Building Strong Community Health Partnerships:

Assessing Collaboration between Researchers and Local Representatives in a Master-Planned Community

By

Amelia Taylor-Hochberg

BA in Rhetoric with Honors
University of California, Berkeley
Berkeley, CA (2011)

Submitted to the Department of Urban Studies and Planning
in partial fulfillment of the requirements for the degree of

Master in City Planning

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June 2019

Author_____
Department of Urban Studies and Planning
May 21, 2019

Certified by _____
Associate Professor Mariana Arcaya
Department of Urban Studies and Planning
Thesis Supervisor

Accepted by _____
Professor of the Practice, Ceasar McDowell
Co-Chair, MCP Committee
Department of Urban Studies and Planning

Building Strong Community Health Partnerships:

Assessing Collaboration between Researchers and Local Representatives in a Master-Planned Community

By

Amelia Taylor-Hochberg

Submitted to the Department of Urban Studies and Planning (DUSP)
on May 21, 2019 in partial fulfillment of the
requirements for the degree of Master in City Planning

ABSTRACT

Health is a social and environmental phenomenon. An understanding of cities as platforms for the social determinants of health, and the emergence of the Healthy Cities movement, support the characterization of urban planners as stewards of health. One way that cities can seek to understand and plan for the complexities of urban health systems is through community-based research initiatives, that pair local representatives with health researchers. Through research and community engagement, these Community-Health Partnerships (CHPs) can then provide both information and guidance regarding the health implications of future kinds of development. This kind of embedded health research is considered to produce more reliable and actionable research findings, through an increased understanding and incorporation of the local context.

However, how these CHPs emerge and become situated in a community is not well understood. How do collaborations between community stakeholders and health researchers come to be? What makes them strong candidates for successful health research? And how are those relationships mediated by local factors? This thesis interprets the collaborative style and processes adopted within the earliest phases of one community health partnership (CHP) in a master-planned community, through the lens of Community-Based Participatory Research (CPBR). Before a formal partnership structure had been adopted, researchers from the imminent CHP reached out to DUSP to assist in articulating the potential opportunities and barriers unique to their intended research context. This thesis's research was conducted for the partnership's use, in order to make recommendations for improving their collaborative processes in pursuit of their future goals. Lessons learned within this partnership's collaborative structure are then reflected upon in terms of how they might inform successful CHPs generally, with particular attention paid to the role of master-planned communities.

Acknowledgements

This thesis would not have been possible without the contributions of the following figures:

Mariana Arcaya, my advisor, for her support, guidance and critiques.

The Health Researcher leading the Study behind this thesis research, for approaching DUSP in the first place, and being my advocate and guide all along the way.

The Study's Director, for their trust in me to be a part of a legacy project.

All members of the Study's partnership, for their honesty and time.

My friends and colleagues at DUSP, my family, and Anders, for creating a community of collaboration and reflection.

Biographical Note

Prior to coming to MIT, Amelia Taylor-Hochberg worked as a writer and editor in Los Angeles, covering art, architecture and urbanism as a freelancer and for Archinect.com. Her professional experience as a journalist led her to DUSP, where she became interested in health and cities through reporting and research on neurourbanism — the practice of incorporating neuroscientific understandings of urbanism into the planning discipline. More information and ways to be in touch can be found at long-hyphen.com.

Building Strong Community Health Partnerships:

Assessing Collaboration between Researchers and Local Representatives in a Master-Planned Community

Table of Contents

1: Introduction: Planners as Stewards of Health

Urban planning's disciplinary roots emerged in tandem with issues of human health. The allocation of land uses and regulations pertaining to how people live and work in cities have profound impacts on health, by ensuring provisions to safe and sanitary living conditions, as well as access to public resources that support welfare. As planning emerged as a discipline in the 19th century,[1] concerns of health were major motivating factors, as cities coped with the casualties of industrial urbanization — overcrowding, polluted sources of food and water, and the demands of labor, to name a few. While standards of living have generally improved since, rates of global urbanization have outpaced the ability to plan for assuredly healthy cities. Today, 54% of the global population lives in cities, with that share projected to expand to 66% by 2050,[2] placing an immense demand on cities as conduits of human health. Far-reaching projections of public health outcomes worldwide still include concerns around unsafe water, poor sanitation, and air pollution both indoors and outside[3] — pervasive and significant factors that impede one's ability to sustain a healthy life.

While planning has always attended to health in some fashion, its methods have increasingly sought to incorporate other disciplines' understandings of the influence environments have on human health. Public health,[4] social epidemiology,[5] environmental psychology,[6] architectural psychology,[7] epigenetics[8] — and their accompanying methodologies (among others) — have informed urban planning efforts to support health from a multiplicity of angles. These disciplines have also contributed to the recognition of an "ecological" model that explains health behaviors through social and environmental influences,[9] not individual choices alone, reinforcing the significance of the social determinants of health.[10] One's ability to live an urban life — through environmental elements such as transportation, access to nature, housing quality, community, and education — is compounded and divided by socioeconomic status, which in turn constrains and facilitates individual behaviors (health being just one outcome). The built environment can lay the foundation for social inequalities — where one lives being just one facet of how segregation, poverty, pollution, or disinvestment are wrought in brick, concrete and steel. Planning is clearly implicated in the perpetuation of the social determinants of health, and has a responsibility to cultivate the best understanding of an ecological model of health.[11]

Beginning in the late 1980s, the World Health Organization's "Healthy Cities" movement has made a significant shift in this direction, which seeks to apply the ecological model of health

while integrating local, on-the-ground realities. Adopting the premise of the social determinants of health, the Healthy Cities project seeks to highlight the role of urban planners in laying the groundwork for health outcomes that "should not be exclusive to one political party or a singular profession."[12] The movement aspires to offer planners resources to support them in roles that facilitate and catalyze healthy living, further establishing the expectation of planners as stewards of health. WHO named healthy and sustainable urban planning as a core element of its Healthy Cities project,[13] specifying that the movement take a "grounded and relational view of health, leading to an emphasis on community participation, empowerment, and institution building."[14] Local context and its social structures play a foundational role, and must be attended to when addressing the roots of any health issue. Therefore, local institutions are implicit partners in health, and should be supported in order to achieve, and perpetuate, improved health outcomes. The purpose of the movement is to strengthen cities' abilities to provide a healthy life for everyone, and initiated a series of case studies in different cities to attempt to do so.[15] The concept of health is construed not merely as an absence of disease, but as "a state of complete physical, mental and social wellbeing."[16] Whether or not contemporary urban development reaches these aspirations, the idea of Healthy Cities provides a guidepost by which to understand the stakes of urbanization, and the experience of those living in cities.

1.1: The Study at the Center of This Thesis

Given the complexity and site-specificity of urban health issues, some healthy city theorists have called for an increase in real-world experimentation, to try to increase understanding through "trial and error" scenarios of design, policy and planning.[17] One such instance, and the focus of this research, is currently underway, with health researchers and community representatives in the early phases of their partnership. Formed in 2018, the research partnership discussed here (which, for purposes of protecting its participants and outcomes, will remain anonymous) has set ambitions for the following: a longitudinal research initiative lasting multiple decades, community interventions to inform the research further, and the development of a community laboratory. The Study (which will from this point on refer to any/all of the partnership's agenda, with further specification provided when necessary) seeks to identify both risk and protective factors of a complex health issue, both to improve community health locally and inform global health understanding.

The precise methods and design of the Study are not yet confirmed, but the health researchers and community leaders have been collaborating for approximately a year to build the relationships and organizational capacity necessary to administer it. Their partnership doesn't on its own make up a formal legal or organizational entity yet, however it is on target to reach its funding goals, and is officially being run through a major research hospital. However, the pace of progress has been relatively quick, and participants have mentioned that this is in part due to the Study site's structure as a master-planned community — its marketing and management arms lending clear administrative structure to communicate with stakeholders, and its unified development timeline helping coordinate the Study's own progress with relative reliability. The site also had to be vetted through a competitive process by the leading organization, according to those involved.

While the pace of the Study thus far suggests that that the collaboration between the health researchers and community stakeholders has been successful, community-health partnerships (CHPs) generally speaking — especially at the scale of longitudinal research — must cope with sustaining strong partner relationships to accomplish their goals. Trust and commitment between the researchers and community participants was integral to the Framingham Heart Study's successful operations, which relied on participants providing data for 20 consecutive years, and is still operating — it was launched in 1948, and began gathering data from its third generation of participants in 2002.[18] Assuring a strong relationship between community stakeholders and health researchers is not easy, but is also considered to increase the quality of interventions and relevance of clinical studies,[19] while also being able to more precisely attend to the social determinants of health.[20] There is also the expectation set by the Healthy Cities literature in support of CHPs, that an agenda for health should accommodate more community participation and empowerment, rather than deferring solely to experts.[21]

While conceptual support for CHPs is strong regarding their ability to address urban health phenomena,[22] the form hasn't always resulted in proportionally positive outcomes. Problems with CHPs have been cited in association with their governance and management styles, in particular, a lack of understanding regarding 1) the appropriate range of partnered organizations given the health concern, combining both professional and grassroots organizations, and 2) the way these groups collaborate and coordinate in service of the partnership.[23] One explanation driving these issues is a lack of a successful community organization processes, that must include a thorough understanding of the community's structures and strengths, in order to

articulate the research question or intervention.[24] Potential responses to these issues rest upon balancing a strong, discretely understood partnership, with work done through local community structures. Using these local structures can help build trust and ease implementation, but it can also potentially limit the partnership's visibility and coherence, threatening its success in the long-term.[25] Successful governance of CHPs then rests, in part, upon their ability to work with and through the community, but not at the expense of developing the partnership to stand on its own. Observations on how this Study's health researchers and community representatives are currently collaborating can help provide valuable documentation at this vital stage, and contribute to a better understanding of what contributes to a CHP's success.

One particular method of research that seeks to honor this form of increased community participation, and aspire to the health potentials of CHPs, is community-based participatory research (CBPR). As evidenced by its name, CBPR places a high value on equitable involvement between researchers and community members, and casts community participants not as research subjects but as assets that contribute unique strengths and benefits to the research. Within discourses that prioritize forms of local knowledge, CBPR advocates for more ethical research practices that are indebted to addressing the structural complexities of marginalized populations. Due to these sensitivities, it has been viewed as an essential approach to addressing the social determinants of health[26] and sustaining commitment, from research through to implementation[27] — advantages that are sustained regardless of whether or not the community is deemed vulnerable. It incorporates the community engagement angle of the Healthy Cities agenda, accommodates the demands of successful community-health partnerships, and is endorsed as a necessary method within public health. CBPR's accommodation of these various priorities within urban health research, as well as the longitudinal ambitions of the Study, makes it a powerful theory through which to study the emerging partnership responsible for bringing the Study to life.

Given the very early stages of development within the partnership and its orientation towards research, this thesis seeks to understand how significant CBPR-based elements of the partnership's collaborative style are contributing to its overarching goals, and that of successful Community-Health Partnerships generally. The focus on collaborative style was chosen because of several characteristics of the partnership at the time of this research: 1) the limited time that the partnership has existed, 2) the lack of any formal partnership structure or defined research question to couch an analysis of organizational integrity, and 3) the study's longitudinal

time frame necessitating a strong collaborative framework. It is also considered useful to the partnership members themselves — one health researcher expressed an interest in looking at the partnership from the perspective of an urban planner, and kickstarted the process for this thesis to be proposed and ultimately approved by members of the partnership.

Thus far, the partnership exists only in the collaborative relationships between health researchers and community representatives. Their research being in this nascent phase, CBPR provides a valuable framework for understanding assets and opportunities for improvement within the partnership. Once articulated, a series of recommendations will be made to improve the collaborative relationship among members of the partnership, and the analysis will reflect on how lessons learned within the partnership's collaborative structure might inform successful community-health partnerships generally. Additionally, connections will be made to the Study's site as a master-planned community, and how these idiosyncrasies may inform CHPs.

2: Research Context: Where Is the Study?

While no specifics can be shared about the community in question, there are a few basic elements that, while not unique to the community, are of importance to situate this research. As mentioned, this partnership is situated in a master-planned community (MPC) in the United States. The community is intergenerational, and includes a mix of non-residential uses (corporate, education, healthcare, retail, open space, recreation, etc.). While the developer has owned the land for longer, the community in question was built less than 30 years ago, and is the first residential use for the land. The research site's status as a master-planned community conveys certain characteristics that are of interest to the partnership's structure and the implementation of the Study, and will be briefly discussed here.

2.1: Idiosyncrasies as a Master-Planned Community

As a master-planned community, the site of the study is part of a pronounced trend in 20th century US urbanization towards privatized forms of land use and residential governance. For the purposes of this research, the history and characteristics of U.S. MPCs will be discussed, with a focus on elements that may be significant to the implementation of the study. This is to both introduce potential ways that the internal MPC governance and that of the health partnership could complement one another, and to provide a primer on MPCs for uninitiated health researchers, who requested it for this thesis. This basic overview of the various internal governance structures operating within MPCs can also convey the structures that the Study can potentially "plug into" in some fashion, and hopefully provoke ideas for how the partnership's own organizational structure can relate.

Historical Context

Master-planned communities (MPCs) are made possible by privatized forms of governance, that are able to exert large-scale land use decisions and operational models within a residential community that would otherwise be held under public responsibility. A cursory Google image search for "master-planned communities" brings up suburban images of single-family homes plopped along cul-de-sacs, and while this has proven to be a popular form of MPCs in the US, it isn't the only one they can take. As essentially a privately governed residential community, MPCs can sometimes also be referred to as "common-interest developments", "community

associations", "homeowners associations", "common-interest communities", "residential private governments", "new communities" or even "gated communities"[28] — the last term a testament to how far some communities go to make their privacy apparent to others. Apartments and condominiums can also constitute MPCs, but single-family home developments represent the largest and fastest growing share, and are the focus of this research and the CHP in question. Starting in the 1980s, common-interest housing began increasing to the point that "the characteristic American suburban neighborhood has been replaced by a privatised alternative."[29] By the most recent available count in 2003, 50 percent of all new housing in major metropolitan areas were part of an MPC housing model, and there were about 230,000 homeowners associations serving approximately 46 million people.[30] California is the state with the most of these types of communities, with Florida coming in second.[31]

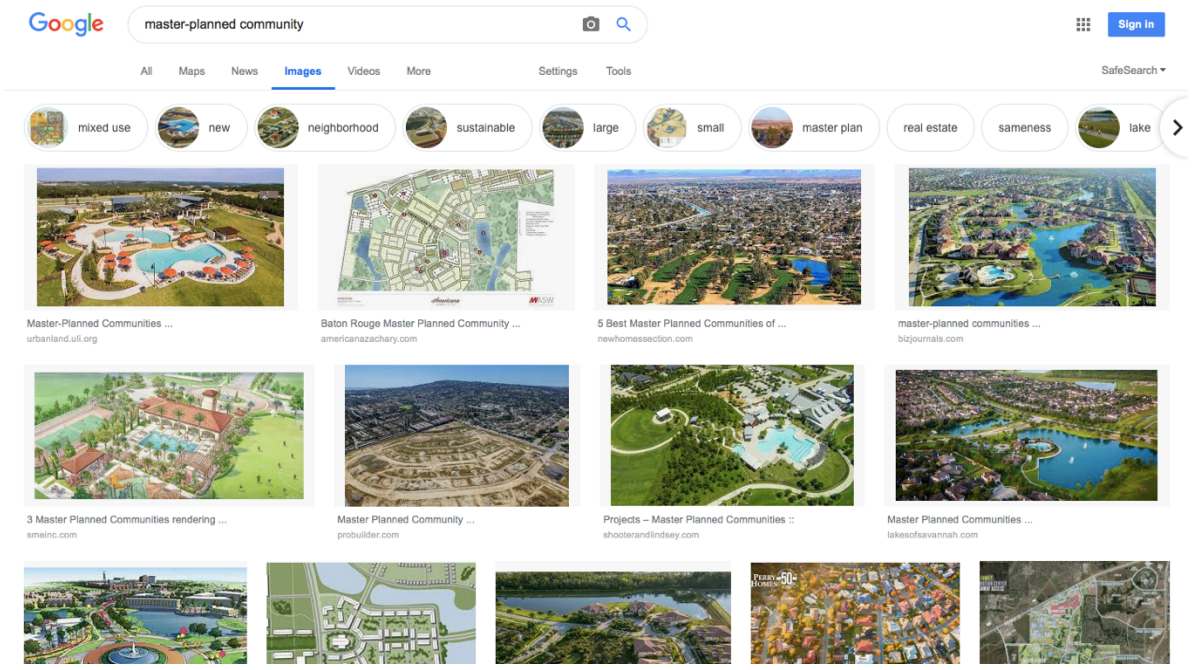


Figure A: Screenshot of a Google search for "master-planned communities" (May 21, 2019).

While land-use planning in the US is generally speaking a private affair — with municipalities setting rules but private developers proposing, funding and building projects for the most part[32] — MPCs represent a form of privatized governance that residents live with far after the "planning" phase has wrapped. They emerge from a developer having control at the outset of a large-enough piece of land to build, most likely from scratch, at the community scale, and for a mix of uses — often enough to sustain the residents' operations on a day-to-day basis. Some MPCs are solely residential, while others contain places of business, shopping, healthcare, and

schools, as well as “lifestyle amenities” for particular markets (such as golfers, seniors, or even gun enthusiasts[33]). In this way, the owners of MPCs can have a comprehensive scope of land use, incorporating social, economic and environmental objectives, and enabling developers to balance multiple uses and tradeoffs at a scale and predictability not necessarily available in smaller projects.[34]

Governance

In the beginning, the developer is often the unifying entity responsible for all development, build out and operations within the community. This is the case in the study site, where the developer owns the entire property and is responsible for making the master plan a reality. Once populated, ownership and operations within the development become more complicated. Incrementally, more localized control is passed to privately governed community associations — a common feature of MPCs. The developer is responsible for establishing the infrastructure within the master-planned community, which is then sometimes (not always) passed over to municipal control.

Once the land has been developed, housing may be built out one subset of the total land area at a time. These groups of housing are sometimes called “neighborhoods” or “villages,” and can be uniquely branded. Once inhabited, these subsets can then be managed under their own Home Owner’s Association (HOA), whose leadership may be passed from the developer to residents after a majority share of the homes are sold. Home Owner Associations (HOAs, composed of any property type) are run through the covenants, conditions and restrictions of the development (CC&R). The covenants adopted there may differ from other HOAs in the same MPC, and need not always comply with the constitutional standards of local public government law.[35] These management structures can also collaborate with property management companies. Community development districts (CDDs) and stewardship districts are other ways to organize the management of, and among, such “villages”. While perhaps hard to contextualize in the abstract, these different forms of private governance that operate within MPCs all benefit from being under the unified focus of the developer at some time. With all of these branching forms of private sub-organizations, MPCs also necessitate a “partnership” structure focused on solving ongoing issues in a “collaborative, constructive manner.”[36]

Due to this comprehensive oversight and accompanying private control mechanisms, MPCs also present somewhat unique opportunities to test out urban policies at relatively low financial risk,[37] although it may be harder to anticipate the social and emotional impact on residents. Prior examples of these kinds of experimentation include the conversion of corporate campuses to residential and retail use, anchoring new residential neighborhoods through the sponsorship of a large business entity, and the creation of conservation lands. Experimentation can also take the form of design decisions, regarding how architects and urban designers seek to create a "sense of place" that is coherent with the image and branded identity of the MPC. These tests may not bear such a high burden of public investment, but there is no single way to describe how such experiments impact community engagement or democratic processes within the community.

Design

As previously discussed, MPCs are often identifiable as such simply through their physical design. Because of the comprehensive scale of development, MPCs often feature a consistent "feel" and aesthetic, which is reinforced through its governance — for instance, HOA stipulations regarding a house's paint color. Building at such scale also includes contracts with home builders to produce housing for entire neighborhoods at a time, which are often marketed under some common "identity", as conveyed through architectural style, aesthetics or amenities. This consistency can carry through to the design and plan of commercial spaces as well, creating a purposefully unified feel to the development.

Historically, MPC's promise of coordinated design and control was motivated in part by improving living conditions for city dwellers. In terms of their development in the US, the design concept can be traced back to the British Garden City Movement of the late 19th century: a reaction to overcrowded urban squalor proposing instead self-sustaining urban centers enclosed by a ring of greenery.[38] The idea was to have the best of both worlds — the dense accessibility of the city, with the peace and quiet of the country. Also influential in the design of MPCs today are the urban design principles of Clarence Perry, Clarence Stein, and Henry Wright, whose ideas of what constituted a "neighborhood" have carried through much of the 20th century's urban development. Most basically, this includes a "superblock" of residential units, arranged around a central green space, spread throughout a cul-de-sac network.[39] Relatedly, many "new towns" in the US were designed under the late 20th century idealism of

"New Urbanism", a reaction to what adherents saw as the social defects and sprawl of contemporary suburbanism. New Urbansim posits that the design of the built environment can create a sense of community, often promoted through "neotraditional" design.[40] This urban form prioritizes walkability, accessible public and community spaces, and an aesthetic that celebrates local history.[41] These design ideals are often also discussed in terms of health, especially walkability — the lack thereof in many American cities being cited as a major driver of health risks.[42] While the contemporary design discourse around MPCs may shift, the focus has consistently been on balancing access to natural and urban spaces, and delivering a sense of "place" to consumers.

Privatized Control Systems

Similar to the simplistic conflation of suburban, single-family homes and MPCs, much of the discourse relating to MPCs is couched in discussions of "gated communities". This makes sense, given that the private governance and operations of many MPCs may materialize in securitized spaces — often, this means the physical gating off of residential neighborhoods to residents and whomever they consent to visit, or the production of exclusive recreational spaces, such as private golf clubs. While not all MPCs are gated, or bear physical indications of private security, they are nonetheless a manifestation of private governance and therefore demonstrate some form of exclusivity. The majority of the residential neighborhoods in the Study's site are gated in some fashion. This can impact the social and community feel of the MPC, and contribute to what anthropologist Setha Low refers to as "spatial governmentality" — a form of social ordering that regulates behavior through design and planning. Low argues that, while this can benefit those living within the community, it can also diminish collective responsibility for society's safety overall, and has historically created a legal framework of residential governance that can reinforce segregation.[43]

3: Research Topic: What Exactly Is the Study?

While respecting anonymity, this section shares as much as possible about the partnership and the Study, to couch discussion of their goals and operations. The characterizations are culled from personal accounts and internal documentation within the partnership.

3.1: Goals and Aspirations

Generally speaking, the Study aspires to both promote positive health behaviors and outcomes, while also contributing to overall scientific knowledge, through the publication of its research. This will be done through identifying both risk and protective factors, and designing interventions. The Study consists of two major elements: a longitudinal research study, gathering multiple kinds of data (genetic, behavioral, environmental), and the establishment of a research laboratory within the community, intended for both the study and other like-minded initiatives. Subjects of the study will be residents of the master-planned community, who would take part over decades. Throughout and in response to the research, interventions — in forms yet to be determined — would be designed and implemented within the community in pursuit of promoting positive health behaviors and reducing negative health outcomes.

The research laboratory seeks to bring together a global selection of clinicians, scientists, engineers, technologists, entrepreneurs and investors in order to develop interventions in service of improving health. Plans for the community-based laboratory are underway, and will be situated within a research campus park that is already under development. The phase of the Study of interest to this thesis is focused on the MPC, however the partnership plans to expand operations regionally in the near future.

3.2: A Brief History of the Study

The origin story of the Study combines serendipity with long-held professional goals. The Study's Director, a member of the Health Researcher side of the partnership, had been in search of a place to launch a decades-long study with for years. It wasn't until 2018, while visiting the researcher's mother, that things began to click into place.

“When I came to them only by chance, genuinely by chance, it was just this perfect synergy of what they had been looking for, what they thought would take twenty years to cultivate, and I come only because my mother dragged me in here. After I looked at it through a different set of lenses, as opposed to: this is where I come to relax and have vacation, and looked at it as, yes this really could be the place for this type of research, then we learned the rest of the story — that this community had really been looking for this type of opportunity, and we brought it." [Health Researcher]

The community appealed to the Study’s director for two main reasons: it was the appropriate size, and had the right culture — in terms of its interest in health and wellness — to mesh well with the interests of the Study. That now, just over a year later, the partnership is already in its nascent phase, also had much to do at the outset with the community’s current economic development strategy — in particular, plans to develop a corporate campus, focused on research and development in the health sciences. According to community representatives, the campus project was lacking a key element: a strong university research presence to anchor the site and attract other entities. Members of the community were poised to develop relationships to help bring the campus to life, and the Director’s idea for a study gave them exactly what they were looking for. One community representative had been searching for a viable candidate for a while, and when the Director came along, jumped at the opportunity:

"One of the biggest pieces [the campus was] missing is a research piece with a university, because you have to have that if you want to have a good research park. I tried working a bunch with local universities and state universities and hadn't gotten much traction, so when [the Director] came here and [they] called me and [they] mentioned that [they were] a [University] researcher, I thought that would be a pretty good affiliation. So I met with [them] and basically just kind of started the whole process." [Community Representative]

The convergence of the community’s economic development intentions with the Director’s goals created an opportunity to develop something in addition to the study — hence, the community laboratory became a second goal of the partnership. Now, as the Study’s progressed, the community also sees it as a way to differentiate themselves and gain early access to certain health promotion technologies, as well as improve the health of their community and future generations.

The Director also saw specific advantages to launching the study in a master-planned community. For one, the land had been owned by the same entity for nearly a century, which to the Director translated into consistent values and a reliable investment in health. The long-term ownership also made it less likely for sudden political or market upheaval to shake the Study's operations in the long term. A master-planned community hadn't been a requirement of the study's community focus, but it offered some unique advantages to streamlining its adoption and operations.

3.3: What's Happening Now?

After the Director identified the community as a potential site, and it was vetted as being the appropriate place to launch the Study, the Director reached out to two additional health researchers to serve as the Director of Research and Director of Survey Development, as part of the "Research Team" side of the Study at its initial phase. The Research Team then began an approximately year-long process of establishing the groundwork for the Study through collaboration with community membership.

In the late spring of 2018, the Research Team began coordinating with the community's owner and development organization, in order to identify leaders of primary community sectors to pitch the Study to, and begin the process of tailoring it to the community's idiosyncrasies. This chapter of the partnership was designed not only to bring together community representatives to better inform the Study, but also to help fundraise for it. Once identified from within the health, education, business, and recreation sectors of the community, these "thought leaders" (as described by the Director) were invited to take part in an online survey (developed by the Research Team), that had them articulate the health and well-being priorities within their sector. These survey respondents then met with the Research Team in person for a roundtable discussion, where the researchers presented their goals for the Study. These leaders of various sectors, as nominated by the developer, became the beginning of a coalition, that would then nominate additional community members.

A primary responsibility of the coalition was to develop (alongside the Research Team) a survey to gauge perspectives on health within the overall community, and to develop a list of participants from within their respective sectors to take part. The topics for this community survey (CS) were established through the earlier survey taken by coalition members, and their

discussions during the roundtables. According to its authors, the CS was designed to both gauge the community's needs and interest insofar as the Study was concerned, and to do so at the foundational stage of the partnership to establish the necessary community relationships for what would ultimately require decades of commitment.

> *"Unless the community has an interest and that community has the opportunity to share their voice and their interests, their concerns, the strengths about the community, where they [see] potential challenges, then you risk significantly not having community engagement, certainly for the short term as well as for sustainability purposes." [Health Researcher]*

Administered between June and August of 2018, the survey queried individuals for their perspectives on: "goals", "thoughts", and "concerns" related to health, performance and well-being in the community. The specific results of the survey will only be mentioned here should they bear significance within the discussion of the partnership's collaborative process and/or style.

According to the executive summary of the survey's results, the authors see the community as willing to make behavioral changes to serve better health outcomes. The summary's authors state that this makes the community, and its region, the perfect "living laboratory" for the Study. As the CS was designed solely as a needs assessment, neither the overall Study nor the community laboratory is mentioned in the survey, nor is the survey's role in the coalition's process. The findings do however meet the coalition's intent for the survey, to identify a brief overview of the goals, thoughts, concerns and trends regarding health, performance and well-being in the community. These findings are then intended to be used by the Research Team to develop their protocol for a pilot study in an upcoming phase.

At the point this thesis research takes place, the partnership had wrapped this "pre-pilot" phase, and begun the next stage of continuing to identify and engage stakeholders, while also fundraising. Subsequent planned phases include using the survey to guide discussions with community members, in order to understand their perspectives on data collection methods and ultimately inform a "pilot phase" of the Study. The community lab is set to launch at the same time as the pilot, which will also include trial designs for interventions.

One health researcher approached MIT's Department of Urban Studies and Planning in the fall of 2018, to invite a master's student to perform research on the partnership thus far. No

particular research question was posed, but the health researcher did express an interest in the role of master-planned communities within such health initiatives. At this point, the pre-pilot stage had recently concluded and was determined to be the best focus for this research's scope. Following the invitation, this research went through a series of proposals that sought to both assist the partnership in pursuit of its goals, and fulfill the departmental qualifications for thesis research. Approval from the partnership for this particular research was achieved in early 2019.

4: Theory and Methods

Once the partnership gave the go-ahead for this research to begin, the author developed the following theoretical framework, through which to approach the aforementioned research questions: How are elements of the partnership's collaborative style contributing to its overarching goals? How can this inform successful Community-Health Partnerships generally? And lastly, does being a master-planned community influence any of this? These questions are considered through the lens of Community-Based Participatory Research, by creating a matrix of "key tenets" understood to be significant factors influencing the success of community-health partnerships.

4.1: Origins of Community-Based Participatory Research

The foundational ideals of Community Based Participatory Research (CBPR) are rooted in the fundamentals of Participatory Action Research (PAR). PAR can refer to a spectrum of research methods, that (briefly speaking) can be traced back to German-American social psychologist Kurt Lewin's "action research school" that emerged in the 1940s, and social science research conducted with oppressed communities during the 1970s.[44] PAR was developed as a response to the extractive and at times exploitive practices that can emerge from sociological research methods that treat "communities"[45] as research objects, rather than partners, and develop research questions and processes autonomously (or unethically), rather than in consensual coordination with the communities. PAR methods emphasize opportunities for community members involved in the research to become partners in it, and collaborate with researchers over the theory, design, and implementation of the research, ideally to guide it towards a future that both researchers and the community are interested in reaching.[46] Throughout the process of research, it emphasizes opportunities for "co-learning,"[47] meaning that the community is also gaining valuable information from the research findings as they are coming into being. Ownership is also a key issue — that the research findings are made accessible throughout the process, and the community is keyed into precisely where data and analyses will end up. This also plays into the "action" element of the approach; that the research being conducted should have some actionable outcomes that helps address the objectives identified in a socially progressive way.

While the ideals of PAR methods are somewhat easily articulated conceptually, they have not historically been well documented or evaluated. While there are some exceptions, there are few detailed accounts in academic literature of the community involvement process within PAR-style research — partially due to the formatting and length requirements in journals, and the lack of codified metrics for how to evaluate participatory outcomes.[48] These methods also require significant investments in community engagement over long terms, necessitating efforts on both sides to communicate and understand the culture, structures and priorities of each partnering organization. This lack of standardized metrics is somewhat endemic to the PAR approach — not only because there are many methods that fall under PAR, but also because successful outcomes are defined by the community involved, and that processes for engagement and implementation are co-developed alongside community partners. That being said, PAR methods do not exist at the expense or sacrifice of contemporary standards of ethical research practices, or analytical rigor. PAR doesn't throw out tools in the social science researcher's toolbox; it adds to them, and may change the appearance of the box.

What Exactly Is CBPR?

One of the strains of approaches that falls under the PAR umbrella (and is the major focus area of this thesis research) is Community Based Participatory Research (CBPR). While there are many other terms in the academic literature akin to CBPR (participatory research, action research, participatory evaluation, community driven research, action science, collaborative inquiry, empowerment and evaluation,)[49] CBPR was selected for the purpose of this research because of its common use within public health literature, often in the form of community-health partnerships (CHPs). Therefore it seemed both appropriate and easily understood, given the Study's focus on public health and epidemiology.

Rather than a single codified research method, CBPR encompasses an orientation to research that puts a premium on PAR's eponymous principles: participation and action.[50] Here, "action" refers to the ultimate purpose of the research — to affect some kind of action in the realm of society; to not sit in a binder on some nonprofit's shelf for decades gathering dust. This can take many forms — educational, political, cultural — but it is a fundamental part of the research design, not an afterthought. CBPR approaches are a "systematic investigation with the participation of those affected by an issue for the purposes of education and action or affecting social change."[51] Investigation with affected parties should strive to be collaborative and

equitably involve all parties throughout the research process — this includes beginning with a research topic that is important to the community involved, and concluding with data and knowledge jointly shared by and beneficial to everyone.

A CBPR approach is also characterized by the kinds of collaborative styles, processes and protocols among those involved in the research. The way the research is conducted should honor the fact that community members, by nature of their identity in connection to the research context and regardless of their professional expertise or role, have access to unique knowledge that is useful for the purposes of the research ("local knowledge").[52] By honoring this kind of knowledge, the research process recognizes the unique assets of the community, and is able to build on these to tailor the research approach further. While it's likely for any research collaboration to bring together diverse sets of knowledge, CBPR processes also actively seek out ways to enrich the variety of viewpoints to contribute to the research. This also encourages and creates opportunities for partners to learn from one another ("co-learning"), engendering a shared feeling of productivity and growth from within the partnership.[53]

Given the often particularly lengthy timeframes necessary to conduct health research, and the focus on collaboration, the partners involved must also show a commitment to the long-term. This also creates opportunities for ongoing improvements: CBPR research includes regular opportunities for iterating on its processes, requiring built-in times for reflecting on how the process is going, and planning how best to tweak things to improve future outcomes. This kind of flexibility, baked into the process, also creates opportunities for all those involved to raise concerns and needs in service of producing the best research possible. Lastly, specifically health-related CBPR recognizes that health is not just the result of individual choices and histories, but is also dependent on ecological factors specific to the local environment.[54] It can be measured through positivist scientific methods, but also emerges from the complex interdependent systems that individuals are bound to, and must navigate constantly merely to exist in the world.

4.2: Why Is CBPR Relevant to the Study?

Given the expanding research fields focused on the relationship between human health and the built environment, there has also been a surge of interest particularly towards how partnerships can approach addressing urban health issues, with CBPR as a major focal point. A 2005 paper

in the *Journal of Urban Health: Bulletin of the New York Academy of Medicine* noted that "CBPR is experiencing a rebirth of interest and unprecedented new opportunities for both scholarly recognition and financial support."[55] It was named by the Institute of Medicine as one of the eight key competencies for health professional students, and primary health research funders — including The National Institute of Health, the Centers for Disease Control and Prevention, and the Robert Wood Johnson Foundation — have recognized CBPR as an essential tool to deepen scientific health knowledge, prevent disease, and reduce racial and ethnic health disparities.[56]

The advantages of a CBPR approach to the Study apply to both research processes and outcomes. In terms of process, CBPR can help improve informed consent and anticipate cost-benefit balance, as experienced by participants in the research, and unique to the community involved. In the case of the community in question, understanding priorities and value sets beforehand, and formulating a research question that respects both, can help ease the design and implementation process — especially given the sensitive nature of health issues. This goal has already been exercised in the pre-pilot's survey, which sought to have community members articulate health in their own terms. The community involvement can also help articulate unexpected factors that contribute to the health issues being studied, improve communications between researchers and local participants, and increase overall trust and a sense of pride within the community, in turn improving recruitment and retention. Similarly, this tailored approach can improve the strategy behind interventions (a key aspect of the proposed Study design), in turn improving the likelihood of success.[57] More generally, given the sometimes obtuse and personal nature of articulating health factors, long-standing community collaboration can be a prerequisite to gaining access to desired data at all.

In terms of outcomes, a CBPR approach not only improves research quality, but also its validity — by way of incorporating local knowledge of those involved, the research analysis is buttressed by community buy-in and clarity of purpose.[58] This also helps build collective capacity within the community to identify and implement projects of local significance, both as part of and external to the research process — the participatory aspect increases the likelihood of acting on and applying the findings.[59] By increasing power and control over the research process, a CBPR process is well-situated to improve the health and well-being of the communities involved, and reduce the likelihood of continued marginalization of vulnerable parties.[60] The advantages articulated above are particularly relevant to the Study, because of its ambitious longitudinal framework and reliance on community infrastructure and resources.

In addition to these conceptual advantages, the Study's partnership has explicitly mentioned that it plans to use PAR-like processes within its research design,[61] so it seems apropos to use the CBPR evaluation framework as a way of anticipating needs and processes to come. It's also a personal goal of this research to try and adopt CBPR as a guiding framework, if not an outright set of rules (given the limited timeframe and resources available). The research question itself was formulated in coordination with representatives from both the health researchers and community leaders, in hopes that it would be useful in helping the partnership operate throughout its continued existence in the community. The secondary goal of this research (the ways in which being a master-planned community might influence the Study) was also suggested specifically by one of the health researchers. This research's data collection instruments were also developed with input from the health researchers involved, and the findings will be presented to representatives of the partnership in the summer of 2019.

CBPR is implicated in the Study for several reasons. For one, the longitudinal format and interventions inherent to the Study necessitates community involvement in the research, as residents will literally be living with the Study and experiencing its impacts on a daily basis. Secondly, the organizers intend to tailor the specifics of the research questions and methods to the community's population and environment, and to do so, are very invested in learning about the community, and collaborating with it on the research process. Thirdly, this interest is shared by the community's leadership. Given the nascent phase of the study itself combined with these shared goals and priorities of the Study overall, CBPR is a useful framework for understanding how foundational aspects of the Study are coming into being. Holding a CBPR mirror up to the Study, at this emergent phase, will help researchers and community members understand key aspects of their working relationship better, and identify points of strength and opportunities for improvement. In preparation of a community-wide longitudinal study, CBPR is an ideal framework for understanding how the parties involved may best work together towards shared outcomes.

Given CBPR's focus on collaboration and community-researcher relationships, and connection to health research, it is also an appropriate tool to apply at this stage of the partnership, which thus far has been so focused on building trust and collaborative systems among community representatives and researchers. CBPR "offers an exceptional opportunity for partnering with communities in ways that can enhance both the quality of research and its potential for helping

address some of our most intractable urban health problems."[62] Given the practical advantages of a CBPR approach to health research, articulating those at this phase in the partnership stands to make a positive impact on how the Study's research is designed in the future.

4.3: How CBPR Is Used Here

In order to hold the CBPR "mirror" up to the partnership, a literature review of CBPR case studies, reports, reviews and critiques was conducted. Key indicators of a successful CBPR partnership were of particular interest, referred to here as "key tenets," and then excluded from this research if they depended heavily on aspects of the Study that had not yet occurred. Ultimately, the author compiled a list of key tenets that could attest to the collaborative process and style that existed between academic researchers and community representatives during the pre-pilot phase of the partnership.

This thesis research is focused exclusively on the "pre-pilot" phase of the Study, because it was the first and only complete phase of the Study, it was relatively well-documented, and because it had wrapped recently enough for participants to still be able to comment on it. While there are many other aspects of the partnership that may be discussed through a CBPR lens, the focus on "collaborative process and style" was chosen because 1) it emerged in the literature review as a key element of successful health partnerships,[63] and 2) partnership leaders confirmed it was of particular interest to them during the author's research proposal process. Finally, given the lack of a formal administrative or organizational structure to compare to, the collaborative methods within the partnership can effectively attest to how the partnership is composing itself at this time.

Developing the Interview and Survey Tools

Through a review of critiques, policy evaluations, case studies and recommendations on CBPR-studies, the author compiled a set of factors seen as significantly influential to accomplishing research goals and respecting key principles of CBPR. Particularly incisive in terms of articulating these factors were Minkler,[64] Israel[65] and Sandoval.[66] Given the early stages of the Study's partnership, some of the key tenets would not have had time to emerge, or could not be studied within the confines of this research. Therefore, and given the focus on collaborative

styles and processes, only the CBPR key tenets that attested to some aspect of collaboration, or the operational relationship between health researchers and community leaders within the partnership, were kept to constitute the CBPR "mirror".

The process for identifying these key indicators followed a systematic review of 24 analyses of CBPR practices from different scholarly perspectives, specifically focused on health when possible. These included (with ratios referring to the share of health-focused literature): academic advocacy/criticism (5:5), best practices (2:7), case studies (5:6), reports from healthcare organizations (2:2), and literature reviews (unknown:4). After collecting a list of characteristics credited within this review as an indicator of a successful CBPR practice, the author of this research removed all indicators that did not relate somehow to how researchers and community representatives worked together throughout the partnership (their collaborative process and style), and characterizations of research that relied on stages not yet reached by the partnership of focus here. For instance, Key Tenets identified in relation to democratic processes within the research itself were not included, because the research has yet to be designed or implemented. The Key Tenets are in no way a comprehensive list of factors that make CBPR processes successful, nor does this research determine them to be necessary or sufficient for success. The format presented here in no way represents any hierarchy of significance. A "successful" CBPR process both reinforces the key values of CBPR, and does so in a way that also serves the particular research project's goals. The Key Tenets presented here are not meant to be exclusive to the specifics of any kind of research project.

A matrix was then made, listing all of these factors for successful CBPR practices (referred to as "Key Tenets" in Figure B), alongside a "Description" column that further articulated the definition of the Key Tenet. Lastly, an "Indicators" column elaborates more precisely on ways in which the cited literature qualified these tenets through different forms of data. The author tried to articulate these Indicators in ways that would be appropriate to the Study. The terminology within the Key Tenets is, for the most part, adapted for this research's legibility — however, when appropriate, explicit terms are cited.[67]

Figure B: Key Tenets of collaborative processes and style in CBPR

Description	Indicators
Equitable involvement[68] between community and researchers[69]	
Community participants will be active in all research stages. Researchers do not dominate conversations or decision making.	• levels of participation (number of people, attendance, acceptance of roles and responsibilities) • research needs are identified by community of interest • people can articulate what they hope to gain from research
Opportunities for co-learning[70]	
In addition to research outcomes, the partnership between community members and researchers allows for both parties to learn things from one another and the process.	• community members gain knowledge from researchers' expertise and vice versa • meetings allow for information to be shared in both directions • effective responses to lack of knowledge
Research builds on community's strengths/resources[71]	
Assets and systems endogenous to the community help create foundation for research.	• researchers change research strategy according to information from participants • community of interest controls decision-making • partners contribute unique strengths
Facilitates collaboration throughout the process[72]	
Every stage includes opportunities for researchers and community members to discuss/share ideas for research.	• meetings are run with opportunities for everyone's involvement • no one party dominates the discussions • attempts to redress difficulties in knowledge, work style, expectations and conflicts
Effective leadership[73]	
Operations are guided in an organized and understood fashion, by someone who can represent the research.	• group had developed mutual support and leadership • decision-making process is understood and respected • opportunities for reflection to improve partnership • partners trust leadership to accomplish goals and their priorities align; leaders induce involvement
Clear communication[74]	
Partners understand one another, and are able to coordinate responsibilities and processes.	• partnership has clear avenues for communication • shared understandings of current/future happenings • key elements reach intended parties / information is shared
Flexibility when navigating new territories[75]	
At an impasse or unexpected moment, the partnership can adapt to meet its needs.	• constructive response to unanticipated scenarios • act quickly to resolve/anticipate issues • effectively manages expectations
Manages conflict constructively[76]	
When issues arise, steps are taken to address and prevent them.	• participants feel comfortable raising issues • issues are effectively addressed for the short and long-term
Effective governance structure[77]	
The organization running the show has a functioning structure.	• clear "chain of command" to accomplish goals • participants understand how their roles relate to others' • respects democratic principles
Shared values / common culture[78]	
Researchers and community members relate to one another and their work.	• research priorities shared among participants • participants learn about one another • partnership members feel connected, on the same team
Partnership capacity[79]	
The partnership has the skills and resources necessary to accomplish its goals.	• time / resources for meetings and accomplishing tasks • commitment to longitudinal time-frame • knowledge necessary to achieve goals

Data Collection Tools

Interview and survey questioning were then designed to have partnership participants speak to their experience thus far, in regards to each Key Tenet. The interview questions (Appendix A) were designed to address the concepts noted in pink and purple in Figure B, in order to accommodate potential need for clarification of the ideas involved. These tenets were also chosen for interview questioning in the hopes of hearing stories that attested to the concepts therein, and would be less likely to emerge without conversation. Questions were designed to be open-ended and vague enough to prioritize all interviewees being able to relate, and the goals of the research (and its interest in collaborative processes) were made apparent at the time of inviting the interviewee to participate in this research. An additional question regarding the perceived role of master-planned communities in the research process was included, based on the request of Research Team members with whom this thesis research was designed.

The complementary survey (Appendix B) was administered for respondents to take remotely via Google Forms. The survey was modeled (with permission by the authors) after a truncated version of the Community Engagement Survey used by the "Engage for Equity: Advancing Community Engaged Partnerships" project.[80] The survey questions were designed to elicit responses on topics related to the Key Tenets that might have been too contentious to raise during a first-time in-person meeting, by allowing for complete anonymity and a variety of rated and open-ended responses. These topics also were designed to attest to the Key Tenets of CBPR processes noted in blue and purple in Figure B. The goals of both the survey and interview tools were not to uncover "truths" about the partnership, or to judge whether or not the Key Tenets were truly being exhibited at some benchmark, but to understand the participants' perceptions about their partnership's collaborative structure and process.

Data Collection Process

In March of 2019, with the blessing of two key leaders in the partnership from the Research Team, the author was put in touch with 18 members of the partnership via email: seven from the Research Team, and 11 Community Representatives. This group represented figures who had actively participated in the partnership thus far, and would continue to play some role in future phases of the Study. In total, 17 people were interviewed (11 community representatives and six from the Research Team). In-person interviews were conducted in conference rooms in the community, with nine representatives from the Study (all but one were community

representatives), and one community representative did not end up participating due to a scheduling conflict. The remaining nine interviews were done by phone, except for one interviewee who chose to respond via email. Of the original 18 people invited to be interviewed, 16 also responded to the survey. The survey was completed on the respondent's own time. Both interviews and surveys were completed over a three-week span during April 2019.

Figure C: Interview and Survey Respondents

	IN-PERSON INTERVIEW	REMOTE INTERVIEW	SURVEYED
COMMUNITY REPRESENTATIVE	8	3	9
HEALTH RESEARCHER	1	5	6
TOTAL	9	8	15

The interviews conducted on-site represented the first time that the interviewer would be meeting any of the participants in-person. Given that each respondent is contributing their time to the partnership in addition to their full-time professional capacities, it was elemental that the 30-minute window devoted to their interview was respected and efficiently conducted. This was both a practical necessity and inherent to maintaining trust with participants. At the outset of each interview, participants were walked through a consent form, the goals of the interview and the interviewer's research, as well as how it all related to the Study.

Limitations of Data Collection

Given the semester-long timescale for this thesis and the logistical issues related to coordinating travel for interviews, the methods outlined here have a few particular limitations. For one, the total number of people invited to take part in the research are not a representative sample, but were endorsed by the leaders of the Research Team as being sufficient for the purposes of my research, based on their relatively significant roles in the partnership. Given additional time and resources, ideally everyone involved in the partnership thus far would have been queried. Also, given that the interview data represents the first time the interviewer spoke with the interviewee, and about potentially sensitive topics, it's not unlikely that the responses skew positive, to avoid confronting difficult issues. Also, the foundation of the partnership was still being established at the time of the interviews, and therefore could perhaps have resulted in some self-censorship by those who have skin in the game (meaning everyone, at this point).

5: Findings

The data sought are primarily personal accounts of how members self-reported experiences within the partnership thus far. The data represented here, and subsequent data analysis, are not an attempt to judge whether these accounts are true or fair, but instead to identify threads and comments that can attest to the (real or perceived) difficulties, strengths and opportunities for improvements within the partnership, according to how participants themselves conceive of it. This research formulation is premised upon providing insights into the partnership's working process and style (as reported) such that it can improve its operations and collaborations, with the ultimate hope that this will increase the likelihood of success within their research partnership. A note on anonymity: while all respondents consented for this research to include some form of identification (either title or name), all respondents are anonymized to prevent any potential negative impacts on the Study. Here, they are only identified by their side of the partnership: Health Researcher or Community Representative.

Interviews were transcribed and a spreadsheet formulated from survey responses. Data from the interviews and surveys were coded according to a semi-structured process, with items that referred to the Key Tenets outright, or their description or indicators, and then organized underneath their respective Key Tenet(s). While media reports and internal documentation also were included within the literature review, neither became a useful data source for this analysis, and were instead used to cross-check timelines and other technical facts mentioned during conversations with the partnership.

Here, the research findings from both the interviews and survey are presented in terms of how they reflect the Key Tenets. The goal is not to judge whether or not they hit some benchmark, but to reflect back to participants how these values are shaking out thus far from a third-party's point of view, and point out possibly significant trends in the partnership's development towards its research goals. Additionally, elements of the Key Tenets are briefly discussed in light of how they relate to the partnership's site as a master-planned community.

5.1: Equitable Involvement between Community Members and Researchers

The majority of survey respondents attested to some degree of involvement regarding data collection within the pre-pilot phase, with 11/16 of respondents disagreeing with the idea that academic researchers dominated the dialogue (Figure D). There was also widespread agreement (14/16) that the findings throughout the pre-pilot process were made available to everyone involved (Figure E). The majority of responses were positive regarding whether participants felt their suggestions were taken seriously and had influence over the process — all those who didn't respond positively marked "neither agree nor disagree" (Figure F).

Figure D: Survey responses to: "Quality of dialogue: How much do you agree or disagree that, during the pre-pilot, this partnership had conversations where:"

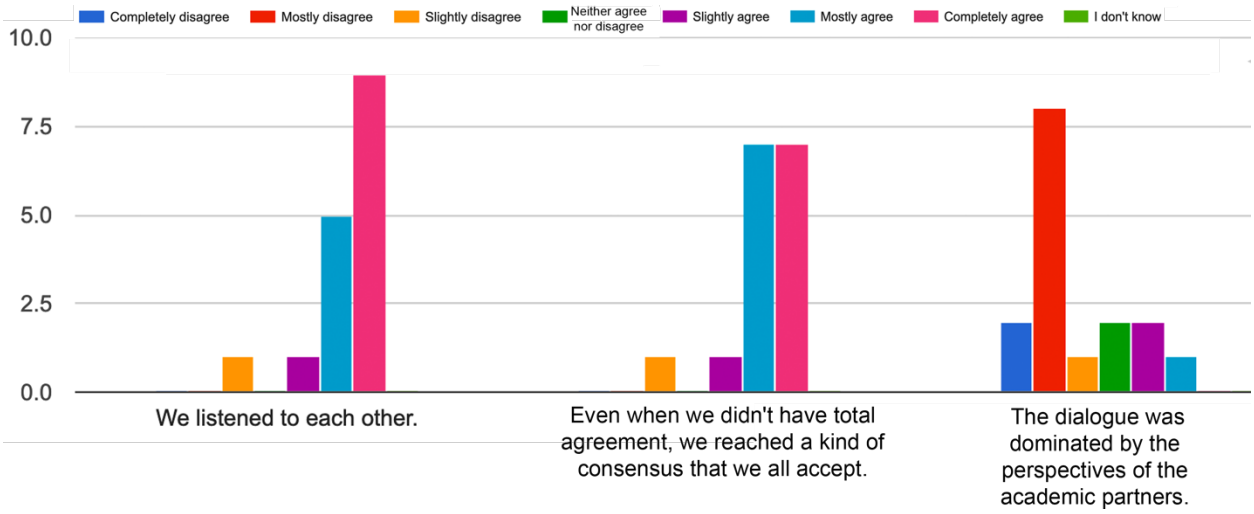


Figure E: Survey responses to: "During the pre-pilot stage, how much were community partners involved in the following?"

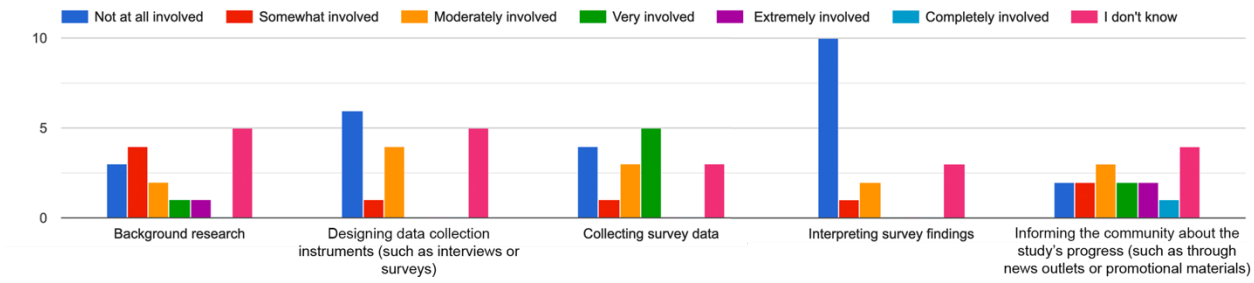
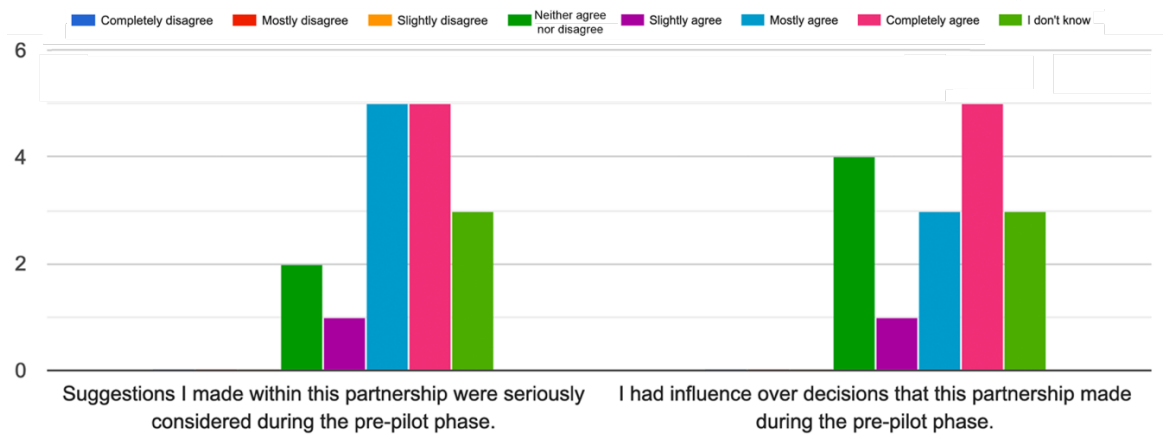


Figure F: Survey responses to: "Influence in the Partnership during the [Study's] Pre-Pilot"



5.2: Opportunities for Co-Learning

As the pre-pilot phase is in service of infrastructure building within the community, both sides of the partnership reported learning new things about the other, in terms of culture, work style and context. Here, "co-learning" in the CBPR context isn't necessarily limited to kinds of knowledge that emerge from the formal research itself, but general items that expand the mindset of those involved, more so than would otherwise be possible in their normal professional roles. This also relates to the partnership's ability to foster equitable benefits between different parties — and echoes the concerns of PAR-like methodologies that research takes from its community partners (in the form of extracting researched data and knowledge) more than it provides. All those surveyed (except one who indicated "I don't know") felt that they "were able to grow and learn" to some extent during the pre-pilot phase (Figure G).

Figure G: Survey responses to: "How much do you agree with the following descriptions of the pre-pilot stage?"

Throughout the interviews, there were frequent mentions of bidirectional interest in both sides of the partnership. Multiple community representatives referred to a sense of fascination with getting to see the research process up close, while also learning more about what constitutes "health" within the Study, including its contemporary scientific understanding and how it relates to their own lives and those of their community constituents.

> *"I talk a lot with [a health researcher] about where the current status of the neurosciences are, and what researchers are able to do, what they're able to see through technology, so I was just very unaware of where we were, so that's been really rewarding." [Community Representative]*

Members of the research team frequently commented on the novelty of working with a master-planned community — what it even was, and how it worked. They also reflected on what it would then mean to have to realize the somewhat abstract values of the Study through the rigorous structure of a scientific study, while at the same time respecting the community's commitment throughout that process.

> *"I knew nothing about master-planned communities, now I've learned a lot about master-planned communities … just through sitting with the people from [the community], I've learned so much about how communities can be planned, how you would go about setting up a community, everything that's involved in administration of a community, I had no idea about anything like this, so that's been very eye opening to me." [Health Researcher]*

5.3: Research Builds on Community's Strengths and Resources

Interviewees mentioned that the Study's rapid pace was, in many ways, due to its ability to plug into and harness the structures and systems already operating in the community. The governance structure of the master-planned community allowed for relatively easy access to stakeholders,[81] which was instrumental in developing the community survey, and which helped inform the Study around community health concerns. The culture of the community, in terms of its interest in health and sociability, also helped garner interest and buy-in. Community representatives also expressed a long-term commitment to realizing similar goals as the Study, which assured the researchers that the longitudinal study could be supported. This in large part is due to the emerging research campus development — the community representatives were interested in strengthening it, and the Director was looking for a community with the campus' resources. Gains for both sides were apparent from the beginning. Community stakeholders also referred to the benefits their community organizations stood to receive through their association with the Study.

> *"Like the relationships among people, the connections within organizations, the shared vision around building a healthy community, like there's all that, shared values and things like that, that I think might not exist in other places that didn't have that kind of same overarching infrastructure." [Health Researcher]*

> *"So I always have my feelers out for anything that I think will help [the research campus] move forward, and one of the biggest pieces we were missing is a research piece with a university, because you have to have that if you want to have a good research park. [...] [So when Health Researcher] came here and [they] called me and [they] mentioned that [they were] a [university] researcher, I thought that would be a pretty good affiliation." [Community Representative]*

Multiple members of the research team also mentioned how the health study in particular could build on the community's strengths. Particular assets cited were the research campus, the community intent on housing scientific research, clear geographic and membership boundaries to base community interventions in, consistent management structures, and residents' health consciousness.

> *"The community was specifically designed to house scientific research. [...] And that's definitely one of the reasons that this community was chosen to do the research that we're doing." [Health Researcher]*

"The founders of this community have been associated with this landmass for over a hundred years, and their values have remained consistent. So that consistency led me to believe that there wasn't going to be one turn in the market, or turn in political administration, or turn in anything that would shake the foundation of this core community." [Health Researcher]

It seems clear from the interview responses that the community offered specific and competitive attributes that made it an appealing site for the partnership and accompanying health study. 13/16 of those surveyed thought the pre-pilot successfully built on community strengths, between a “great” and “complete extent” (Figure G).

Hooking successfully into these community strengths will be integral to assure that future interventions for the study are done effectively and efficiently. It could also help community representatives feel that their assets are being respected and invested in — which also plays into the tenets of co-learning and equitable benefits. However, at this early stage of the Study, the precise methods of the health study have not been determined, allowing the messaging to stay broad enough to incorporate a wider range of visions for what it could ultimately become. Once the nitty-gritty specifics of the research goals are translated into actionable research methods, systems will be put in place to try and ensure the community strengths are still being respected and integrated into the process — such as through an advisory board with both scientists and community members. At this point, as one health researcher put it:

“I think a lot of the work that I’ve been doing within this partnership is to try to really take a broad idea, or vision, and try to make it practical.” [Health Researcher]

Where possible, the specifics of the study will need to seek to demonstrate how they are still accommodating and helping build on the community strengths articulated here, as the connections may no longer be as apparent.

5.4: Facilitates Collaboration throughout the Process

Collaboration as a shared value came up frequently in discussions of the perceived and self-reported cultures of both the Research Team and community membership. Members of the Research Team also expressed their appreciation of being welcomed by the community, which made bridging the gaps of research-esotericism somewhat easier. A member of the Research

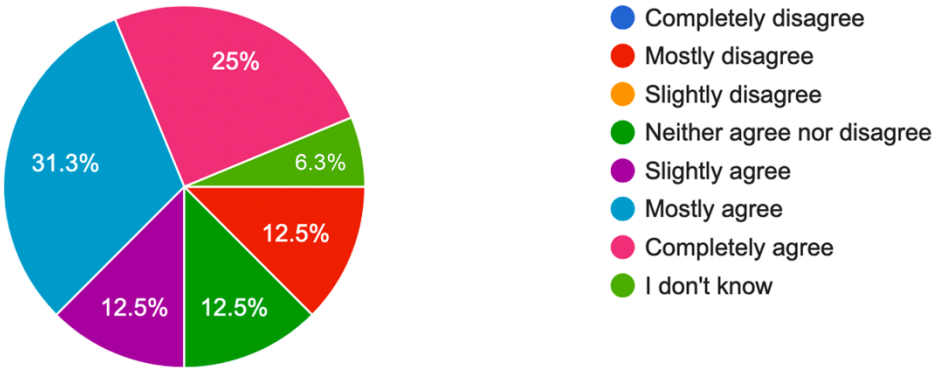
Team specifically credited and praised the Director's leadership for fostering a successfully collaborative culture within the partnership.[82]

What wasn't clear was the precise methods through which the partnership collaborated with one another; aside from the processes previously laid out (see "3.3: Where Are We Now?") and requisite phone calls between sides of the partnership. No interviewee mentioned specific strategies or systems for collaboration within the partnership, i.e. communication platforms or specific standards. Multiple interviewees did note that there was palpable excitement around the Study from both sides of the partnership, which motivated their desire to collaborate. Interviewees also noted a strong collaborative culture from within their side of the partnership generally speaking, that they could then both recognize in the other.

> *"What's really great about the [...] community is that they were so excited to partner with us, they were so excited to have us as a presence in their community, and they were really welcoming and very collaborative right at the start. [...] I've seen this incredible collaboration among everyone." [Health Researcher]*

In terms of fostering collective opportunities to strengthen their internal collaboration, however, there was notable disagreement among survey respondents. While 11/16 attested to, in some form, a collective evaluation of how the partnership was progressing and meeting its goals, the remaining respondents indicated that either the partnership didn't do this, or they didn't know about it (Figure H). Broken down by side of the partnership, all of the Health Researchers attested to some form of agreement or were neutral (neither agree or disagree), whereas two Community Representatives did not agree with the statement at some level, one was neutral, and one marked "I don't know". If collaboration were truly facilitated, one would hope that all those queried would know it.

Figure H: Survey responses to: "Our partnership evaluated together what we've done well and how we can improve our collaboration."



5.5: Effective Leadership

The Study's Director is the founder and public figurehead of the Study at this point. As the major point of contact between the research team and the community representatives, they are also the pivot point for all communications within the partnership. Multiple interviewees from both sides of the partnership expressed appreciation for the Director's charisma, passion, and ability to foster a collaborative culture within the partnership — to serve as the "glue" holding it together. Participants also expressed concerns that passion be combined with a clear process, to try and assure that the most motivated individuals didn't always end up carrying most of the responsibilities.

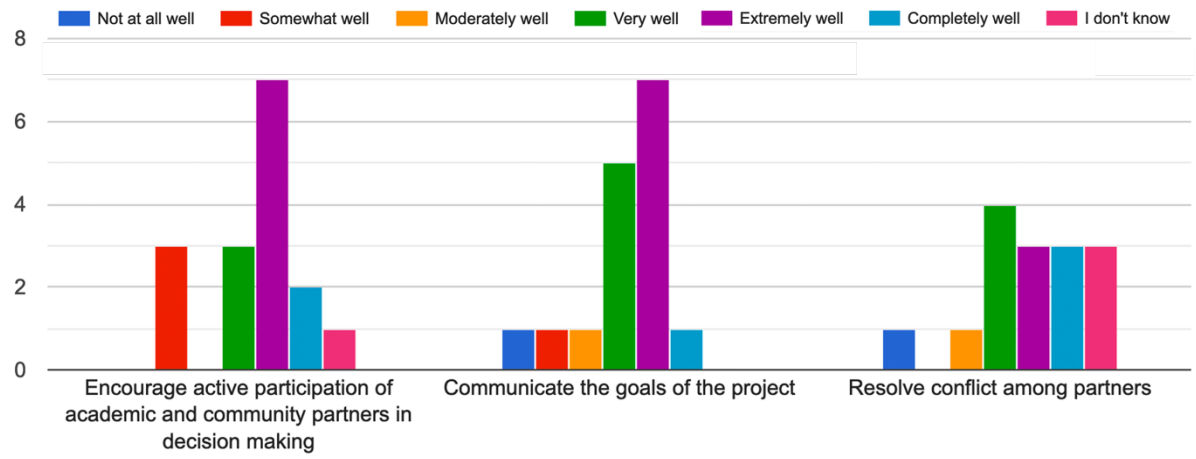
> *"The collaboration culture is amazing. One of the things that I've enjoyed, all the projects I've worked on with [the Director], is that there has been an amazing collaborative culture. [The Director's] amazing ability to bring people together from a number of different areas, a number of different types of backgrounds, a number of different sectors of business, academia, and community life. [The Director] has a wonderful ability to bring everybody together and bring the best that they have to offer forward, so that everybody can put those things to use for the common purpose, and I really enjoy that, it's a very positive, collaborative skill that I think [the Director] has and it really shines through in all the projects that [the Director] works on." [Health Researcher]*

Multiple interviewees also expressed an appreciation for the preexisting structures of leadership within the community, which allowed for easier access to business leaders and representatives

involved in the Study, and the creation of a “centralized leadership structure” through which the partnership could operate.

In terms of fostering collaboration, 13/16 of those surveyed responded between “very well” and “completely well” when asked how leadership encouraged participation from both researchers and community members (Figure I). Only one person responded “not at all well” to how the project’s goals were communicated: 80% of respondents otherwise answered between “very well” and “completely well”.

Figure I: Survey responses to: “How well did leadership for the partnership:”



Another note that surfaced during interviews was a concern about leadership burnout. While charisma and passion were in no short supply and demonstrably helpful, they alone could not sustain the partnership. One interviewee mentioned that leadership needed to more clearly articulate a system to delegate tasks more efficiently among the partnership, to prevent bottlenecks of information and communication, and distribute the load more evenly to sustain successful long-term operations. This concern was also raised in light of governance — that an overreliance on individual leaders could put undue strain on an eventual governance structure.

5.6: Clear Communication

Communication styles and efficacy were considered in two fashions: internally, among those involved in the Study, and externally, in terms of how the partnership expressed itself to others. Regarding the latter, when it came to soliciting responses for the Community survey, the structure of the coalition made access to participants relatively easy. And when considering future outreach to residents, a community representative expressed confidence that this would go smoothly due to the pre-existing communication systems built into the community's management structure, and the roles of representatives devoted to community communications (who were also queried as part of this research).

> *"The job going forward to me will be getting this study out to the population, and we get out to the population constantly because that's what we do. So we have all the contacts and all the means and methods to disseminate information into the community. [...] We're set up perfectly for that." [Community Representative]*

While avenues for communication with stakeholders did exist prior to the Study, a representative from the community did express concern that the organization process behind outreach to stakeholders wasn't clear, and wished that it would have been more "streamlined". Representatives from both sides of the partnership also mentioned how communicating the Study to others, and being able to justify it to them, was complicated by the project's nebulousness — or that their standard way of communicating it (as a scientist, business owner or community leader) wasn't necessarily legible to the party they needed to appeal to at a given time. A desire to manage expectations and hit fundraising goals had to be balanced with keeping the scope wide enough to maintain interest from all involved parties.

> *"There's obviously a dance here, when you're communicating with donors and the community, you have to present a vision, and you have to get people very excited, and you have to use very simple language to present that information, but I felt that my role as a scientist was really to also go back and try to see how we can put this vision into a research question." [Health Researcher]*

> *"Ok this sounds great, sounds like peaches and cream, but at the end of the day, speaking from the business perspective, business owners are trying to make payroll on Friday, and I think sometimes it's hard to parlay projects from the 40,000 foot level, to how is this going to affect your small business, and I do think there's still some work to be done on connecting those dots for the small businesses." [Community Representative]*

Internally, communication systems were strained by a couple major factors. For one, a couple representatives from the community cited frustrations that updated fundraising figures had not been communicated to them quickly enough, making them feel that their fundraising efforts — and the funders' attitudes towards the project — had been compromised.

> *"The funds that we seem to need seem to be constantly increasing, and that's frustrating, that the number keeps growing, what we actually need to raise. I think it's frustrating for our colleagues on the other side as well, who originally promised us [X number of dollars] and all of a sudden that number is up to [Y number]." [Health Researcher]*

Members of the research team, who are not based at the Study site, also cited a need to prepare for different communication methods with the community, as the Study itself starts to be more clearly defined. Up until now, the Director has been the sole point of communication between the researchers and the community representatives. There are demonstrated benefits to having one person handle these responsibilities, but also created a bottleneck at times and frustrated partners. Interviewees recognized that this is something that would have to change once the study was underway, to allow for more direct access between health researchers and community representatives.

In terms of general communication attributes, survey respondents felt that people listened to one another, and that consensus was reached at most phases to move forward. However, there was widespread disagreement regarding how the information about the Study was communicated to the public (Figure E) — four said they didn't know, where every other level of involvement from "not at all involved" to "completely involved" was marked equally (two respondents each, except for "moderately", which three people noted). Notably however, public-facing communications were somewhat beyond the current responsibilities of the partnership at this phase.

5.7: Flexibility When Navigating New Territories

Flexibility is effectively about an ability to roll with the punches — to identify when things are not working, and try to switch things up to address and improve them. As previously cited under "5.4: Facilitates Collaboration," two-thirds of those surveyed agreed, at some level, that "Our partnership evaluated together what we've done well and how we can improve our collaboration" (Figure H). That the remaining third either didn't know, disagreed, or didn't either agree or disagree with the statement, seems like a significant deviation of opinions within the partnership.

From the interviews, respondents consistently commented on the partnership's process thus far being "reactive" — that due to a relatively fast pace and the ambitions of the Study, there wasn't a clear guidebook for how to proceed. This created some frustrations on both sides around time management, delegation of labor, and communication protocol. There seemed to be a desire for more coherent structures of how different phases of the Study would proceed, and that those structures be mutually agreed upon before being implemented. Given that the vast majority of those involved in the partnership are also responsible for preexisting full-time professional obligations, interviewees also expressed difficulties finding the time to manage everything. One interviewee expressed frustration with a lack of clearly delineated roles and accountability within the partnership, leading to disempowerment among some participants and others having to do more than their fair share.

> *"There's not a script how to do this, so you figure it out as you go, so I think that at times we have been much more reactive rather than proactive in terms of managing the project. Which would have made things easier at various points." [Health Researcher]*

> *"This is something that came to us so quickly, certainly the earliest phases, there was a lot of reactive responses to the researchers. [...] To have this opportunity, you can't reject it right, you wouldn't want to, and so just to be honest it's been grappling with new responsibilities on top of a pretty stretched staffing structure." [Community Representative]*

5.8: Manages Conflict Constructively

As evidenced in the notes from “5.6: Communication” and “5.7: Flexibility” above, interviewees frequently mentioned that when issues arose, they were able to bring them to the necessary parties and relatively easily resolve them. 11/15 of respondents felt that leadership resolved conflicts within the partnership between moderately and completely well (Figure I). Questions that had to do with conflict generally tended to receive one negative response — suggesting that perhaps one individual in particular has strong feelings about the partnership.

Generally speaking, those representing the community’s management organization felt the communication pathway with leadership was open enough to be able to address issues directly as they arose. Multiple interviewees felt they could honestly raise issues with the partnership’s leadership, and steps would be taken to address it. Concerns arose mostly around communication and time management. What exactly the Study would entail wasn’t yet determined, so those pitching the concept weren’t necessarily confident they could relate it to their audience’s day-to-day life. This also complicated requests for funding — it was hard to get monetary support for a “nebulous” concept, even when there was lots of conceptual support and excitement. This also made time management difficult, not knowing exactly what the focus should be or how it might play into the next phase.

Interviewees mentioned at multiple instances how, once an issue was raised, leadership sought to amend it. However, interviewees describe a responsiveness that, while effective in addressing the issue, did not express how it would also attend to the structural defect that led to the issue in the first place. One of these sticking points that was mentioned a few times by interviewees was the expedited time frame of the Study, and how this led to conflict when parties weren’t informed of updated information. One interviewee who raised this issue was concerned that the communication style hadn’t been sufficiently changed to address the issue. Also due to the expedited time-frame, one stakeholder expressed concern that their organization had not been approached about the Study earlier. Additionally, interviewees remarked on the pace of work being difficult to meet alongside their other professional responsibilities.

While interviewees frequently brought up the Director’s strong leadership presence within the partnership, members from the community expressed concerns around the lack of clear structure dictating their role in the Study thus far. While certainly relevant to many participants’

professional duties, the Study is still largely a separate project, done in addition to other full-time responsibilities. The “nebulous” description of the project exacerbated this.

> *“I think no question, the biggest challenge has been the expedited timeline … grappling with new responsibilities on top of a pretty stretched staffing structure.” [Community Representative]*

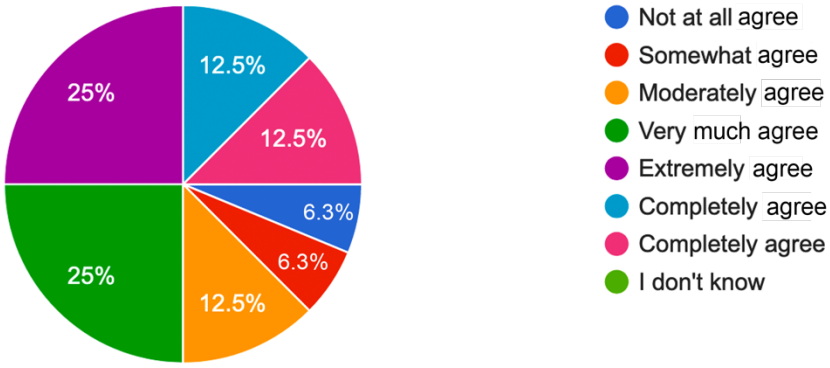
> *“The project is still very nebulous. I feel like a challenge is defining exactly what it's going to do, what's this data gonna really do, what does it mean and being able to define it.” [Community Representative]*

5.9: Effective Governance Structure

As the Study is still in its nascent phase, it does not have a formal organizational structure. The Director is consistently recognized as its leader, but there isn’t a legal or institutional framework by which to measure how decisions are made within the partnership, people’s responsibilities within their roles, and how they all interact with one another — all key elements of understanding how the governance structure reflects CBPR principles. Therefore, understanding governance at this stage is largely incidental, and inferred largely through stress tests. Whether participants were able to operate smoothly within the partnership, or ran into issues, would indicate the implicitly consensual governance structure. Essentially, participants would feel it out. That being said, it’s also been mentioned multiple times before how the community’s governance structure as a master-planned community allowed for relatively easy access to stakeholders, which was instrumental in developing the community survey, and which helped inform the Study of community health concerns.

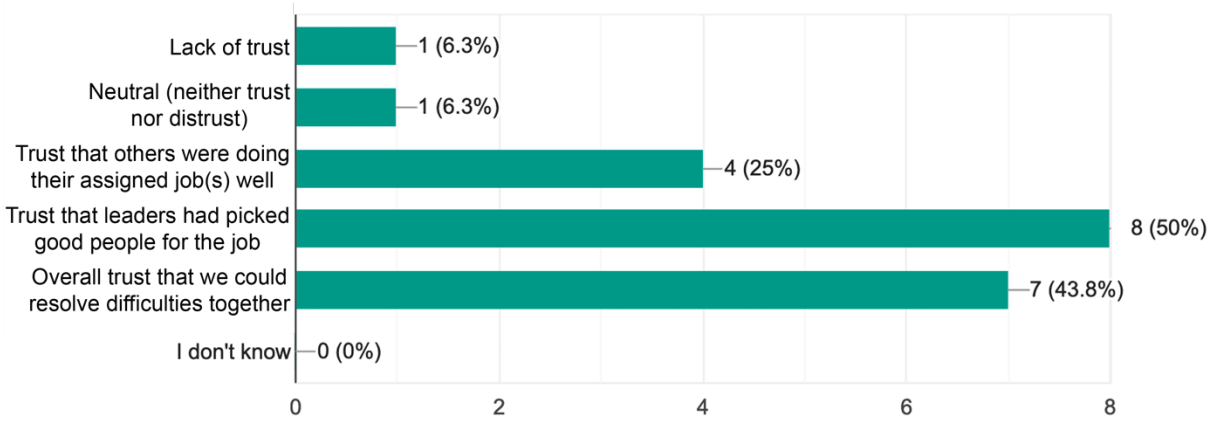
Given this lack of a formal partnership structure, trust is a major factor for this governance style to function. Four survey respondents answered “not at all, somewhat or moderately” to how much they trusted the decisions others made within the partnership (Figure J). This lack of a strong sense of trust among a near-third of the respondents merits further attention by members of the partnership.

Figure J: Survey responses to: "I trusted the decisions others made about issues that are important to our projects."



Respondents to the survey identified with multiple forms of trust, including trust towards the leadership, trust that people were pulling their weight, and trust that difficulties could be resolved within the partnership. These kinds of trust can be seen in the same light as community strengths — that given the lack of one asset (a clear partnership governance structure), different modes of trust have been established within the partnership to guide its progress in these early stages, also allowing it to be nimbler. However, as also seen above in Figure J, there is a lack of a unified sense of trust among members. The responses below (Figure K) also attest to this. Participants were able to select all forms of trust that they identified with, and notably, two marks were made towards either a lack of, or neutral sense of, trust.

Figure K: Survey responses to "Which of the following describes the overall level of trust among partners during the pre-pilot phase?"



While interviewees were generally quick to praise the leadership of the Study, and its Director specifically, for their charisma and passion, many also raised concerns that there was not a sustainable structure of accountable roles in place to keep the Study running smoothly in the long term. Multiple interviewees suggested that the partnership put in place a formal coordinator role to oversee all operations, in addition to the existing leadership. Some also thought that a formal organizational structure should be adopted (such as a consortium), to streamline the partnership with its own legal structure and business plan. A common theme discussed by interviewees was a desire for clarity and structure — suggesting tactics like a branded entity and a physical presence in the community to make the partnership more tangible and easy to understand. Similarly, one interviewee mentioned a desire to more clearly articulate the Study's foundational concepts up front, and come to a shared understanding of the priorities that would guide actions along the way. A couple respondents expressed some frustration at not having a clear idea of how decisions were made within the partnership, and a desire for clearer communication and accountability among partnership participants. These aspects were sometimes also painted in a proud light — that the Study, as a pioneering, ambitious project, did not come with a clear protocol, and that partners often had to make decisions quickly.

In future phases of the Study, representatives from the community expressed a wish for their organizations be more involved, in terms of integrating the Study with their operations in some fashion (for instance, a youth organization hosting "healthy" activities). The research team also expressed plans to become more directly communicative with community representatives — mostly, up through the pre-pilot, while the other researchers were still situated outside of the community, the vast majority of their communications had been managed through the Study's Director.

Multiple respondents cited the community's master-plan community structure as elemental to the organizational structure and operations of the Study — one even likened trying to do the Study in a non-master-planned community to studying a bacterial culture on a desktop, rather than in a petri dish. The community's business alliance was instrumental in identifying and querying stakeholders from within the community, to take part in the pre-pilot's roundtable discussions and ultimately informing who would be a part of the coalition. Multiple interviewees remarked that knowing how to identify these stakeholders for the Study would have been far more difficult in a non-master-planned community. Dissemination of the Community survey was quickly passed to the marketing arm of the community, according to an interviewee from the

community, because they had the resources to more easily and effectively communicate with residents. Multiple other interviewees remarked on how the master-planned community aspect probably made communications about the Study easier. At the very beginning, when the Director first approached one of the community's information centers in early 2018, the health study idea reached two key figures in the community's management structure — who are now both representatives for the partnership overall — within a couple months, allowing the idea to gain traction relatively quickly. A representative from the community mentioned how, as a private entity owned by a family, it could be more "nimble" and had more "flexibility". Similarly, a community representative mentioned how the reputation of the academic institutions that health researchers belonged to was instrumental in allowing the Study to take off as quickly as it did.

> *"There hasn't been a protocol for anything we've done. Absolutely everything we've done we're creating off of either professional or personal experience or intuition, but there is no model per se for what we are doing." [Health Researcher]*

> *"It's a little confusing too, I'm not completely certain how all the decisions are made, so that's a little, that tends to be a thing. It probably takes more time and energy to figure that out than I have to give right now." [Community Representative]*

5.10: Shared Values / Common Culture

Partnership representatives were asked about the kinds of cultures involved in the partnership, and how they were interacting with one another, to see if a common working culture had emerged. "Culture" here refers to the anecdotal understanding of the major groups' customs and characteristics, insofar as they are present in the partnership. Community representatives often responded to questions about the culture of the research team with how they imagined their cultures would interact, and measured those expectations against their experience working on the Study. Members of the research team generally expressed fewer preconceived notions about the community's culture.

The community representatives described their culture as focused on health and wellness generally, and highly motivated to take part in the partnership. Representatives described the community's relative newness as a community (having only existed for approximately 25 years) in a positive light, lending it a more "open", flexible, entrepreneurial and experimental culture, that lent itself to people coming together more easily from different backgrounds. Passion and

motivation to take part in the Study were frequently referenced, as well as one representative noting a "spirit of excellence" present in the community and shared by the research team. Members of the research team, commenting on the community's culture, also noted a focus on health, and a palpable excitement towards the Study's partnership. This sense of eagerness and commitment was reinforced through the research team's experience of the community as rich with "extroverts" and "highly social".

> *"[The community] is definitely a healthy community by all means." [Community Representative]*

> *"The community seems to be uniquely poised to do the work that we're trying to do, because they're very, very committed to participating in this study, as well as the interventions that we want to develop." [Health Researcher]*

Regarding the Community Representatives' experience of the Research Team's culture, a common thread was a positive upending of expectations in seeing how "down to earth" they were. The reputation of the Research Team was well-regarded, but based on its institutional associations, also thought to be more entrenched and bureaucratic in its operations. This characterization was reinforced by the Research Team's self-descriptions. Experiences throughout the pre-pilot phase, however, made the Research Team appear more similar to the Community Representatives, as "pleasant", "relatable" and "passionate". Similar to the Community Representatives, the Research Team also noted an internal culture of collaboration.

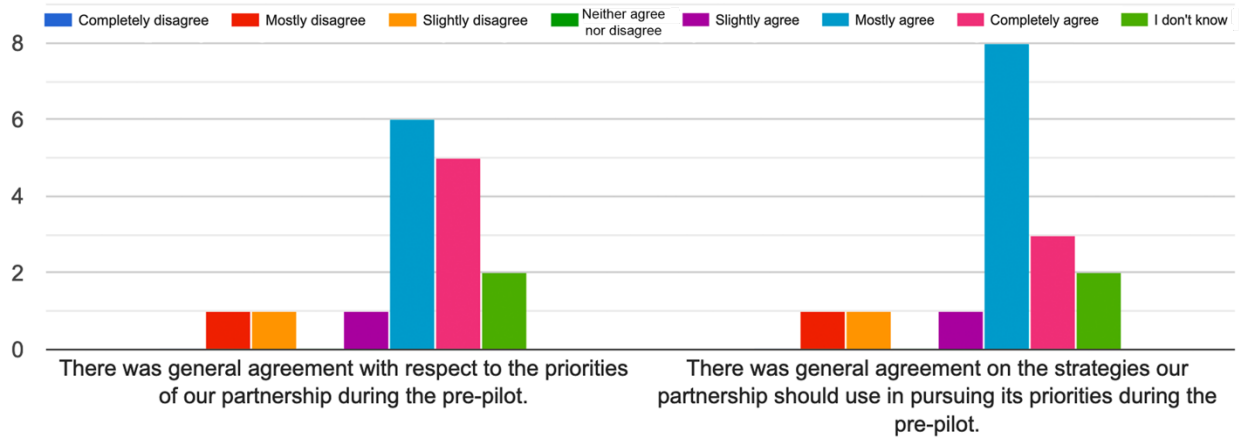
> *"I just find them to be so down to earth and so relatable, and I think that's kind of critical, because this is going to impact so many people, and they do seem to be so sensitive and relatable to all the different aspects and people that are going to be touched by this." [Community Representative]*

The emerging common working culture within the partnership was generally described in positive terms — that the relationships between researchers and community members was "personable", and significantly benefited from in-person interactions, both professional and social. A Community Representative commented that both sides of the partnership shared the aforementioned "spirit of excellence", and passion for the Study.

> *"One of the things that I noticed from the get-go of meeting all the researchers is that they were so genuine and so committed and passionate on their side, just like we were on our side. We're so passionate about our community, and they were so passionate about their research and the greater good that could come of all it, so I saw that alignment really early on." [Community Representative]*

According to survey results (Figure L), 75% of respondents felt that the partnership had shared priorities at some level, with only two respondents disagreeing at some level (the remaining answered “I don’t know”).

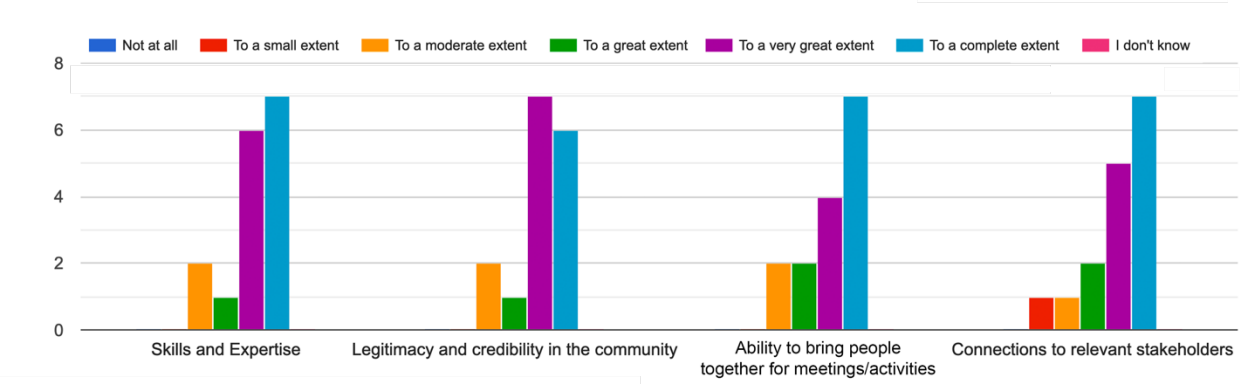
Figure L: Survey responses to “Missions and Strategies within the [Study’s] Pre-Pilot”



5.11: Partnership Capacity

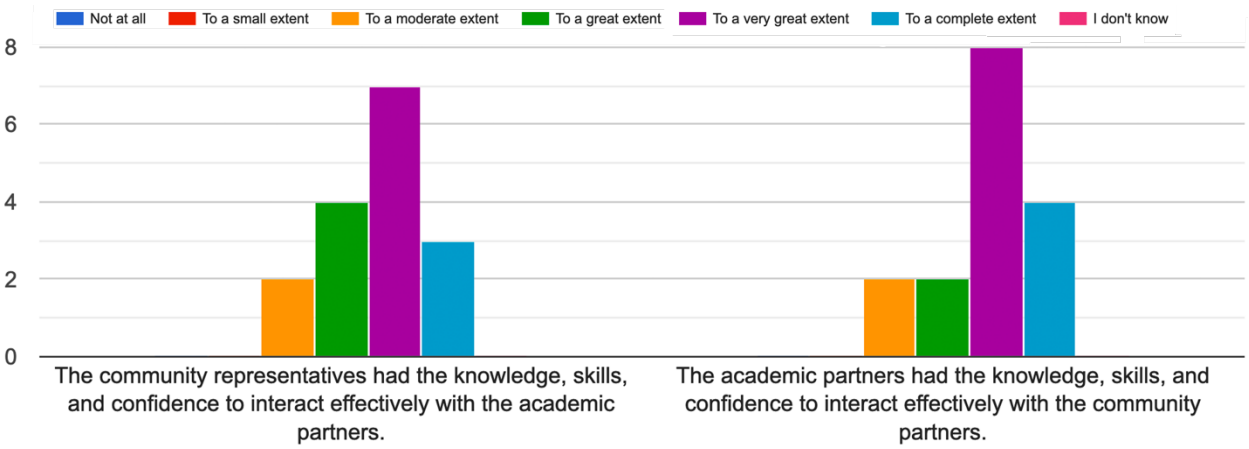
Interviewees from the community frequently mentioned their excitement at partnering with the research and academic organizations associated with Research Team members — entities that they held in high regard. Representatives from the research team remarked on how certain processes in service of the partnership thus far were made far easier by the community being a master-planned community, in terms of understanding its structure more easily. A community representative commented on how the Study was “perfectly meshing” with the community’s goals (regarding the research campus development specifically) and the Director’s study. The partnership, according to survey results, is thought to have the key components necessary to accomplish its goals, including skills and expertise, legitimacy/credibility in the community, the ability to bring people together, and connections to relevant stakeholders. At least two-thirds of those surveyed responded positively, from a “moderate” to “complete” extent on these factors, with no respondents indicating the partnership didn’t have them at all (Figure M).

Figure M: Survey responses to “Which of the following features does this collaboration have in support of the pre-pilot’s goals?” (part I)



To a “great” or “complete” extent, 13 respondents believed that the community representatives had the knowledge, skills, and confidence to interact effectively with the academic partners — the remaining two surveyed responded with “moderate” extent (Figure N). The flip-side, whether academic partners had the knowledge, skills and confidence to interact effectively with the community partners, received the same breakdown of responses.

Figure N: Survey responses to “Which of the following features does this collaboration have in support of the pre-pilot’s goals?” (part II)



The fact that 12/16 of respondents “slightly”, “mostly” or “completely” agreed that the partnership had a shared understanding of priorities and shared strategies for accomplishing them, with two respondents disagreeing in some fashion and two responding with “I don’t know”, suggests that there was not a shared understanding of priorities (Figure L). If there had been, this should have been expressed in some form among all participants. A desire to more clearly lay out the shared goals and priorities of the Study was also expressed during an interview with a community representative.

6: Discussion

The following considers the findings above in regards to the indicators of the 11 aforementioned key CBPR tenets. As seen in Figure O, each row lays out the indicators for each tenet, and provides a brief discussion of how the partnership appears to be exhibiting them. Other common themes that arose but did not directly relate to discussions of the Key Tenets will also be briefly mentioned, in regards to what they may be able to convey about the partnership's collaborative process, as well as how they may be improved.

The discussion of how the Key Tenets' indicators arose within the partnership is then further reflected upon, based on two questions: how they may intersect with facets of master-planned communities, and how they may inform community-health partnerships generally. Based on the observed strengths and opportunities for improvement, recommendations will also be made in direct service of improving the partnership's collaborative process.

Figure O: Comparing Each Key Tenet's Indicators with a Discussion of their Exhibition in the Research

Indicators	Discussion
Equitable involvement between community and researchers	
• levels of participation (number of people, attendance, acceptance of roles and responsibilities) • research needs are identified by community of interest • people can articulate what they hope to gain from research	Generally speaking, the equitable indicators are respected here, but the project is still too much in its infancy to assure that it is truly meeting the goals of equitable community involvement. The community survey did help articulate the community's needs for the research, however the research agenda has not been formally set, so it's unclear how these needs will surface. The same limitation goes for whether researchers are open about the research's limitations. Participants in the partnership can speak to their goals for the research, but the project is still nebulous enough at this point to accommodate many different (perhaps incompatible) priorities.
Opportunities for co-learning	
• community members gain knowledge from researchers' expertise and vice versa • meetings allow for information to be shared in both directions • effective responses to lack of knowledge	Both sides of the partnership were eager to share the knowledge they gained from the other side. Both sides also generally felt that they had an equal voice at meetings, and the considerations from "Flexibility" also indicated that, when issues around a lack of understanding (mostly due to communication breakdown) arose, the partnership was able to effectively address them.
Research builds on community's strengths/resources	
• researchers change research strategy according to information from participants • community of interest controls decision-making • Partners contribute unique strengths	As evidenced by the community survey, the partnership does seem keen to integrate information from the community's feedback into their research agenda. But because the formal research agenda has not been set, it's unclear how this information will surface later on. Generally though, there has been a strong showing of the community's unique assets to the partnership, including its governance structure as a master-planned community, and symbiotic interests in health within the research campus plan.
Facilitates collaboration throughout the process	
• meetings are run with opportunities for everyone's involvement • no one party dominates the discussions • attempts to redress difficulties in knowledge, work style, expectations and conflicts	Leadership and a demonstrated eagerness to engage helped both sides of the partnership establish a common culture of collaboration. Neither of the partners were viewed as dominating discussions, and both sides recognized a culture of collaboration in the other that predated the partnership. As also evidenced in the "Clear Communication" category, when issues did arise within the partnership, participants felt like they could easily be raised and addressed. However, that issues continued to arise makes it unclear whether structural changes were effectively made to prevent them.
Effective leadership	
• group had developed mutual support and leadership • decision-making process is understood and respected • opportunities for reflection to improve partnership • partners trust leadership to accomplish goals and their priorities align; leaders induce involvement	One interviewee made clear that they did not know how decisions were made, and that it would take more time than it was worth to figure this out. This is a troubling issue for the partnership, because while the charisma and passion of the Study's leadership is much appreciated by those involved, it is susceptible to burnout without the establishment of a clear internal governance structure. Concerns were also raised that a few participants were carrying more than their fair share of obligations, suggesting that leadership need to more effectively establish roles and duties. While there is demonstrated faith in leadership generally speaking, a clearly established leadership structure is needed to sustain a long-term partnership.

Figure O (cont.)

Indicators	Discussion
Clear communication	
• partnership has clear avenues for communication • shared understandings of current/future happenings • key elements reach intended parties / information is shared	Avenues for communication between the partnership and the community generally speaking have relied in part upon the internal communication networks of the community — this at times has eased communication, but not necessarily ensured it was done in the best way. Streamlined forms of internal communication were frequently requested within the partnership, and breakdowns were credited multiple times with endangering the reputation of the Study.
Flexibility when navigating new territories	
• constructive response to unanticipated scenarios • act quickly to resolve/anticipate issues • effectively manages expectations	The characterization of the partnership thus far as "reactive" suggests that, while not ideal for sustaining the Study, it is able to quickly address unanticipated scenarios. However, it didn't appear that this "reactivity" fed into systematic adjustments to prevent the same issues from arising again. Given the nebulousness of the Study, it can still mean many things to different people, and it's not apparent whether these potentially divergent expectations are being managed.
Manages conflict constructively	
• participants feel comfortable raising issues • issues are effectively addressed for the short and long-term	As echoed in "Flexibility" and "Clear Communication", participants did self-report comfort with raising issues, and generally seemed satisfied with how the issues were handled in the short-term. However, the conflict that arose from the lack of communication around funding did not appear to have a more precise diagnosis, which could establish a precise means of preventing a similar conflict from arising again.
Effective governance structure	
• clear "chain of command" to accomplish goals • participants understand how their roles relate to others' • respects democratic principles	Respondents frequently referenced a lack of clear structure to the chain of commands, and a desire for more defined roles and accountability. It's too early in the partnership, and its structure too nebulous, to understand whether democratic principles are being upheld. But especially considering the imminent impact of funding, a formal governance structure and organization should be established as soon as possible.
Shared values / common culture	
• research priorities shared among participants • participants learn about one another • partnership members feel connected, on the same team	As also evidenced in the "Opportunities for Co-learning" section, participants did express an appreciation of new knowledge gained from their partners. Other references to a shared focus on collaboration, and the general excitement and passion permeating both sides of the partnership, help constitute a clear sense of common culture within the partnership thus far. The majority of respondents also felt that research priorities were shared among participants.
Partnership capacity	
• time / resources for meetings and accomplishing tasks • commitment to longitudinal time-frame • knowledge necessary to achieve goals	Regarding the time and resources for meetings and accomplishing tasks, interviewees repeatedly mentioned feeling stretched thin and frustrated by last-minute requests, and wished that communication would be more streamlined and organized. Both sides did demonstrate a clear commitment to the longitudinal time frame, as evidenced by the widespread support for the study and willingness to integrate stakeholders' own organizations into its practice. However, at this point, given the lack of formal structure and unclear funding outcomes, there isn't a clear path forward regarding how to redress these differences. But generally, both sides expressed trust that the partnership had the knowledge necessary to accomplish their goals.

6.1: Do the Findings Exhibit CBPR's Key Tenets?

Data from the interviews and surveys were considered in relationship to the definition and indicators previously listed (Figure B) of Key Tenets of collaborative processes and style within CBPR. Below (Figure O), the discussion of each Tenets is considered alongside their respective indicators, to ease reflections on whether or not they appeared. The color of the label for each Key Tenet indicates whether it emerged largely as a strength (green), or an opportunity for improvement (blue) within the partnership. If the data feels insufficient to make a call either way, this will be indicated with yellow.

One notable topic that also arose within the interviews and survey data was the existence and strength of trust among members of the partnership. While too diffuse of a concept to ground firmly in any of the aforementioned tenets, it is nonetheless clearly an imperative element of collaboration within any CHP. Issues of trust arose within conversations around governance (Figure J and K), with one community representative noting a lack of trust, and otherwise a wide distribution of the level of trust (tending towards the higher levels of trust) experienced within the partnership. This lack of a coherent feeling around trust merits further discussion with partnership members directly.

6.2: What Does This Say about CHPs Generally?

Based on the factors outlined above, it is clear that much of the partnership's operations leaned on the preexisting structures for communication and operations within the community. Multiple interviewees spoke about how difficult the whole process would be if it weren't taking place in a master-planned community, and the advantages of the community having already committed to developing a research laboratory as part of its economic development strategy. Participants appreciated the community's private ownership and development structure as a means of identifying and communicating with stakeholders, and drawing support for the partnership's operations. Additionally, strong cultural alignment and a sense of shared values within the partnership emerged as a point of perceived strength, enforced by the community's motivation to connect the partnership to the research campus under development. Indeed, this exemplifies the ability for a research partnership to build off of a community's specific strengths, one of the aforementioned CBPR tenets. This corroborates the suggestion that many participants

surfaced, that facilitating a community-health partnership in a master-planned community can allow for the relatively quick and nimble process that the partnership celebrated.

However, there is also a tension inherent to this strength, as it coincided with a lack of clear internal governance structure and difficulties with communication. While by no means catastrophic, both of these issues arose regardless of the strengths outlined above — the community's own communication and governance structures were instrumental in supporting the partnership, but alone are clearly not enough to sustain it completely. Participants also frequently mentioned feeling stretched thin from trying to balance their professional roles with their responsibilities within the partnership, and at this point are not being compensated for their time spent on the latter (Partnership Capacity). While being "nimble" and dynamic were seen as positive points, being reactive (vs. proactive) was also cast as a limitation. This could be indicative of an aforementioned issue with CHPs,[83] that should they rely too heavily on internal community structures, they risk weakening the unique capacity and image of the partnership itself, potentially limiting the research's success over time.

Given the lack of literature covering similar timeframes in a CHP's formation, and the still-emergent nature of this partnership, what these observations can say about CHPs generally is somewhat limited — so much more remains to be seen. However, using the CBPR framework, the majority of key tenets were self-reported positively, and the partnership is still pursuing its goals, suggesting that the participants feel their working relationships, while not ideal, are sufficient at least at this time. Therefore, it appears that effective collaboration within CHP partnerships can exist, even in the absence of a clear governance structure. Based on the data presented here, the tenets that seem most significant in perpetuating the partnership are effective leadership, shared values / common culture, and an ability to build on community strengths / resources. Further observations and analysis to track these indicators through the partnership's operations would help better contextualize their respective significance within the CHP's effectiveness, and perhaps point to additional factor that play a role in the partnership's perpetuation.

6.3: What about the Role of Master-Planned Communities in CHPs?

Multiple key tenets were discussed in relationship to the partnership's existence within a master-planned community, and in some cases, positive descriptions were discussed in direct

attribution to master-planned communities generally. Stakeholder outreach and engagement, within the tenets of communication and governance, were mentioned as positively informed by the partnership being in an MPC. This was explained through the operational assets of the MPC's owner and developer, as a unified private entity with access to all necessary nooks of the community. While the research here is focused entirely on this partnership, and therefore lacks any point of specific comparison, it's possible that, despite the self-reporting, these factors did not in fact *depend* upon the site of the partnership being an MPC. It's also not clear to what degree being an MPC may have actually influenced this positive outcome, although it is certainly a major influence in terms of the participants' perceptions.

A perceived strength of the partnership that does seem more clearly attributable to master-planned communities is the celebration of shared values / common culture. As a development that has emerged within the last 30 years, the site of the partnership did not have any prior residential history — pointing to the unique capabilities of MPCs to build communities "from scratch". Respondents attested to this with descriptions of the community's residents in terms of it being "open", flexible, and willing to experiment (as in, with the Study) — as everyone is from somewhere else, everyone's new and motivated to form community. This element is unlikely to be found in non-MPCs, given the more incremental approach to development (for one). This suggests that forming a shared set of values in service of a CHP may be easier within an MPC, although this could easily depend on the age of the MPC itself — newer MPCs might be more amenable to such proposals than older ones.

Lastly, in consideration of the partnership's interest in how MPCs may generally inform a CHP's style of research, these additional attributes will be briefly discussed in terms of how they might influence the exhibition of the Key Tenets. While an MPC's structure of private governance has already been discussed at length, physical elements of security may also play a role in establishing of a common culture within a CHP. Elements such as gates, security cameras, and policies dictating uses of open spaces impact the residential culture of an MPC, and may encourage feelings of exclusivity that could be difficult to penetrate, as the CHP seeks to design and implement interventions specifically for the community. That being said, MPCs have also been praised for their ability to "test out" urban policies in less risky ways than would otherwise be possible in another urban setting. This, however, does not account for the actual impact such policies could nonetheless have on the MPC's culture or its residents' daily lives. What structures of governance and accountability are appropriate, when residents within a privately-

held community are subject to these “tests” while also financially committed to the MPC’s success in order to retain their property values? These attributes may introduce unique opportunities within MPCs for CHPs to operate, but also suggest potentially sensitive and necessary considerations around financial motivations and participant protections.

7: Recommendations for Improvement

The initial motivation for this research was to provide the partnership with a set of observations regarding strengths and areas for improvement within their collaborative structure, and then make subsequent recommendations in order to strengthen the partnership's operations and its pursuit of future goals. To do this, suggestions based on the articulated strengths are considered in ways that they might fill the identified gaps, by addressing each key tenet at a time. Generally speaking, the areas for improvement articulated here appear to stem from a lack of clarified organizational structure. Establishing one as soon as possible, or adopting the governance structure of a partner organization to guide the overall Study, seems prudent given issues of coherent communication styles, and a lack of shared understanding regarding roles and decision-making. This will also help solidify the image of the partnership in the long-run as something committed to, but run independently of, the community itself. Precisely which form this organizational structure could take is a point of future research, however it should respond to the particular concerns articulated above surrounding communication, accountability, and governance.

The following recommendations were written for the ears of the partnership, and are represented here in a relatively concise form. A more detailed version of this document will be issued directly to the partnership at a later date.

7.1: Equitable Involvement between Community Members and Researchers

At this beginning phase, the partnership appears to have established a laudable dynamic in terms of equitably sharing the information that it has surfaced. Explicit allowances around who has access to what data should be made as soon as possible, with respect to confidentiality rules as well as towards equitable sharing of research data with community stakeholders. These expectations should be integrated in a formal governance structure, to assure this can continue. Additionally, an accountability mechanism should be discussed to assure that this goal is being met throughout subsequent phases of the partnership.

7.2: Opportunities for Co-Learning

The ambitions and excitement around the Study have appeared to contribute to an active culture of co-learning within the partnership, where even in this pre-pilot phase, both sides are learning new things from the other. Given the partnership's goal to design and implement interventions within the community, this demonstrated curiosity and excitement around the research subject bodes well. Sustaining this trend throughout the study's scope will likely necessitate some formal avenues for co-learning, which there already seems to be eager stakeholder interest in — such as, how a youth organization might incorporate the study's insights into its programming. The partnership should provide frequent opportunities for sharing insights and processes with the other side — not only to keep communication flowing, but to build each side's insights and refresh inspiration along the way.

7.3: Research Builds on Community's Strengths / Resources

Multiple health researchers also mentioned that the partnership plans to accommodate a regional approach sometime in its future, and has more imminent plans to reach out to health and political representatives within the region to expand the Study's operations. Given that the community strengths appear to be somewhat unique to the site and its status as a master-planned community, the partnership may need to carefully consider different ways to hook into other, dissimilar areas (especially with less-defined networks) and build off their strengths. For example, the partnership can begin by asking itself, in regards to any action within the Study, "Who would I have spoken to for that task, if I were doing this elsewhere?"

7.4: Facilitates Collaboration throughout the Process

Baking in this kind of reflective process to the partnership shouldn't be a huge leap, given the expressed appreciation of a shared readiness to collaborate. The partnership is understandably stretched thin at this early phase, but establishing a strong precedent for considering ways to improve the partnership from the outset will help build a culture of mutual responsibility. Once the Study's research methods are set, and the reach of the partnership becomes more pervasive, there's little doubt that more parties will become involved, necessitating a well-oiled collaborative apparatus that is capable of adapting as it grows. Regular check-ins could be established for participants to anonymously share thoughts on the collaborative process, and

create systems for keeping accountable progress towards areas of concerns and improving on strengths.

7.5: Effective Leadership

To paraphrase one interviewee, effective leadership isn't just about charisma and passion — it's also about delegation. In the construction of a formal organizational structure, those in leadership roles should be able to manage others' roles and responsibilities alongside their own, to assure efficient operations, encourage a sense of mutual responsibility, and prevent burnout. The leadership present in the partnership has been repeatedly praised for its commitment and enthusiasm, but clear structures must be established to move the partnership forward — especially given its longitudinal nature. This will also help to establish the partnership as a singular entity.

7.6: Clear Communication

It's not clear whether the observed divergence of understandings is due to partners having different priorities and expectations towards information sharing, or whether the partners received radically different understandings of how information was shared (or both). A lack of clear understanding from within the partnership regarding how much information has been shared outside of it can not only confound messaging, but potentially degrade community trust, if partnerships operate on a shaky understanding of what the community already knows. It need not be everyone's responsibility within the partnership to know how information is shared publicly, but a solid control of incoming and outgoing information should be established — especially as public interfacing becomes a more common practice.

7.7: Flexibility When Navigating New Territories

It bears mentioning that the "reactive" comment also arose in a positive light, in terms of the partnership's ability to act nimbly and more quickly than anticipated. But from a risk-prevention standpoint, it is not a quality to rely on in the long term. Sustaining an effective partnership means anticipating and developing mitigation strategies for disruptions and issues that will inevitably arise in the course of such an ambitious study. And certainly when dealing with

human subjects in a research context, harm prevention strategies will need to anticipate responses for any potential hiccup. An exercise in “scenario planning” might allow the partnership to more clearly determine and agree upon alternative responses to significant junctures in the study.

7.8: Manages Conflict Constructively

As the partnership eventually seeks to expand regionally in some fashion, there will no doubt be more opportunities for conflict within the partnership and in interactions with outsiders. Removing conflict entirely is impossible, but setting clear ground-rules and procedures for when disagreement occurs is a proactive measure that should inform the governance and operations structure of the partnership. This will also help build trust by establishing a system of accountability within the partnership, and hopefully streamline operations by providing fewer distractions when conflicts do arise. Leveraging an already strong leadership presence can help push the partnership towards developing these collaborative systems.

7.9: Effective Governance Structure

In reflecting the ways effective governance structure contributes to successful CBPR tenets, there are a few elements where the partnership must be developed. While leadership may be a strong element within the partnership, there needs to also be a clear chain of command that is understood throughout the collaboration, which was generally seen as lacking. Relatedly, participants must understand how their roles are organized around the partnership’s goals and one another. While participants may understand how they are involved as representatives of a particular stakeholder group, they lack formal, distinguished roles. This may not have been seen as necessary up until this point, but will certainly become so as the partnership grows. This could also be immensely helpful in improving notions of trust within the partnership. Lastly, leadership and governance structures should respect basic democratic principles. Given the lack of formal structure, there is no decisive way to understand how democratic the partnership is at this time. One initial way to tackle this is to do a “knowledge map” of all those within the partnership thus far, attesting to who is involved and how they contribute to the partnership. This will help articulate common areas and gaps in work, that the partnership can then iterate upon to build its internal structure.

7.10: Shared Values / Common Culture

Participants cited both a “spirit of excellence” as well as an interest in health as mutual factors that helped create a common culture within the partnership. Both of these factors were said to have predated the partnership, so it didn’t seem apparent that, despite their geographic differences, the partnership had to actively cultivate a sense of shared values. This is positive, but not to be taken for granted. In anticipating the partnership’s intended growth regionally, the partnership should seek to understand how it wishes to define its culture moving forward. This understanding can then be used to streamline communications and collaborations with additional entities, helping “hook” them into operations. The partnership should reflect upon the mechanisms through which their culture is established — Email etiquette? Lunch-and-learns? Management styles? — and how it can use those to strengthen its longitudinal collaborations.

7.11: Partnership Capacity

Similar to the point of effective governance, the capacity that exists within the partnership as it stands could benefit from a knowledge map. It has demonstrated the ability to complete its necessary tasks thus far, but its ambitions and regional scope will inevitably invite different kinds of tasks. A knowledge map can help articulate particular strengths and gaps in capacity, as well as help forge new connections among people that otherwise might not have benefited from working together. It can also be iterated upon throughout significant phases within the partnership, to track progress and anticipate necessary changes. It can also serve as a valuable culture-building tool.

8: Conclusion

Regarding the exhibition of each Key Tenet at this phase of the partnership, the following are considered to be “strengths” within the partnership: opportunities for co-learning; research builds on community’s strengths/resources; facilitates collaboration throughout the process; effective leadership; flexibility when navigating new territories; shared values / common culture; and partnership capacity. Demonstrated areas for improvement were: effective governance structure and clear communication. Lastly, these tenets were deemed inconclusive based on the data gathered: equitable involvement between community and researchers, and manages conflict constructively.

8.1: Collaboration, CHPs, and Master-Planned Communities

The discussion above suggests a clear relationship between facets of a master-planned community, and the partnership’s strengths and areas for improvement. This suggests that master-planned communities can offer something of a double-edged sword to the operations of community-health partnerships. They can provide necessary organizational structures up front, before a CHP can establish its own, perhaps contributing to faster or more dynamic outcomes. However, these structures may not actually be fully sufficient to the CHP’s own needs, and perhaps ultimately compromise outcomes, or put undue strain on internal relationships. This may also contribute to a false sense of organizational security — that by accommodating many of the CHP’s own incapacities upfront, using a master-planned community’s structures may inhibit the internal capacity-building necessary to sustain the CHP in the long run. These factors are not unique to master-planned communities, but given the unified structure of an MPC, these scenarios may be more consequential in the CHP’s operation.

Additionally, further research is encouraged surrounding how the community’s precise design and notions of exclusivity impact the local culture — therefore also impacting the establishment of a common culture within the CHP. Given the comprehensive approaches to design and securitization possible within an MPC, it is likely that these factors may further influence the community’s self-conception, and how it may relate to health researchers. Similarly, these structures may also influence population selection in longitudinal studies, potentially by appealing to certain customer groups within the residential market.

Given the lack of literature documenting the governance and management of CHPs, hopefully this thesis can provide valuable (if not meager) insight into the early stages of what (hopefully) will eventually become a decades-long partnership towards supporting community health, and producing knowledge to improve global health. It is also of the author's opinion that retaining the ideals of CBPR in each element of the partnership and research process encourages a rigorous culture of self-evaluation, strengthening partnerships between local and health representatives and ultimately supporting the creation of truly Healthy Cities.

Reflections on the Research Process

As the bulk of this thesis deals with Community-Based Participatory Research, and discussions of how researchers and community members interact, it feels appropriate to include a few reflections on how the I (as a researcher) related to the research methods and subject(s) throughout the thesis process. I hope this will shed some helpful light upon the thesis research process for future DUSP students, as well as serve as a vehicle for improving my own approach to research.

Journalism and Social Science Research

Prior to DUSP, I worked as a journalist, and the interview and fact-finding methods employed in that role were instrumental in grounding my approach to this thesis. While proving immensely helpful in many aspects, I also bumped up against their limitations, particularly in regards to questioning certain perspectives in ways that could negatively impact the partnership. At times, I wanted to push certain lines of questioning to learn more about the partnership, but realized doing so could be used later to the partnership's disadvantage. This left me conflicted at times, torn between my role, in one sense, to accurately document the partnership, and, on another, to not intervene in any way that could cause harm. This tension was somewhat resolved in the production of two theses: the one available here is for the public record, and another document was made available only to partnership members, who could benefit from the inclusion of more sensitive information.

Also, in terms of interview style, I had to adapt to become less interrogative, and allow for the interviewee to lead the conversation in some ways. There were times where I felt responses were mismatched to my understanding from other sources. While I wished to clarify these points, doing so would have at times contradicted the perspectives of the interviewee, or veered into too personal a territory. Also, given my very limited time to conduct interviews, it was important to keep them standardized and retain the trust necessary to perpetuating the research.

Gaining Trust as a Student Researcher

At the beginning of my research process at the end of the fall 2018 semester, I sent a proposal to a contact within the partnership. The proposal was given the go-ahead, but during further requests for information from community representatives to make the research question more explicit, I inadvertently ruffled some feathers. I never learned exactly why my request was problematic, but understood that the partnership seemed concerned that my research was drifting away from serving their goals (which, within the CBPR framework, is important). The proposal had to pivot somewhat suddenly (although not drastically in terms of content) in order to make sure it was still palatable to both sides of the partnership. This was very distressing at the time, as I feared I had lost the partnership's trust, and therefore compromised the thesis project — especially given that I was reliant on remote communications for most of the research. The renewed proposal was accepted, and I made sure (through consultations with additional health researchers) that future information requests were vetted through the appropriate avenues.

My understanding in retrospect of why this issue may have arisen is in part due to a lack of clarity regarding my role in the research process. While CBPR is premised on research goals being endorsed by both researchers and community participants, I also had to make clear that this thesis research had goals and deadlines specific to DUSP's degree requirements. I was doing the research for two formats: my academic certification, and their use. This, I believe, at times may have confused my role: at times I was perceived as an outsider, asking for unearned information, whereas the ideology of my methods was also grounded in provided them in something they found valuable. At others, I was a point of concern for not representing the partnership accurately, suggesting that I was a part of the Study overall — an identity which, at the time, I did not feel comfortable or prepared to fully adopt.

Who Is the "Community" Anyway?

This question bears particular significance in master-planned communities, given the ways in which the private governance and operational structures may seek to represent residents. Internal governance structures unique to master-planned communities may provide additional avenues for interpreting and querying residents, then would otherwise be used in the public proceedings for a democratic planning process. What if the ways the research represents the

community differs from that of the promotional materials designed to sell homes in the community? Are informal leaders and stakeholders understood differently in gated communities? What say does the community's owner have in determining which stakeholders are relevant to the research project? And how might public knowledge of the research influence whether or not potential residents wish to live in the community? These questions were out of the bounds of this research, but could be a large part of determining the community dynamics and governance structures within the partnership, and inform CHP's operations within master-planned communities.

Appendices

Appendix A: Interview Questions

The following is a version of the questions provided to interviewees prior to their interview. Elements that could potentially identify the Study have been redacted.

Amelia Taylor-Hochberg
[redacted]

Interview questions regarding your role up through the pre-pilot phase in the [redacted] *Healthy Community* [redacted].

The "partners" in this interview refer to the following groups:

- *"The community"*: those serving primarily in a local representative role for the [redacted] residing in the greater [redacted] area. The interview may refer to this group simply as = [redacted].
- *"Researchers"*: those primarily serving as professional/academic health researchers for the [redacted], not from the greater [redacted] area. The interview may refer to this group simply as = [redacted].

Individual roles:

1. Tell me briefly about how you got involved in the [redacted].
2. Describe your role in the [redacted].
3. Will your role change in the next phase of the [redacted]? If so, how?

Relationship characteristics:

4. How would you describe the culture of [redacted]?
    a. Of [redacted]?
    b. How did you seek to bridge those two cultures?
5. How are members of this collaboration preparing this relationship for the next phase in the Initiative?
6. Describe a particular challenge or obstacle you faced in pursuit of this [redacted] thus far. How did you go about addressing it with the partners?
7. Have you learned anything new from the partnership through your role in the [redacted]?

Local context:

8. Imagine you were trying to do this [redacted] in a non master-planned community. What do you imagine being different about it?
9. How would the relationship between researchers and community leaders change if the [redacted] was not taking place in a master-planned community?

Appendix B: Survey Form

The following survey was sent to all participants in this research, via Google Forms. Elements that could potentially identify the Study have been redacted.

[redacted]

[redacted] **Pre-Pilot Collaboration Survey**

CONSENT TO PARTICIPATE IN SURVEY
Community/Researcher Collaboration in the [redacted]

You have been asked to participate in a research study conducted by Amelia Taylor-Hochberg from the Department of Urban Studies and Planning at the Massachusetts Institute of Technology (MIT). The purpose of the study is to understand the collaborative process behind the pre-pilot phase of the [redacted] (which will be referred to as [redacted] for short from here onward), from the perspective of the organizing community leaders and researchers (the "partnership"). The results of this study will be included in Amelia Taylor-Hochberg's Masters thesis. You were selected as a possible participant in this study because of your role in the pre-pilot phase. You should read the information below, and ask questions about anything you do not understand, before deciding whether or not to participate.

• This survey is voluntary. You have the right not to answer any question, and to stop the survey at any time or for any reason.

• [redacted] operation will be influenced by its organizers' collaborative process and style. Understanding how community leaders and researchers work together to accomplish this historic study will be key to [redacted] successful design and implementation. Ultimately, this research could help the [redacted] understand how to best collaborate among the many parties needed for success. There are no apparent risks to participating in the study.

• You will not be compensated for this survey.

• Unless you give permission to use your name, title, and / or cite you in any publications that may result from this research, the information you tell me will be confidential.

This project will be completed by June 1, 2019. All survey data will be stored in a secure external hard drive until 1 year after that date.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. In addition, your information may be reviewed by authorized MIT representatives to ensure compliance with MIT policies and procedures.

* Required

Remember!

Please contact Amelia Taylor-Hochberg via email [redacted] with any questions or concerns.

If you feel you have been treated unfairly, or you have questions regarding your rights as a research subject, you may contact the Chairman of the Committee on the Use of Humans as Experimental Subjects, M.I.T., Room E25-143b, 77 Massachusetts Ave, Cambridge, MA 02139, phone 1-617-253-6787.

[redacted]

[redacted]

Please complete the following to affirm your consent. If you do not consent to this survey, no more action is necessary.

1. **I understand the procedures described above, and I agree to participate in this study. I have been given a copy of the consent form. Please check all that apply:** *
   Check all that apply.

   - [ ] I give permission for my NAME to be included in publications resulting from this survey.
   - [ ] I give permission for my TITLE to be included in publications resulting from this survey.
   - [ ] I give permission for SPECIFIC RESPONSES to be includeed in publications resulting from this survey.

2. **If you gave permission to use your full NAME, please enter it here.**

3. **If you gave permission to use your full TITLE, please enter it here.**

Now, on to the survey!

Role & Experience within the [redacted] Pre-Pilot

4. **Which of the following best describes your role within the BBHC thus far?**
   Mark only one oval.

   - ◯ Principal Investigator (PI)
   - ◯ Community PI or Community Coordinator
   - ◯ Community Representative
   - ◯ Academic Researcher
   - ◯ Consultant
   - ◯ Volunteer
   - ◯ Activist
   - ◯ Other

Partnership Capacity within the [redacted] Pre-Pilot

[redacted]

[redacted]

5. **Which of the following features does this collaboration have in support of the pre-pilot's goals?**
Mark only one oval per row.

	Not at all	To a small extent	To a moderate extent	To a great extent	To a very great extent	To a complete extent	I don't know
Skills and Expertise							
Legitimacy and credibility in the community							
Ability to bring people together for meetings/activities							
Connections to relevant stakeholders							

Bridging Differences during the [redacted] Pre-Pilot

6. *Mark only one oval per row.*

	Not at all	To a small extent	To a moderate extent	To a great extent	To a very great extent	To a complete extent	I don't know
The community representatives had the knowledge, skills, and confidence to interact effectively with the academic partners.							
The academic partners had the knowledge, skills, and confidence to interact effectively with the community partners.							

Mission and Strategies within the [redacted] Pre-Pilot

[redacted]

[redacted]

7. *Mark only one oval per row.*

	Completely disagree	Mostly disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Mostly agree	Completely agree	I don't know
There was general agreement with respect to the priorities of our partnership during the pre-pilot.								
There was general agreement on the strategies our partnership should use in pursuing its priorities during the pre-pilot.								

Community Involvement in Research during the [redacted] Pre-Pilot

8. **During the pre-pilot stage, how much were community partners involved in the following?**
Mark only one oval per row.

	Not at all involved	Somewhat involved	Moderately involved	Very involved	Extremely involved	Completely involved	I don't know
Background research							
Designing data collection instruments (such as interviews or surveys)							
Collecting survey data							
Interpreting survey findings							
Informing the community about the study's progress (such as through news outlets or promotional materials)							

Influence in the Partnership during the [redacted] Pre-Pilot

9. *Mark only one oval per row.*

	Completely disagree	Mostly disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Mostly agree	Completely agree	I don't know
Suggestions I made within this partnership were seriously considered during the pre-pilot phase.								
I had influence over decisions that this partnership made during the pre-pilot phase.								

Quality of Dialogue during the [redacted] Pre-Pilot

How much do you agree or disagree that, during the pre-pilot, this partnership had conversations where:

[redacted]

10. *Mark only one oval per row.*

	Completely disagree	Mostly disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Mostly agree	Completely agree	I don't know
We listened to each other.	◯	◯	◯	◯	◯	◯	◯	◯
Even when we didn't have total agreement, we reached a kind of consensus that we all accept.	◯	◯	◯	◯	◯	◯	◯	◯
The dialogue was dominated by the perspectives of the academic partners.	◯	◯	◯	◯	◯	◯	◯	◯

Reflexivity within the [redacted] Pre-Pilot

11. **Our partnership evaluated together what we've done well and how we can improve our collaboration.**

Mark only one oval.

- ◯ Completely disagree
- ◯ Mostly disagree
- ◯ Slightly disagree
- ◯ Neither agree nor disagree
- ◯ Slightly agree
- ◯ Mostly agree
- ◯ Completely agree
- ◯ I don't know

Leadership within the [redacted] Pre-Pilot

[redacted]

12. **How well did the leadership for the partnership:**
Mark only one oval per row.

	Not at all well	Somewhat well	Moderately well	Very well	Extremely well	Completely well	I don't know
Encourage active participation of academic and community partners in decision making	◯	◯	◯	◯	◯	◯	◯
Communicate the goals of the project	◯	◯	◯	◯	◯	◯	◯
Resolve conflict among partners	◯	◯	◯	◯	◯	◯	◯

Trust within the [redacted] Pre-Pilot

How much do you agree or disagree with the following statements?

13. **I trusted the decisions others made about issues that are important to our projects.**
Mark only one oval.

- ◯ Not at all well
- ◯ Somewhat well
- ◯ Moderately well
- ◯ Very well
- ◯ Extremely well
- ◯ Completely well
- ◯ Completely agree
- ◯ I don't know

14. **Which of the following describes the overall level of trust among partners during the pre-pilot phase?**
Check all that apply.

- ☐ Lack of trust
- ☐ Neutral (neither trust nor distrust)
- ☐ Trust that others were doing their assigned job(s) well
- ☐ Trust that leaders had picked good people for the job
- ☐ Overall trust that we could resolve difficulties together
- ☐ I don't know

Community Engagement Principles within the [redacted] Pre-

Pilot

15. **How much do you agree with the following descriptions of the pre-pilot phase?**
Mark only one oval per row.

	Not at all	To a small extent	To a moderate extent	To a great extent	To a very great extent	To a complete extent	I don't know
The pre-pilot phase built on resources and strengths in the community	◯	◯	◯	◯	◯	◯	◯
All partners involved were able to grow and learn from one another during the pre-pilot phase..	◯	◯	◯	◯	◯	◯	◯
The findings from the pre-pilot phase were made available to all partners	◯	◯	◯	◯	◯	◯	◯

Quality and Satisfaction

16. **What is the quality of the overall work of the partnership toward achieving the goals of the pre-pilot?**
Mark only one oval.

- ◯ Not at all good
- ◯ Somewhat good
- ◯ Moderately good
- ◯ Very good
- ◯ Extremely good
- ◯ Completely good
- ◯ I don't know

[redacted]

17. **How satisfied are you with your partnering experience during the pre-pilot?**
Mark only one oval.

- ◯ Not at all satisfied
- ◯ Somewhat satisfied
- ◯ Moderately satisfied
- ◯ Very satisfied
- ◯ Extremely satisfied
- ◯ Completely satisfied
- ◯ I don't know

Notes for Improvement

18. **Based on your experience during the pre-pilot stage, if you could change, remove or add one thing about how the partnership operates, what would it be?**

_____

_____

_____

_____

_____

Thank you for completing the survey!

Powered by
Google Forms

References

[1] Laura E. Jackson, “The Relationship of Urban Design to Human Health and Condition,” *Landscape and Urban Planning* 64, no. 4 (August 2003): 191–200, https://doi.org/10.1016/S0169-2046(02)00230-X.
[2] Sudhvir Singh and Jessica Beagley, “Health and the New Urban Agenda: A Mandate for Action,” *The Lancet* 389, no. 10071 (February 2017): 801–2, https://doi.org/10.1016/S0140-6736(17)30518-4.
[3] Rydin et al., “Shaping Cities for Health,” p. 2080.
[4] Freudenberg, N, Galea, S & Vlahov, D, *Cities and the health of the public*. Vanderbilt University Press. 2006.
[5] M. E. Northridge, “Sorting Out the Connections Between the Built Environment and Health: A Conceptual Framework for Navigating Pathways and Planning Healthy Cities,” *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 80, no. 4 (December 1, 2003): 556–68, https://doi.org/10.1093/jurban/jtg064.
[6] D Stokols, “Environmental Psychology,” *Annual Review of Psychology* 29, no. 1 (January 1978): 253–95, https://doi.org/10.1146/annurev.ps.29.020178.001345.
[7] Duncan Philip, “Essay: The Practical Failure of Architectural Psychology,” *Journal of Environmental Psychology* 16, no. 3 (September 1996): 277–84, https://doi.org/10.1006/jevp.1996.0023.
[8] Jadotte, “Epigenetics.”
[9] Cheryl Merzel and Joanna D’Afflittl, “Reconsidering Community-Based Health Promotion: Promise, Performance, and Potential,” *American Journal of Public Health* 93, no. 4 (April 2003): 557–74, https://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=9372544&site=eds-live&scope=site.
[10] The CDC defines the social determinants of health as the: “Conditions in the places where people live, learn, work, and play [that] affect a wide range of health risks and outcomes.” https://www.cdc.gov/socialdeterminants/index.htm (accessed March 29, 2019).
[11] Rydin et al.; Jackson, “The Relationship of Urban Design to Human Health and Condition”; Singh and Beagley, “Health and the New Urban Agenda”; Andrew L. Dannenberg et al., “The Impact of Community Design and Land-Use Choices on Public Health: A Scientific Research Agenda,” *American Journal of Public Health* 93, no. 9 (September 2003): 1500–1508, https://doi.org/10.2105/AJPH.93.9.1500.
[12] World Health Organization, “Healthy Cities and the City Planning Process: A Background Document on Links between Health and Urban Planning,” (p. 1).
[13] World Health Organization, “Healthy Cities and the City Planning Process: A Background Document on Links between Health and Urban Planning.”
[14] Rydin et al., “Shaping Cities for Health.” “Healthy Cities and the City Planning Process: A Background Document on Links between Health and Urban Planning,” n.d., 43.
[15] “Healthy Cities and the City Planning Process: A Background Document on Links between Health and Urban Planning.”
[16] World Health Organization. Constitution of the World Health Organization. In: WHO basic documents, 40th ed. Geneva, World Health Organization, 1994.
[17] Rydin et al., “Shaping Cities for Health”; Merzel and D’Afflittl, “Reconsidering Community-Based Health Promotion.”
[18] Levy and Brink, *A Change of Heart: How the People of Framingham, Massachusetts, Helped Unravel the Mysteries of Cardiovascular Disease*., page 54 -81.
[19] Alegría et al., “Community-Based Partnered Research: New Directions in Mental Health Services Research.” (page 2).
[20] Mitchell and Shortell, “The Governance and Management of Effective Community Health Partnerships.”
[21] Rydin et al.; Kenzer M. Healthy cities: a guide to the literature. Environ Urban 1999; 11: 201–20.; van Naerssen T, Barten F. Healthy Cities as a political process. In: van Naerssen and Barten Healthy Cities in

Developing Countries: lessons to be learned. 2002. http://socgeo.ruhosting.nl/homepages/tvn/healthycities.PDF (accessed April 19, 2010); Duhl L. Healthy Cities and the Built Environment. Built Environ 2005; 31: 356–61. (This agenda is echoed by Local Agenda 21, laid out by the 2012 UN Conference on Sustainable Development 2012.)

[22] The CDC endorses a "focus on community-based prevention and control strategies." Merzel and D'Afflittl, "Reconsidering Community-Based Health Promotion." P. 557.

[23] Mitchell and Shortell, p. 242.

[24] Merzel and D'Afflittl, "Reconsidering Community-Based Health Promotion." p. 567.

[25] Weiner and Alexander, "The Challenges of Governing Public-Private Community Health Partnerships."

[26] Aaron and Stryer, "Moving from Rhetoric to Evidence-Based Action in Health Care."; Minkler, "Community-Based Research Partnerships: Changes and Opportunities."

[27] Wallerstein and Duran, "Using Community-Based Participatory Research to Address Health Disparities."

[28] Durington, "Private Cities."

[29] Durington, p.14.

[30] Setha Low, *Behind the Gates: Life, Security and the Pursuit of Happiness in Fortress America* (Taylor & Francis, 2003), p. 117.

[31] Blakely and Gail Snyder, "Divided We Fall: Gated and Walled Communities in the United States," p. 3.

[32] Durington, "Private Cities." p. 19.

[33] "A Planned Community for the Gun Enthusiast."

[34] Miller, "Reviews and Reflections on Planned Communities.", p. 497-8.

[35] Behind the Gates

[36] Apgar, "Innovations In New Communities."

[37] Apgar.

[38] Low, *Behind the Gates: Life, Security and the Pursuit of Happiness in Fortress America*.

[39] Patricios, "Urban Design Principles of the Original Neighbourhood Concepts."

[40] Talen, "Sense of Community and Neighbourhood Form."

[41] taotiadmin, "The Charter of the New Urbanism."

[42] Bell and Wiland, "Designing Healthy Communities."

[43] Low, *Behind the Gates: Life, Security and the Pursuit of Happiness in Fortress America*.

[44] M. Minkler, "Community-Based Research Partnerships: Challenges and Opportunities," *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 82, no. 2_suppl_2 (June 1, 2005): ii3–12, https://doi.org/10.1093/jurban/jti034.

[45] The term "community" can be defined through a variety of commonalities: geography, culture, age, ethnicity, socioeconomic status, religion, etc. For the purposes of this research, "community" refers to whomever the research seeks to study and/or partner with.

[46] Minkler, "Community-Based Research Partnerships."

[47] Paulo Freire's concept of "co-learning" as articulated in Minkler.

[48] Andrew Binet et al., "Designing and Facilitating Collaborative Research Design and Data Analysis Workshops: Lessons Learned in the Healthy Neighborhoods Study," *International Journal of Environmental Research and Public Health* 16, no. 3 (January 24, 2019): 324, https://doi.org/10.3390/ijerph16030324.

[49] J. A. Sandoval et al., "Process and Outcome Constructs for Evaluating Community-Based Participatory Research Projects: A Matrix of Existing Measures," *Health Education Research* 27, no. 4 (August 1, 2012): 680–90, https://doi.org/10.1093/her/cyr087.

[50] Minkler, "Community-Based Research Partnerships."

[51] University of British Columbia et al., *Study of participatory research in health promotion: review and recommendations for the development of participatory research in health promotion in Canada* (Ottawa: Royal Society of Canada, 1995).

[52] Catherine Riffin et al., "Community-Based Participatory Research: Understanding a Promising Approach to Addressing Knowledge Gaps in Palliative Care," *Annals of Palliative Medicine* 5, no. 3 (July 2016): 218–24, https://doi.org/10.21037/apm.2016.05.03.
[53] Barbara A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research: Policy Recommendations for Promoting a Partnership Approach in Health Research," *Education for Health: Change in Learning & Practice* 14, no. 2 (July 1, 2001): 182–97, https://doi.org/10.1080/13576280110051055.
[54] A. Israel, Amy J. Schulz, Edith Par.
[55] Minkler.
[56] Nicolette I. Teufel-Shone, "Community-Based Participatory Research and the Academic System of Rewards," *AMA Journal of Ethics* 13, no. 2 (February 1, 2011): 118–23, https://doi.org/10.1001/virtualmentor.2011.13.2.pfor1-1102.
[57] Minkler, "Community-Based Research Partnerships."
[58] A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research."
[59] Michael; Cockburn Polanyi, "Opportunities and Pitfalls of Community-Based Research: A Case Study," *Michigan Journal of Community Service Learning* 9, no. 3 (Summer 2003), http://hdl.handle.net/2027/spo.3239521.0009.302.
[60] Barbara A. Israel et al., "Review of Community-Based Research: Assessing Partnership Approaches to Improve Public Health," *Annual Review of Public Health* 19, no. 1 (May 1998): 173–202, https://doi.org/10.1146/annurev.publhealth.19.1.173.
[61] See "Lwr pilot presentation-2018-10-23.pptx"
[62] Minkler, "Community-Based Research Partnerships." (ii3).
[63] Mitchell and Shortell, "The Governance and Management of Effective Community Health Partnerships."
[64] Minkler, "Community-Based Research Partnerships."
[65] Israel et al., "Review of Community-Based Research"; A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research."
[66] Sandoval et al., "Process and Outcome Constructs for Evaluating Community-Based Participatory Research Projects."
[67] The structuring of this matrix relied on similar matrices used by Sandoval et al. and Polanyi, "Opportunities and Pitfalls of Community-Based Research."
[68] "Equitable involvement" is a term used explicitly in the papers cited here; however it was also referred to via footnote 76: A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research"; Seifer and Sisco, "Mining the Challenges of CBPR for Improvements in Urban Health."
[69] Minkler, "Community-Based Research Partnerships: Changes and Opportunities."; A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research"; Israel et al., "Review of Community-Based Research"; Seifer and Sisco, "Mining the Challenges of CBPR for Improvements in Urban Health."
[70] "Co-learning" as a term is attributed to Paulo Freire, and cited explicitly in: A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research"; Israel et al., "Review of Community-Based Research"; Alegría et al., "Community-Based Partnered Research: New Directions in Mental Health Services Research."
[71] Referred to in Lantz as an "assets based" approach, this tenet appeared in: Lantz, "Can Communities and Academia Work Together on Public Health Research?"; Minkler, "Community-Based Research Partnerships"; A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research."
[72] Minkler, "Community-Based Research Partnerships"; A. Israel, Amy J. Schulz, Edith Par, "Community-Based Participatory Research"; Israel et al., "Review of Community-Based Research"; Lantz, "Can Communities and Academia Work Together on Public Health Research?"; Mitchell and Shortell, "The Governance and Management of Effective Community Health Partnerships."
[73] Minkler, "Community-Based Research Partnerships"; Lantz, "Can Communities and Academia Work Together on Public Health Research?"

[74] Minkler, “Community-Based Research Partnerships”; A. Israel, Amy J. Schulz, Edith Par, “Community-Based Participatory Research”; Alegría et al., “Community-Based Partnered Research: New Directions in Mental Health Services Research.”
[75] Binet et al., “Designing and Facilitating Collaborative Research Design and Data Analysis Workshops”; Sandoval et al., “Process and Outcome Constructs for Evaluating Community-Based Participatory Research Projects.”
[76] Minkler, “Community-Based Research Partnerships.”
[77] Mitchell and Shortell, “The Governance and Management of Effective Community Health Partnerships.”
[78] A. Israel, Amy J. Schulz, Edith Par, “Community-Based Participatory Research”; Israel et al., “Review of Community-Based Research”; Sandoval et al., “Process and Outcome Constructs for Evaluating Community-Based Participatory Research Projects.”
[79] Minkler, “Community-Based Research Partnerships”; Israel et al., “Review of Community-Based Research”; Seifer and Sisco, “Mining the Challenges of CBPR for Improvements in Urban Health.”
[80] Sandoval et al., “Process and Outcome Constructs for Evaluating Community-Based Participatory Research Projects.”
[81] More on this in the “Governance” section.
[82] More on this in the “Leadership” section.
[83] See page 9, “Potential responses to these issues rest upon balancing a strong, uniquely understood partnership, with work done *through* local community structures — using these local structures can help build trust and ease implementation, but it can also potentially limit the partnership’s visibility, therefore threatening its success in the long-term.”

Bibliography

A. Israel, Amy J. Schulz, Edith Par, Barbara. “Community-Based Participatory Research: Policy Recommendations for Promoting a Partnership Approach in Health Research.” *Education for Health: Change in Learning & Practice* 14, no. 2 (July 1, 2001): 182–97. https://doi.org/10.1080/13576280110051055.

Alegría, Margarita et al. “Community-based partnered research: new directions in mental health services research.” *Ethnicity & disease* vol. 21,3 Suppl 1 (2011): S1-8-16.

Alexander, Jeffrey A., Bryan J. Weiner, Maureen E. Metzger, Stephen M. Shortell, Gloria J. Bazzoli, Romana Hasnain-Wynia, Shoshanna Sofaer, and Douglas A. Conrad. “Sustainability of Collaborative Capacity in Community Health Partnerships.” *Medical Care Research and Review* 60, no. 4_suppl (December 2003): 130S-160S. https://doi.org/10.1177/1077558703259069.

Al-Hindi, Karen Falconer, and Caedmon Staddon. “The Hidden Histories and Geographies of Neotraditional Town Planning: The Case of Seaside, Florida.” *Environment and Planning D: Society and Space* 15, no. 3 (June 1997): 349–72. https://doi.org/10.1068/d150349.

Apgar, Mahlon. “Innovations In New Communities,” 2014, 35.

Bailey, Drew, Greg J. Duncan, Candice L. Odgers, and Winnie Yu. “Persistence and Fadeout in the Impacts of Child and Adolescent Interventions.” *Journal of Research on Educational Effectiveness* 10, no. 1 (January 2, 2017): 7–39. https://doi.org/10.1080/19345747.2016.1232459.

Bell, Dale, and Harry Wiland. “Designing Healthy Communities.” PBS, 2012.

Belone, Lorenda, JE. Lucero, B. Duran, G. Tafoya, EA. Baker, D. Chan, C. Chang, E. Greene-Moton, M. Kelley, and Nina Wallerstein. “Community-Based Participatory Research Conceptual Model: Community Partner Consultation and Face Validity.” *Qualitative Health Research* 26, no. 1 (January 2016): 117–35. https://doi.org/10.1177/1049732314557084.

Binet, Andrew, Vedette Gavin, Leigh Carroll, and Mariana Arcaya. “Designing and Facilitating Collaborative Research Design and Data Analysis Workshops: Lessons Learned in the Healthy Neighborhoods Study.” *International Journal of Environmental Research and Public Health* 16, no. 3 (January 24, 2019): 324. https://doi.org/10.3390/ijerph16030324.

Bislev, Sven. “Privatization of Security as Governance Problem: Gated Communities in the San Diego Region.” *Alternatives: Global, Local, Political* 29, no. 5 (November 2004): 599–618. https://doi.org/10.1177/030437540402900507.

Blakely, Edward, and Mary Gail Snyder. “Divided We Fall: Gated and Walled Communities in the United States"." In *Architecture of Fear*. Princeton Architectural Press, 1997.

Buettner, Dan, and Sam Skemp. “Blue Zones.” *American Journal of Lifestyle Medicine* 10, no. 5 (July 7, 2016): 318–21. https://doi.org/10.1177/1559827616637066.

Canter, David V., and Kenneth H. Craik. “Environmental Psychology.” *Journal of Environmental Psychology* 1, no. 1 (March 1, 1981): 1–11. https://doi.org/10.1016/S0272-4944(81)80013-8.

Cheshire, Lynda. “The Limits to Authority: Developer Interventions and Neighbour Problems on a Master Planned Estate.” *Housing, Theory and Society* 36, no. 1 (January 2, 2019): 92–111. https://doi.org/10.1080/14036096.2017.1383933.

Clayton, Susan, Patrick Devine-Wright, Paul C. Stern, Lorraine Whitmarsh, Amanda Carrico, Linda Steg, Janet Swim, and Mirilia Bonnes. “Psychological Research and Global Climate Change.” *Nature Climate Change* 5, no. 7 (July 2015): 640–46. https://doi.org/10.1038/nclimate2622.

Community, Nocatee. “Master-Planned Communities: Designed for Healthy Living.” www.nocatee.com, November 25, 2013. https://blog.nocatee.com/master-planned-communities-designed-for-healthy-living.

Dannenberg, Andrew L., Richard J. Jackson, Howard Frumkin, Richard A. Schieber, Michael Pratt, Chris Kochtitzky, and Hugh H. Tilson. "The Impact of Community Design and Land-Use Choices on Public Health: A Scientific Research Agenda." *American Journal of Public Health* 93, no. 9 (September 2003): 1500–1508. https://doi.org/10.2105/AJPH.93.9.1500.

Dunton, Genevieve F. "Sustaining Health-Protective Behaviors Such as Physical Activity and Healthy Eating." *JAMA* 320, no. 7 (August 21, 2018): 639. https://doi.org/10.1001/jama.2018.6621.

Durington, Matthew. "Private Cities: Global and Local Perspectives – By Georg Glasze, Chris Webster and Klaus Frantz; Gated Communities – By Rowland Atkinson and Sarah Blandy." *International Journal of Urban and Regional Research* 35, no. 1 (2011): 207–11. https://doi.org/10.1111/j.1468-2427.2010.01033_1.x.

Duhl, L.J., and A.K. Sanchez. 1999. "Healthy Cities and the City Planning Process: A Background Document on Links between Health and Urban Planning." *WHO Regional Office for Europe*, 43.

Economos, Christina D, Sara C Folta, Jeanne Goldberg, David Hudson, Zachariah Baker, Eliza Lawson, and Miriam Nelson. "A Community-Based Restaurant Initiative to Increase Availability of Healthy Menu Options in Somerville, Massachusetts: Shape Up Somerville" 6, no. 3 (2009): 8.

Freudenberg, N, Galea, S & Vlahov, D, *Cities and the health of the public*. Vanderbilt University Press. 2006.

Galbraith, Sally, Jack Bowden, and Adrian Mander. "Accelerated Longitudinal Designs: An Overview of Modelling, Power, Costs and Handling Missing Data." *Statistical Methods in Medical Research* 26, no. 1 (February 2017): 374–98. https://doi.org/10.1177/0962280214547150.

Gorman, Tom. "A Planned Community for the Gun Enthusiast." *Los Angeles Times*, December 13, 2000. https://www.latimes.com/archives/la-xpm-2000-dec-13-mn-64871-story.html.

Hajar, Rachel. "Framingham Contribution to Cardiovascular Disease." *Heart Views : The Official Journal of the Gulf Heart Association* 17, no. 2 (2016): 78–81. https://doi.org/10.4103/1995-705X.185130.

Holkup, Patricia A et al. "Community-based participatory research: an approach to intervention research with a Native American community." *ANS. Advances in nursing science* vol. 27,3 (2004): 162-75.

Hoppenfeld, Morton. "A Sketch of The Planning-Building Process for Columbia, Maryland." *Journal of the American Institute of Planners* 33, no. 6 (November 1967): 398–409. https://doi.org/10.1080/01944366708977204.

Israel, Barbara A., Amy J. Schulz, Edith A. Parker, and Adam B. Becker. "Review of Community-Based Research: Assessing Partnership Approaches to Improve Public Health." *Annual Review of Public Health* 19, no. 1 (May 1998): 173–202. https://doi.org/10.1146/annurev.publhealth.19.1.173.

Jackson, Laura E. "The Relationship of Urban Design to Human Health and Condition." *Landscape and Urban Planning* 64, no. 4 (August 2003): 191–200. https://doi.org/10.1016/S0169-2046(02)00230-X.

Jackson, Michael Mehaffy, Richard J. "The Grave Health Risks of Unwalkable Communities." CityLab. Accessed April 24, 2019. http://www.theatlanticcities.com/design/2012/06/grave-health-risks-unwalkable-communities/2362/.

Jadotte, Yuri T. "Epigenetics: The Process of Inheriting Health Disparities." In *Social Pathways to Health Vulnerability*, edited by Dula F. Pacquiao and Marilyn "Marty" Douglas, 143–56. Cham: Springer International Publishing, 2019. https://doi.org/10.1007/978-3-319-93326-9_6.

Jagosh, Justin, Paula L. Bush, Jon Salsberg, Ann C. Macaulay, Trish Greenhalgh, Geoff Wong, Margaret Cargo, Lawrence W. Green, Carol P. Herbert, and Pierre Pluye. "A Realist Evaluation of Community-Based Participatory Research: Partnership Synergy, Trust Building and Related Ripple Effects." *BMC Public Health* 15 (July 30, 2015). https://doi.org/10.1186/s12889-015-1949-1.

Lai, Lawrence W.C. "'Stone Walls Do Not a Prison Make, nor Iron Bars a Cage': The Institutional and Communitarian Possibilities of 'Gated Communities.'" *Land Use Policy* 54 (July 2016): 378–85. https://doi.org/10.1016/j.landusepol.2016.02.023.

Lantz, Paula M., Edna Viruell-Fuentes, Barbara A. Israel, Donald Softley, and Ricardo Guzman. "Can Communities and Academia Work Together on Public Health Research? Evaluation Results from a Community-Based Participatory Research Partnership in Detroit." *Journal of Urban Health* 78, no. 3 (September 1, 2001): 495–507. https://doi.org/10.1093/jurban/78.3.495.

Leeuw, Evelyne de, and Jean Simos, eds. *Healthy Cities: The Theory, Policy, and Practice of Value-Based Urban Planning*. New York, NY: Springer, 2017.

Levy and Brink, *A Change of Heart: How the People of Framingham, Massachusetts, Helped Unravel the Mysteries of Cardiovascular Disease*. Knopf, 2005.

Low, Setha. *Behind the Gates: Life, Security and the Pursuit of Happiness in Fortress America*. Taylor & Francis, 2003.

Lowe, Melanie, Claire Boulange, and Billie Giles-Corti. "Urban Design and Health: Progress to Date and Future Challenges." *Health Promotion Journal of Australia* 25, no. 1 (2014): 14–18. https://doi.org/10.1071/HE13072.

Macaulay, Ann C., Justin Jagosh, Robbyn Seller, Jim Henderson, Margaret Cargo, Trisha Greenhalgh, Geoff Wong, et al. "Assessing the Benefits of Participatory Research: A Rationale for a Realist Review." *Global Health Promotion* 18, no. 2 (June 2011): 45–48. https://doi.org/10.1177/1757975910383936.

Maller, Cecily, Mardie Townsend, Anita Pryor, Peter Brown, and Lawrence St Leger. "Healthy Nature Healthy People: 'Contact with Nature' as an Upstream Health Promotion Intervention for Populations." *Health Promotion International* 21, no. 1 (March 1, 2006): 45–54. https://doi.org/10.1093/heapro/dai032.

McKenzie, Evan. "Rethinking Residential Private Government in the US: Recent Trends in Practices and Policy." In *Private Communities and Urban Governance*, edited by Amnon Lehavi, 51–76. Cham: Springer International Publishing, 2016. https://doi.org/10.1007/978-3-319-33210-9_3.

Merzel, Cheryl, and Joanna D'Afflittl. "Reconsidering Community-Based Health Promotion: Promise, Performance, and Potential." *American Journal of Public Health* 93, no. 4 (April 2003): 557–74. https://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=9372544&site=eds-live&scope=site.

Miller, Stephen R. "Reviews and Reflections on Planned Communities," 49 Urban Law. 483 (2017).

Minkler, M. "Community-Based Research Partnerships: Challenges and Opportunities." *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 82, no. 2_suppl_2 (June 1, 2005): ii3–12. https://doi.org/10.1093/jurban/jti034.

Mitchell, Shannon M., and Stephen M. Shortell. "The Governance and Management of Effective Community Health Partnerships: A Typology for Research, Policy, and Practice." *The Milbank Quarterly* 78, no. 2 (2000): 241–89. https://doi.org/10.1111/1468-0009.00170.

Murray, Eleanor J., Ellen C. Caniglia, Sonja A. Swanson, Sonia Hernández-Díaz, and Miguel A. Hernán. "Patients and Investigators Prefer Measures of Absolute Risk in Subgroups for Pragmatic Randomized Trials." *Journal of Clinical Epidemiology* 103 (November 2018): 10–21. https://doi.org/10.1016/j.jclinepi.2018.06.009.

Newman, Susan D, Jeannette O Andrews, Gayenell S Magwood, Carolyn Jenkins, Melissa J Cox, and Deborah C Williamson. “Community Advisory Boards in Community-Based Participatory Research: A Synthesis of Best Processes.” *Public Health Research, Practice and Policy* 8, no. 3 (2011): 12.

Northridge, M. E. “Sorting Out the Connections Between the Built Environment and Health: A Conceptual Framework for Navigating Pathways and Planning Healthy Cities.” *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 80, no. 4 (December 1, 2003): 556–68. https://doi.org/10.1093/jurban/jtg064.

O’Fallon, Liam R, and Allen Dearry. “Community-Based Participatory Research as a Tool to Advance Environmental Health Sciences.” *Environmental Health Perspectives* 110, no. suppl 2 (April 2002): 155–59. https://doi.org/10.1289/ehp.02110s2155.

Pastor, Manuel, and Rachel Morello-Frosch. “Integrating Public Health And Community Development To Tackle Neighborhood Distress And Promote Well-Being.” *Health Affairs* 33, no. 11 (November 2014): 1890–96. https://doi.org/10.1377/hlthaff.2014.0640.

Patricios, Nicholas. “Urban Design Principles of the Original Neighbourhood Concepts.” *Urban Morphology* 6, no. 1 (2002): 21–32. https://miami.pure.elsevier.com/en/publications/urban-design-principles-of-the-original-neighbourhood-concepts.

Philip, Duncan. “Essay: The Practical Failure of Architectural Psychology.” *Journal of Environmental Psychology* 16, no. 3 (September 1996): 277–84. https://doi.org/10.1006/jevp.1996.0023.

Polanyi, Michael; Cockburn. “Opportunities and Pitfalls of Community-Based Research: A Case Study.” *Michigan Journal of Community Service Learning* 9, no. 3 (Summer 2003). http://hdl.handle.net/2027/spo.3239521.0009.302.

Riffin, Catherine, Cara Kenien, Angela Ghesquiere, Ashley Dorime, Carolina Villanueva, Daniel Gardner, Jean Callahan, Elizabeth Capezuti, and M. Carrington Reid. “Community-Based Participatory Research: Understanding a Promising Approach to Addressing Knowledge Gaps in Palliative Care.” *Annals of Palliative Medicine* 5, no. 3 (July 2016): 218–24. https://doi.org/10.21037/apm.2016.05.03.

Rydin, Yvonne, Ana Bleahu, Michael Davies, Julio D Dávila, Sharon Friel, Giovanni De Grandis, Nora Groce, et al. “Shaping Cities for Health: Complexity and the Planning of Urban Environments in the 21st Century.” *The Lancet* 379, no. 9831 (June 2012): 2079–2108. https://doi.org/10.1016/S0140-6736(12)60435-8.

Sallis, James F, Fiona Bull, Ricky Burdett, Lawrence D Frank, Peter Griffiths, Billie Giles-Corti, and Mark Stevenson. “Use of Science to Guide City Planning Policy and Practice: How to Achieve Healthy and Sustainable Future Cities.” *The Lancet* 388, no. 10062 (December 2016): 2936–47. https://doi.org/10.1016/S0140-6736(16)30068-X.

Sandoval, J. A., J. Lucero, J. Oetzel, M. Avila, L. Belone, M. Mau, C. Pearson, et al. “Process and Outcome Constructs for Evaluating Community-Based Participatory Research Projects: A Matrix of Existing Measures.” *Health Education Research* 27, no. 4 (August 1, 2012): 680–90. https://doi.org/10.1093/her/cyr087.

Saracci, Rodolfo. “My Memories of Walter Holland: Leader in Promoting Epidemiology Collaboration in Europe.” *International Journal of Epidemiology* 47, no. 3 (June 1, 2018): 1009–10. https://doi.org/10.1093/ije/dyy122.

Schettler, Ted.“Toward an Ecological View of Health: An Imperative for the Twenty-First Century | The Center for Health Design.” Accessed April 26, 2019. https://www.healthdesign.org/chd/research/toward-ecological-view-health-imperative-twenty-first-century.

Seifer, Sarena D., and Sarah Sisco. “Mining the Challenges of CBPR for Improvements in Urban Health.” *Journal of Urban Health* 83, no. 6 (December 8, 2006): 981–84. https://doi.org/10.1007/s11524-006-9112-z.

Singh, Sudhvir, and Jessica Beagley. “Health and the New Urban Agenda: A Mandate for Action.” *The Lancet* 389, no. 10071 (February 2017): 801–2. https://doi.org/10.1016/S0140-6736(17)30518-4.

South, Eugenia C., Bernadette C. Hohl, Michelle C. Kondo, John M. MacDonald, and Charles C. Branas. “Effect of Greening Vacant Land on Mental Health of Community-Dwelling Adults: A Cluster Randomized Trial.” *JAMA Network Open* 1, no. 3 (July 6, 2018): e180298–e180298. https://doi.org/10.1001/jamanetworkopen.2018.0298.

Stokols, D. “Environmental Psychology.” *Annual Review of Psychology* 29, no. 1 (January 1978): 253–95. https://doi.org/10.1146/annurev.ps.29.020178.001345.

Talen, Emily. “Sense of Community and Neighbourhood Form: An Assessment of the Social Doctrine of New Urbanism.” *Urban Studies* 36, no. 8 (July 1999): 1361–79. https://doi.org/10.1080/0042098993033.

Teufel-Shone, Nicolette I. “Community-Based Participatory Research and the Academic System of Rewards.” *AMA Journal of Ethics* 13, no. 2 (February 1, 2011): 118–23. https://doi.org/10.1001/virtualmentor.2011.13.2.pfor1-1102.

University of British Columbia, Institute of Health Promotion Research, Lawrence W Green, Royal Society of Canada, and B.C. Consortium for Health Promotion Research. *Study of participatory research in health promotion: review and recommendations for the development of participatory research in health promotion in Canada*. Ottawa: Royal Society of Canada, 1995.

Viswanathan M, Ammerman A, Eng E, et al. *Community-Based Participatory Research: Assessing the Evidence*. Summary, Evidence Report/Technology Assessment: Number 99. AHRQ Publication Number 04-E022-1, August 2004. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/clinic/epcsums/cbprsum.htm

Wallerstein, Nina, and Bonnie Duran. “Community-Based Participatory Research Contributions to Intervention Research: The Intersection of Science and Practice to Improve Health Equity.” *American Journal of Public Health* 100, no. S1 (April 2010): S40–46. https://doi.org/10.2105/AJPH.2009.184036.

Wandersman, Abraham, and Maury Nation. “Urban Neighborhoods and Mental Health: Psychological Contributions to Understanding Toxicity, Resilience, and Interventions.” *American Psychologist* 53, no. 6 (June 1998): 647–56. http://dx.doi.org/10.1037/0003-066X.53.6.647.

Wang, Karen H., Natasha J. Ray, David N. Berg, Ann T. Greene, Georgina Lucas, Kenn Harris, Amy Carroll-Scott, Barbara Tinney, and Marjorie S. Rosenthal. 2017. “Using Community-Based Participatory Research and Organizational Diagnosis to Characterize Relationships between Community Leaders and Academic Researchers.” *Preventive Medicine Reports* 7 (September): 180–86. https://doi.org/10.1016/j.pmedr.2017.06.007.

Webster, Chris, Georg Glasze, and Klaus Frantz. “The Global Spread of Gated Communities.” *Environment and Planning B: Planning and Design* 29, no. 3 (June 2002): 315–20. https://doi.org/10.1068/b12926.

Weiner, Bryan J., and Jeffrey A. Alexander. “The Challenges of Governing Public-Private Community Health Partnerships.” *Health Care Management Review* 23, no. 2 (April 1998): 39. https://journals.lww.com/hcmrjournal/Fulltext/1998/04000/The_Challenges_of_Governing_Public_Private.5.aspx.