifically, tension existed between long-term health and social outcomes and ‘easier’ short-term outcomes. A hospital administrator elaborated: “...we’re used to short-term evaluation, and so...it’s easy when you can... decrease hospitalizations [and] emergency department visits; I’m not sure 10 years out how much better off these [communities will be]...it takes time for that kind of evaluation, and when we’re talking about...prevention and public health, you really [need] the long view...if you can’t show some immediate bang for the buck, it’s kind of like, ‘well, that didn’t work.’ Well, that’s just not true.” [KII 06]. Key indicator characteristics include: 1) social determinants of health; 2) focus on performance and impact; 3) be clearly measurable; 4) delineate geographic boundaries; and 5) community inclusion. KIs emphasized addressing health disparities by directing efforts toward the social determinants of health. A leader of one CBO said “...understanding the social determinants of health that prevent people from getting into care. That, I think, plays an important role in why we have such health disparities.” [KII 07]

### 2.5. Integrating findings through a Collective Impact Framework

The CIF requires: 1) a common agenda, 2) shared metrics, 3) continuous communication, 4) a backbone agency, and 5) mutually reinforcing activities as well as three pre-conditions of: urgency, adequate resources, and champions (Hanleybrown et al., 2012). The current context in Brooklyn meets these criteria.

Table 2 highlights how our findings dovetail with the CIF principles. Many KIs were familiar with the CIF and felt it would advance development and implementation of a *Trust*. Others noted that it takes significant and persistent commitment among participating agencies which is time-intensive. One KI discussed challenges, “...I think that some of the downsides of what I’ve heard of collective impact models is that because there are so many different organizations represented, it tends to take a lot of time to move things forward.” [KII 03]

Regarding necessary pre-conditions, most respondents felt that the community had a sense of urgency in addressing health-related issues and that champions existed. However, proposed champions varied depending on the chosen priorities (e.g., medical or social). The final pre-condition, adequate funding, was mentioned in nearly all KI interviews. Respondents felt that funding should be sustainable, transparent, and equitable. As reflected by one KI,

*“Adequate funding (is needed) for your partners to participate and to be engaged. Many partners are doing...the work that’s not even part of what they get funded for, but because they believe in (it)...and “I think also what’s important with funding, not just the CBOs, is setting up a structure that sustains itself.”*

[KII 07]

Taken together, it is critical to align the *Trust’s* mission and activities with its financing model.

Should a *Trust* be developed, agenda setting is essential. Aligning existing local and state health priorities with community-identified needs could increase collaboration and resources. The agenda-setting process should be community-engaged including diverse stakeholders. The backbone should be experienced in coalition building, have significant administrative and technical capacity, and already exist within the community. One KI emphasized the importance of past experience, “You really want the lead to...have a track record, ideally, or [be] a trusted collaborator. That is probably the most important thing and where that can be built into the process from the beginning the better.” [KII 13]. Little consensus existed regarding the appropriate sector or type of agency to serve in this role, including skepticism of hospitals and mixed feelings toward government agencies.

The CIF elements of continuous communication and mutually reinforcing activities are interconnected. Respondents noted that: 1) pilot programs should be implemented to establish effectiveness, 2) early findings should inform future *Trust* intervention and target outcomes, and 3) communication and coordination should be prioritized throughout planning and development, specifically in funding-related decisions. Many mentioned that scarce resources foster mistrust and competition. One KI discusses an on-going collaborative partnership facing these complexities, “today we got sent the budget from the lead organization and basically we don’t get any money. But we’re collaborating. Most of the money is going to a program manager that we have in their organization, but they’re gonna hire a fresh (manager) to manage all these programs that didn’t exist – they should just give the money to us because we know what we’re doing and we can do it well.” [KII 08]

A shared metrics system could use existing data systems with indicators related to social determinants of health. Respondents emphasized including measures that capture community inclusion and development that encourage participation of diverse agencies. Care should be taken to ensure that this does not place excessive demands on under-resourced organizations. A KI highlighted these sentiments, “if there’s a way to really get city and state agencies, maybe within the federal reserve on board with sharing their data and figuring out how they can be really helpful in the data side, ‘cause I think it’s a real burden for community-based organizations to be required to add additional data tracking.” [KI 03]

From our findings, we operationalized the CIF around four key themes (Fig. 1): 1) necessary partners; 2) possible administrative (“backbone”) entities; 3) potential financing and management approaches; and 4) operations or implementation guidance. With the CIF, significant improvement could be made to maximize synergies among partners, coordinate efforts, and reduce duplication.

### 3. Conclusions

Strong interest exists for developing a *Trust* in Brooklyn. The current context presents challenges with regard to improving community health but existing resources and expertise can be leveraged. Health issues were not solely described in medical terms; there was clear recognition of the social determinants of health and interventions targeting them to prevent poor health in the community.

A goal of a *Trust* should be to fund cost-effective rather than cost-saving prevention programs. Some programs that are not cost saving may still be valuable if they improve health. Moreover, cost-effectiveness may manifest in the long term. While extant data collection and monitoring activities can be utilized, stakeholders clearly expressed a desire to better measure and incorporate social determinants among targeted *Trust* outcomes. Including social determinants of health in existing NYC reporting systems makes them an ideal starting point for evaluating impact. As these social indicators are the ‘root causes’ of health inequalities, they are conducive to informing work across sectors to develop socially-oriented prevention interventions. Once shared measurement systems are chosen, evaluation plans must be specified. Finally, measures of community inclusion were suggested as valuable indicators of community health. Given the lack of extensive experience



**Table 2**  
Examination of compatibility of the Collective Impact Framework as a coordinating structure for a wellness trust in Brooklyn, New York, 2016.<sup>a</sup>

	Summary of finding	Examples of supporting data
Collective impact pre-conditions (3)		
1) Sense of urgency	A strong sense of urgency exists, with consensus that the timing and conditions were appropriate.	“So sense of urgency we have for sure. I mean, if you look at the hospitals in Brooklyn, they’re all in various stages of I don’t know what, bankruptcy or crumbling or, you know, I think that’s a sense of urgency... We all recognize that the disparities in the health of people in Brooklyn needs to be addressed.” [KII 05]
2) Adequate funding	Potential viable financing resources exist at local, state, and national levels. Funding allocation to partnering entities should be transparent and equitable.	“...there is a keen desire to make sure that those funds are distributed in a way that is really responsive to needs and really responsive to equity. A lot of the existing engagement structures that we have are inadequate.” [KII 04]
3) Presence of influential champion(s)	Many champions exist to move the issue forward; however, lack of clear leadership was regularly mentioned. Champions should be identified and engaged as early as possible.	“Definitely strategically identifying those folks, getting them on board early and engaging in the draft and getting them to go see examples of what you are talking about funding more of so they can talk about it as champions and understand the primary prevention and community change aspect.” [KII 13]
Collective impact conditions (5)		
1) Shared agenda	Priority areas include medical and social determinants of health and issues with the healthcare system. While broad consensus among the overarching topics is evident, further refinement is necessary. Care should be taken to streamline and reduce burden of reporting requirements among participating entities.	“I think Brooklyn can meet those easily. I think we have common agenda, could have common agenda, in maybe more than one area... So I think it is easier to occur in Brooklyn, for this to happen, to have a common agenda, to reach a good consensus to look at short-term where do we need to be and move things to where do we see ourselves in five years?” [KII 07]
2) Backbone (BB) support	Respondents felt the BB should be an existing entity within the community, effective and innovative, with strong capacity to support administrative and technical needs of the effort. Respondents felt mixed about health systems and governmental agencies participating in this role.	“One could argue that the [health department] district office...would be in a natural appropriate position to do this...this is what the role of government should be ...I also recognize that...governmental agencies are associated with different administrations and there are ups and downs...They can be under certain administrations and things change and all of a sudden they are not there...” [KII 02]
3) Continuous communication	Communication essential to reduce mistrust and sense of competition among entities for funding and to allow community priorities to emerge.	“There are too many people who need too much stuff; it ought to be much more cooperative. To me, the next step in Brooklyn is really to try to convene everybody who’s trying to work together and figure out how to parse it out and do it together.” [KII 06]
4) Shared metrics system	Robust local and state reporting systems exist that align with state health priorities. Metrics system may be used in addition to existing reporting requirements and therefore should be as effective and efficient as possible. Including elements of community engagement in metrics system may enhance effectiveness of other elements, such as communication.	“...it was a little bit experimental because there is a community process involved. We wanted to also involve strengthening communities’ abilities to organize and create the change that would make healthier communities so that was a built-in variable.” [KII 13]
5) Mutually reinforcing activities	A multitude of synergistic activities are occurring in parallel and could be coordinated to leverage and maximize efforts.	“...huge number of organizations working in the borough, but nobody’s really coordinating it all.” [KII 06]  “... (We) did a bunch of asset mapping and really scan the neighborhood to understand what was already going to be happening so we could build off of those opportunities, so you’re kind of starting from an area where you already, that there should be some wins because you’re starting from an area, like you already know what the landscape is, and where there are opportunities and ensuring that you really get the city agencies behind this effort, who could strategically bring in different monies and help braid those together.” [KII 03]

<sup>a</sup> Adapted from Hanleybrown, Kania, and Kramer’s *Channeling Change: Making Collective Impact Work*.

with *Trusts* and related research, these findings contribute important guidance in this new area of funding for primary prevention.

This study has strengths and limitations. It focused on planning and implementation of a *Trust* for East and Central Brooklyn; thus, findings may not be applicable to other geographic areas. While we sought to include diverse perspectives from KIs, we likely did not capture all perspectives. However, a strength of the sampling frame was the application of 11 selection criteria to ensure participants represented various sectors and expertise. Additionally, comprehensive assessment of extant data sources to implement a *Trust* may advance its development. As a study rooted in participatory community-engaged principles, we did not pre-define identification of specific interventions or costs associated with a *Trust*. Rather, development and implementation of the *Trust* would be collectively determined by participating stakeholders.

The possibility of establishing a wellness *Trust* in Brooklyn presents an exciting, unprecedented opportunity to improve the community’s health, establish linkages between clinical and community-based services, and advance development of important measures of community engagement processes. As cities and states seek innovative approaches

to fund and support population health, the wellness trust model is promising. Public health practitioners seeking to develop a trust can reference the CIF outlined here and recommended elements informing planning, engagement, sustainability, and scalability. Complex, multi-factorial issues such as health disparities and their determinants require long-term vision, significant commitment, strategic funding plans, and an inclusive engagement model. Wellness trusts offer a strategy to address health system and public health infrastructure challenges and allow for responsive, community-driven action promoting health.

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#### Conflict of interest statement

The authors have no conflicts of interest to report and have complied with the Principles of Ethical Practice of Public Health. The research was approved by the IRB (#2016-1086). All participants provided informed consent.

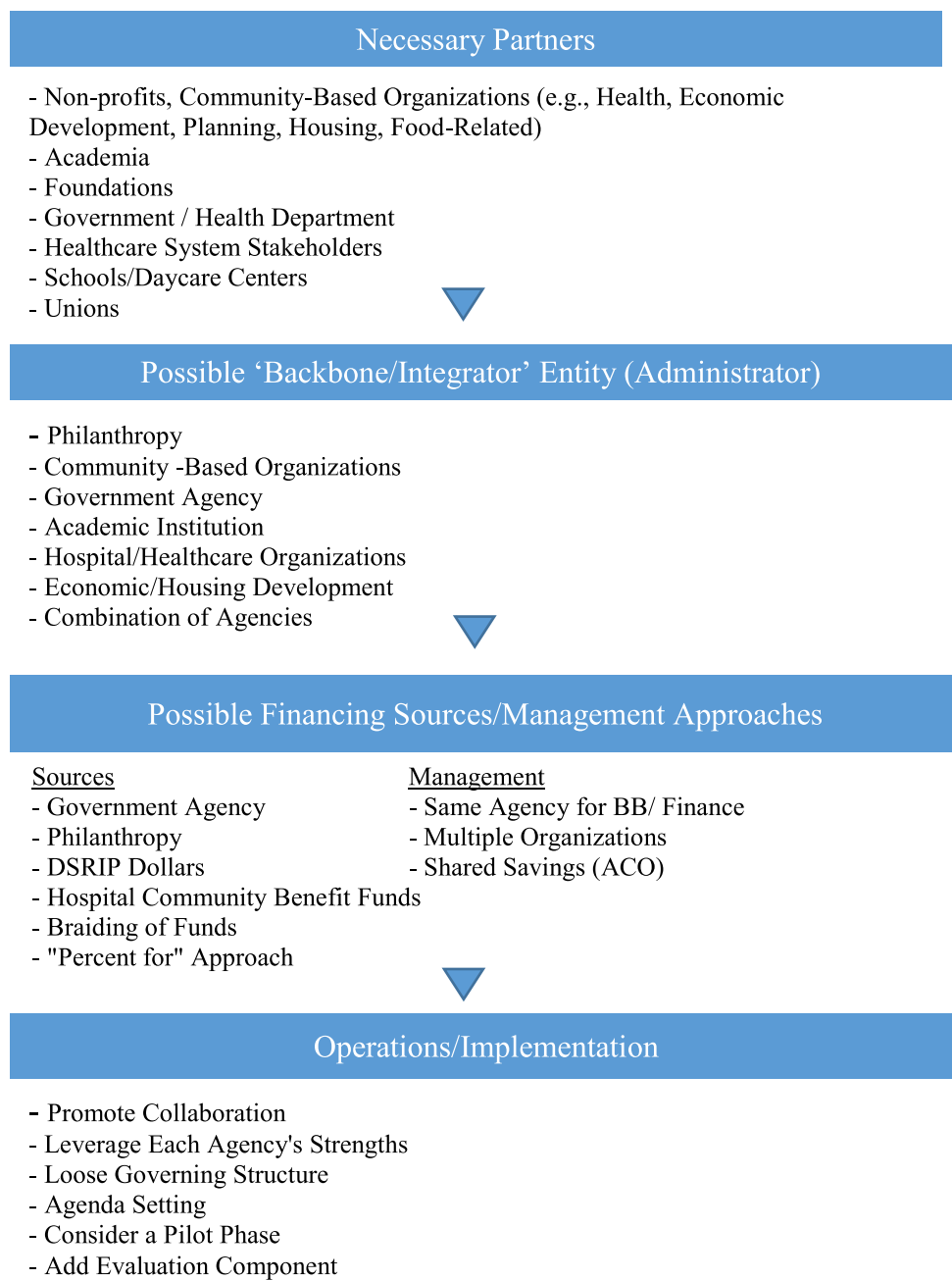


Fig. 1. Elements of an organizational structure for a potential wellness trust, Brooklyn, New York, 2016.

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**References**

Ackermann, R.T., Finch, E.A., Brizendine, E., Zhou, H., Marrero, D.G., 2008. Translating the diabetes prevention program into the community. The DEPLOY Pilot study. *Am. J. Prev. Med.* 35 (4), 357–363. <http://dx.doi.org/10.1016/j.amepre.2008.06.035>.  
 Ahn, S., Smith, M.L., Altpeter, M., Post, L., Ory, M.G., 2015. Healthcare cost savings

estimator tool for chronic disease self-management program: a new tool for program administrators and decision makers. *Front. Public Health* 3, 42. <http://dx.doi.org/10.3389/fpubh.2015.00042>.  
 Baicker, K., Cutler, D., Song, Z., 2010. Workplace wellness programs can generate savings. *Health Aff. (Millwood)* 29 (2), 304–311.  
 Baxter, R., 2010. Making better use of policies and funding we already have. *Prev. Chronic Dis.* 7 (5), A97.  
 Berger, S., Rodriguez, R., Swain, E., Toby, W., Webb, A., 2016. At the brink of transformation: restructuring the healthcare delivery system in Brooklyn. In: Report of the Brooklyn Health Systems Redesign Work Group. Northwell Health. [https://www.northwell.edu/sites/northwell/files/20830-Brooklyn-Healthcare-Transformation-Study\\_0.pdf](https://www.northwell.edu/sites/northwell/files/20830-Brooklyn-Healthcare-Transformation-Study_0.pdf), Accessed date: 12 November 2016.  
 Billings, J., Mijanovich, T., 2007. Improving the management of care for high-cost Medicaid patients. *Health Aff. (Millwood)* 26 (6), 1643–1654. <http://dx.doi.org/10.1377/hlthaff.26.6.1643>.  
 Bodenheimer, T., 2003. Interventions to improve chronic illness care: evaluating their effectiveness. *Dis. Manag.* 6 (2), 63–71. <http://dx.doi.org/10.1089/109350703321908441>.  
 Brown, T.T., 2014. How effective are public health departments at preventing mortality? *Econ. Hum. Biol.* 13, 34–45.  
 Brush, R., 2013. Collective health. Can pay for success reduce asthma emergencies and reset a broken health care system? *Community Dev. Invest. Rev.* 9 (1), 115–125.

- Cantor, J., Mikkelsen, L., Simons, B., Waters, R., 2013. How Can We Pay for a Healthy Population? Innovative New Ways to Redirect Funds to Community Prevention. Oakland, CA, Prevention Institute. <https://www.preventioninstitute.org/sites/default/files/publications/How%20Can%20We%20Pay%20For%20a%20Healthy%20Population.Final.pdf>.
- Chapman, L.S., 2012. Meta-evaluation of worksite health promotion economic return studies: 2012 update. *Am. J. Health Promot.* 26 (4), 1–12. <http://dx.doi.org/10.4278/ajhp.26.4.tahp>.
- Cheadle, A., Hsu, C., Schwartz, P.M., et al., 2008. Involving local health departments in community health partnerships: evaluation results from the partnership from the Partnership for the Public's health initiative. *J. Urban Health* 85 (2), 162–177. <http://dx.doi.org/10.1007/s11524-008-9260-4>.
- Chen, M., Unruh, M., Pesko, M., et al., 2016. The Role of Hospitals in Improving Non-medical Determinants of Community Population Health. New York State Health Foundation, pp. 1–19. <http://nyshealthfoundation.org/uploads/resources/community-population-health-report-april-2016.pdf>.
- Cohen, L., Mikkelsen, L., Abolenta, M., Cantor, J., Bennett, R., Harr, W., 2015. Sustainable Investments in Health: Prevention and Wellness Funds. Prevention Institute, Oakland, CA. <https://www.preventioninstitute.org/publications/sustainable-investments-health-prevention-and-wellness-funds>.
- Cuomo, Governor Andrew M., 2017. Governor Cuomo Announces \$1.4 Billion “Vital Brooklyn” Initiative to Transform Central Brooklyn. Governor Andrew M. Cuomo. <https://www.governor.ny.gov/news/governor-cuomo-announces-14-billion-vital-brooklyn-initiative-transform-central-brooklyn>, Accessed date: 29 June 2017 (Published March 9).
- Cuomo, Governor Andrew M., 2016. Governor Cuomo Announces New York City Highlights of the 2016–17 State Budget Agreement. Governor Andrew M. Cuomo. <https://www.governor.ny.gov/news/governor-cuomo-announces-new-york-city-highlights-2016-17-state-budget-agreement>, Accessed date: 25 September 2016 (Published April 1).
- Diaz, R., Behr, J.G., Britton, B.S., 2015. Estimating cost adjustments required to accomplish target savings in chronic disease management interventions: a simulation study. *Simulation* 91 (7), 599–614. <http://dx.doi.org/10.1177/0037549715584618>.
- Edwards, R.T., Charles, J.M., Lloyd-Williams, H., 2013. Public health economics: a systematic review of guidance for the economic evaluation of public health interventions and discussion of key methodological issues. *BMC Public Health* 13, 1001. <http://dx.doi.org/10.1186/1471-2458-13-1001>.
- Feliciano, A. Community engagement is a must in the DSRIP program. <http://www.cphsny.org/cphs/reports/page/CBO-involvement-is-a-must-in-DSRIP-en-us.pdf>.
- Frost, M., 2013. Brooklyn health care town hall emphasizes transition to outpatient care, collaboration, and funding. *Brooklyn Daily Eagle*. <http://www.brooklyneagle.com/articles/brooklyn-health-care-town-hall-emphasizes-transition-outpatient-care-collaboration-and>, Accessed date: 1 August 2017 (Published November 22).
- Georgia Health Policy Center, Robert Wood Johnson Foundation, 2016. Financing Population Health: Abridged Version October 2016. Andrew Young School of Policy Studies, Georgia State University, Atlanta, GA. [ghpc.gsu.edu/files/2016/10/RWJF\\_FinanceBook\\_Abridged\\_Version\\_Oct16.pdf](http://ghpc.gsu.edu/files/2016/10/RWJF_FinanceBook_Abridged_Version_Oct16.pdf).
- Goetzl, R.Z., Ozminowski, R.J., Villagra, V.G., Duffy, J., 2005. Return on investment in disease management: a review. *Health Care Financ. Rev.* 26 (4), 1–19.
- Grosse, S.D., Teutsch, S.M., Haddix, A.C., 2007. Lessons from cost-effectiveness research for United States public health policy. *Annu. Rev. Public Health* 28, 365–391. <http://dx.doi.org/10.1146/annurev.publhealth.28.021406.144046>.
- Hanleybrown, F., Kania, J., Kramer, M., January 2012. Channeling change: making collective impact work. *Stanf. Soc. Innov. Rev.* 1–8. [http://ssir.org/articles/entry/channeling\\_change\\_making\\_collective\\_impact\\_work](http://ssir.org/articles/entry/channeling_change_making_collective_impact_work).
- Harris, G., 2016. Transforming health through multisector partnerships. *N. C. Med. J.* 77 (4), 286–289. <http://dx.doi.org/10.18043/ncm.77.4.286>.
- Hester, J., Stange, P., Seeff, L., Davis, J., Craft, C., 2015. Towards sustainable improvements in population health: overview of community integration structures and emerging innovations in financing. U.S. Department of Health and Human Services <https://www.cdc.gov/policy/docs/financepaper.pdf>, Accessed date: 15 September 2016.
- Holmes, N., Berube, A., 2016. City and metropolitan inequality on the rise, driven by declining incomes. The Brookings Institution <https://www.brookings.edu/research/city-and-metropolitan-inequality-on-the-rise-driven-by-declining-incomes/>, Accessed date: 15 August 2017.
- Holmes, A., Ackermann, R., Zillich, A., Katz, B., Downs, S., Inui, T., 2008. The net fiscal impact of a chronic disease management program: Indiana Medicaid. *Health Aff. (Millwood)* 27 (3), 855–864. <http://dx.doi.org/10.1377/hlthaff.27.3.855>.
- Hoying, A., Samborskiy, N., Sanders, B. A structured approach to effective partnering: lessons learned from public and private sector leaders. The Office of Policy, Planning, and Evaluation, Office of Public Health Preparedness and Response, Centers for Disease Control and Prevention [https://www.cdc.gov/phpr/partnerships/documents/a\\_structured\\_approach\\_to\\_effective\\_partnering.pdf](https://www.cdc.gov/phpr/partnerships/documents/a_structured_approach_to_effective_partnering.pdf), Accessed date: 15 September 2016.
- Hung, D.Y., Rundall, T.G., Tallia, A.F., Cohen, D.J., Halpin, H.A., Crabtree, B.F., 2007. Rethinking prevention in primary care: applying the chronic care model to address health risk behaviors. *Milbank Q.* 85 (1), 69–91. <http://dx.doi.org/10.1111/j.1468-0009.2007.00477.x>.
- Institute on Urban Health Research and Practice, 2013. The Massachusetts Prevention and Wellness Trust: An Innovative Approach to Prevention as a Component of Health Care Reform. Bouve College of Health Sciences, Northeastern University, Boston, Massachusetts. <http://www.northeastern.edu/iuhrp/wp-content/uploads/2013/12/PreventionTrustFinalReport.pdf>, Accessed date: 15 September 2016.
- Jacobs, J., 2012. Tools for implementing an evidence-based approach in public health practice. *Prev. Chronic Dis.* 9. <http://dx.doi.org/10.5888/pcd9.110324>.
- Kania, J., Kramer, M., Winter 2011. Collective impact. *Stanf. Soc. Innov. Rev.* 36–41.
- Katnas, P., 2016. Eugene secures \$4.9 million for Kings County Hospital. *Brooklyn Daily Eagle*. <http://www.brooklyneagle.com/articles/2016/3/10/eugene-secures-49-million-kings-county-hospital>, Accessed date: 15 July 2017 (Published March 10).
- King, L., Hinterland, K., Dragan, K., et al., 2015a. Community Health Profiles 2015. 27(59). Brooklyn Community District 3, Bedford Stuyvesant, pp. 1–16.
- King, L., Hinterland, K., Dragan, K., et al., 2015b. Community Health Profiles 2015. 29(59). Brooklyn Community District 5, East New York and Starrett City, pp. 1–16.
- King, L., Hinterland, K., Dragan, K., et al., 2015c. Community Health Profiles 2015. 40(59). Brooklyn Community District 16, Brownsville, pp. 1–16.
- King, L., Hinterland, K., Dragan, K., et al., 2015d. Community Health Profiles 2015. 28(59). Brooklyn Community District 4, Bushwick, pp. 1–16.
- Korczak, D., Dietl, M., Steinhäuser, G., 2011. Effectiveness of programmes as part of primary prevention demonstrated on the example of cardiovascular diseases and the metabolic syndrome. *GMS Health Technol. Assess.* 7, Doc02. <http://dx.doi.org/10.3205/hta000093>.
- Krause, D.S., 2005. Economic effectiveness of disease management programs: a meta-analysis. *Dis. Manag.* 8 (2), 114–134. <http://dx.doi.org/10.1089/dis.2005.8.114>.
- Levi, J., St. Laurent, R., Segal, L., Vinter, S., 2010. Shortchanging America's Health: A State-By-State Look at How Public Health Dollars Are Spent and Key State Health Facts. Trust for America's Health, Robert Wood Johnson Foundation. <http://healthyamericans.org/assets/files/TFAH2010Shortchanging05.pdf>, Accessed date: 16 November 2016.
- Linden, A., 2006. What will it take for disease management to demonstrate a return on investment? New perspectives on an old theme. *Am. J. Manag. Care* 12 (4), 217–222.
- Matke, S., Seid, M., Ma, S., 2007. Evidence for the effect of disease management: is \$1 billion a year a good investment? *Am. J. Manag. Care* 13 (12), 670–676.
- Mays, G.P., Smith, S.A., 2011. Evidence links increases in public health spending to declines in preventable deaths. *Health Aff. (Millwood)*. <http://dx.doi.org/10.1377/hlthaff.2011.01916>.
- Ormond, B.A., Spillman, B.C., Waidmann, T.A., Caswell, K.J., Tereshchenko, B., 2011. Potential national and state medical care savings from primary disease prevention. *Am. J. Public Health* 101 (1), 157–164. <http://dx.doi.org/10.2105/AJPH.2009.182287>.
- Parsons, J., Weiss, C., Wei, Q., 2017. Impact Evaluation of the Adolescent Behavioral Learning Experience (ABLE) Program. Vera Institute of Justice, New York. [https://storage.googleapis.com/vera-web-assets/downloads/Publications/rikers-adolescent-behavioral-learning-experience-evaluation/legacy\\_downloads/rikers-adolescent-behavioral-learning-experience-evaluation.pdf](https://storage.googleapis.com/vera-web-assets/downloads/Publications/rikers-adolescent-behavioral-learning-experience-evaluation/legacy_downloads/rikers-adolescent-behavioral-learning-experience-evaluation.pdf), Accessed date: 28 June 2017.
- Patton, M.Q., Patton, M.Q., 2002. *Qualitative Research and Evaluation Methods*, 3rd ed. Sage Publications, Thousand Oaks, Calif.
- Pennsylvania Health Department, 2015. Pennsylvania State Health improvement plan: 2015–2020.
- Phillips, V.L., Becker, E.R., Howard, D.H., 2013. Value drivers: an approach for estimating health and disease management program savings. *Popul. Health Manag.* 16 (6), 356–363. <http://dx.doi.org/10.1089/pop.2012.0106>.
- Ritchie, J., Lewis, J. (Eds.), 2014. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, 2nd ed. SAGE, London.
- Russell, L.B., 2009. Preventing chronic disease: an important investment, but don't count on cost savings. *Health Aff. (Millwood)* 28 (1), 42–45. <http://dx.doi.org/10.1377/hlthaff.28.1.42>.
- Schmidt, H., Stock, S., Doran, T., 2012. Moving Forward With Wellness Incentives Under the Affordable Care Act: Lessons From Germany. 13. Commonw Fund, pp. 1–12.
- Schwartz, S.M., Ireland, C., Strecher, V., Nakao, D., Wang, C., Juarez, D., 2010. The economic value of a wellness and disease prevention program. *Popul. Health Manag.* 13 (6), 309–317. <http://dx.doi.org/10.1089/pop.2009.0070>.
- Segal, L., Martin, A., 2017. A Funding Crisis for Public Health and Safety: State-By-State Public Health Funding and Key Health Facts, 2017. Trust for America's Health, Washington, D.C. <http://healthyamericans.org/report/136/>, Accessed date: 23 June 2017.
- The California Endowment, Social Finance, Collective Health, November 2013. AIM4Fresno paves way for the first health-related social impact bond in the U.S. [http://www.healthpolicyohio.org/wp-content/uploads/2014/01/aim4fresno\\_project\\_summary\\_nov.2013.pdf](http://www.healthpolicyohio.org/wp-content/uploads/2014/01/aim4fresno_project_summary_nov.2013.pdf).
- Thorpe, K.E., Yang, Z., 2011. Enrolling people with prediabetes ages 60–64 in a proven weight loss program could save Medicare \$7 billion or more. *Health Aff. (Millwood)* 30 (9), 1673–1679. <http://dx.doi.org/10.1377/hlthaff.2010.0944>.
- Timmons, J., 2007. Models of Collaboration and Cost Sharing in Transition Programming. 6(1) Natl Cent Second Educ Transit. <https://eric.ed.gov/?id=ED495867>.
- University of Wisconsin Population Health Institute, Robert Wood Johnson Foundation County Health Rankings: our approach. County Health Rankings & Roadmaps <http://www.countyhealthrankings.org/our-approach>, Accessed date: 29 June 2017.
- US Census Bureau, 2016. A comparison of rural and urban America: household income and poverty. The United States Census Bureau [https://www.census.gov/newsroom/blogs/random-samplings/2016/12/a\\_comparison\\_of\\_rura.html](https://www.census.gov/newsroom/blogs/random-samplings/2016/12/a_comparison_of_rura.html), Accessed date: 15 August 2017 (Published December 8).
- Wang, L.Y., Yang, Q., Lowry, R., Wechsler, H., 2003. Economic analysis of a school-based obesity prevention program. *Obes. Res.* 11 (11), 1313–1324. <http://dx.doi.org/10.1038/oby.2003.178>.
- Weatherly, H., Drummond, M., Claxton, K., et al., 2009. Methods for assessing the cost-effectiveness of public health interventions: key challenges and recommendations. *Health Policy* 93 (2), 85–92.
- Wessler, J.L.I. M. The Need for Caring in North and Central Brooklyn: The Community Survey. New York: Commission on the Public's Health System, New York [http://www.cphsny.org/cphs/reports/the\\_need\\_for\\_caring\\_in\\_north\\_and\\_cphs\\_chna\\_report\\_12\\_6\\_12\\_final:en-us.pdf](http://www.cphsny.org/cphs/reports/the_need_for_caring_in_north_and_cphs_chna_report_12_6_12_final:en-us.pdf), Accessed date: 16 September 2017.
- Zhuo, X., Zhang, P., Gregg, E.W., et al., 2012. A nationwide community-based lifestyle program could delay or prevent type 2 diabetes cases and save \$5.7 billion in 25 years. *Health Aff. Proj Hope* 31 (1), 50–60. <http://dx.doi.org/10.1377/hlthaff.2011.1115>.