Embedding Health in Affordable Housing Development: Results of the Health Action Plan Pilot Project

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Abstract

- *Objectives: Although affordable housing holds great potential for improving the health of its residents, the optimal way to incorporate health into the affordable housing planning and design process remains unknown. Working with five community development corporations (CDCs), we performed a pilot study of their approach to developing Health Action Plans, a structured process that formalizes collaboration between CDCs and public health professionals.*
- *Methods: Five CDCs were selected through a competitive process to receive financial and technical assistance to develop Health Action Plans. The evaluation used a mixed-methods approach. Data were collected through monthly Community of Practice calls, structured interviews conducted twice during the project, and prepilot and postpilot surveys to assess the CDCs' ability to implement the Health Action Plan framework in the future.*
- *Results: Four CDCs developed Health Action Plans specific to their projects. The plans varied in the health issues addressed and the health-promoting strategies considered. A fifth CDC developed generic guidelines. All CDCs gained a deeper understanding of how the built environment can impact health and found that engaging residents and understanding local health needs improved the development process. They were likely to engage public health professionals in the future and consider how their development decisions affect resident health.*
- *Conclusions: The Health Action Plan may be an important framework to guide CDCs to look at development as a mechanism to promote resident health outcomes. Work remains to be done before the creation of a Health Action Plan becomes routine, including the incorporation of additional tools and resources that bolster cross-sector collaboration.*

Background

Place matters. This simple statement reflects our growing understanding of how the social and physical environment in which people live can influence both individual and population health outcomes. Housing is one of the most important places we inhabit and has the potential to significantly impact resident health in numerous ways—from site selection to the building materials used to operations and maintenance procedures.

Architects, planners, and developers play roles in ensuring that the built environment is health promoting. Factors such as walkability, access to services, healthy food, transportation, and safety all translate to better health (Berke and Vernez-Moudon, 2014). Similarly, quality design and construction, coupled with regular building maintenance, can help to prevent illness and contribute to improved physical and mental wellbeing (Robert Wood Johnson Foundation, 2011).

Enterprise Green Communities Criteria

Enterprise Community Partners (hereafter, Enterprise) launched its Green Communities Initiative in 2004. The central element of the initiative is the Green Communities Criteria (hereafter, the Criteria), which is the nation's leading green building standard for affordable housing. The Criteria have been used to certify properties in 43 states, ensuring healthy design and building practices across the affordable housing field. Protecting human health by reducing greenhouse gas emissions and by promoting proven healthy housing design and operations practices has been an imperative of the Criteria since its inception. During its most recent update, Enterprise sought to amplify this emphasis on health, and the current version of the Criteria includes best practices in active design, health-related criteria inspired by the Health Impact Assessment (HIA) process and new standards for indoor air quality. More specifically, the 2015 update includes two process-based criteria that interweave the integrative design process from the green building sector with the HIA process from the public health sector. By so doing, the Criteria provide affordable housing developers an actionable path to considering and prioritizing resident health-promoting outcomes through design. One of these criteria is mandatory for all projects pursuing Enterprise Green Communities certification (Criterion 1.2a, *Resident Health and Well-Being: Design for Health*) and one is optional (Criterion 1.2b, *Resident Health and Well-Being: Health Action Plans*; Enterprise, 2015). Although both these criteria ask developers to consider resident health in their project designs, Criterion 1.2b requires a more rigorous association with a public health professional and community stakeholders, as well as more robust followup action. These criteria were developed through a partnership involving Enterprise, the Health Impact Project (a collaboration between the Robert Wood Johnson Foundation and The Pew Charitable Trusts), and the U.S. Green Building Council—all organizations poised to promote the comprehensive and systematic consideration of health in housing through green building certification programs.

The Health Action Plan Process

Although many affordable housing developers include health-promoting design features in their buildings, these design decisions are often made without regard to the specific health needs of a building's current or future residents. Development of a Health Action Plan (through Criterion 1.2b) calls for housing developers to collaborate with public health professionals to assess, identify,

implement, and monitor achievable actions to enhance the health-promoting features of their project and to minimize features that could present health risks. The Health Action Plan framework identifies five Resident Health Campaigns that encompass many of the health issues that disproportionately affect low-income communities—injury and accessibility, asthma and respiratory health, cardiovascular diseases, Type 2 diabetes and obesity, cancer and health outcomes related to toxin exposure, and mental health.

Based on a review of local public health data and input from residents and other community stakeholders, community development corporations (CDCs) and their public health partners create a Health Action Plan that focuses on one or more of the Resident Health Campaigns or identifies additional community concerns. Developers then work with their public health partners to design changes to the built environment that will address these concerns. Exhibit 1, taken from the Criteria, offers an example of a Health Action Plan.

Exhibit 1

Example of a Health Action Plan

Key Health Issue and Population Group	Potential Intervention	Examples of Strategies	Was This Strategy Elected? (Yes or No)	If Selected, Indicate How This Strategy Will Be Implemented	Rationale for Selecting or Rejecting This Example Strategy
High incidence of childhood asthma	Eliminate or reduce use of potential asthmagens	Prioritize the specification of hard surface flooring	Yes	Specification of linoleum for kitchens; cork flooring for bedrooms	High-impact strategy in terms of addressing health issue; also a flooring choice that reduces ongoing maintenance and replacement costs. Given the disparities in asthma rates by race, ethnicity and income in our community, this strategy will also help to address health equity.
Above-average prevalence of childhood obesity	Prioritize features that promote physical activity	Street infrastructure improvements to safely accommodate users of all ages, abilities and transportation modes	No	NA	Our project team does not have the capacity to affect local transportation infrastructure.
Above-average prevalence of childhood obesity	Prioritize features that promote physical activity	Playground	Yes	We will be including a 100-square-foot playground as part of the project.	This feature will provide a local, safe space for the families living in our development to play and socialize. Otherwise, closest playground is 2 miles from project, not easily accessible. Given the disparities in childhood obesity rates by race, ethnicity and income in our community, this strategy will also help to address health equity.

NA = not applicable.

Developing the Health Action Plan is only one step of the process. The accompanying Implementation and Monitoring Plan ensures that the strategies adopted during the design phase perform as expected and positively contribute to resident health. The Implementation and Monitoring Plan identifies design, operations, and health metrics for each strategy adopted in the Health Action Plan.

The Health Action Plan Pilot Project

Enterprise and the Health Impact Project were interested in evaluating the ways in which CDCs implemented the Health Action Plan framework and the capacities needed to achieve a development perspective anchored by promoting resident health outcomes. Funded by the Health Impact Project, Enterprise conducted a pilot project, along with a formative evaluation, involving five CDCs between July and December 2016. The purpose of the pilot was to observe and support the ways in which the affordable housing developers used public health data and forged the key partnerships necessary to create a Health Action Plan and a Monitoring and Implementation Plan. A secondary goal of the pilot was to build the organizational capacity of these developers to ensure their ability to implement the Health Action Plan framework in future projects.

Participating organizations were selected through a competitive process, with a request for proposal issued in June 2016. Twelve organizations applied and were ranked based on the following factors.

- Development project schedule.
- Thoroughness and comprehensive nature of the proposal.
- Demonstrated experience in developing affordable housing.
- Commitment to addressing resident health outcomes through housing solutions.

The five organizations selected were Grant Housing and Economic Development Corporation (California), Gulf Coast Housing Partnership (Louisiana), LUCHA (Illinois), Mercy Housing Southeast (Georgia), and SKA Marin (New York).

In addition to their geographic diversity, the development projects represented a mix of construction types (single-family, multifamily lowrise, and multifamily highrise) and resident populations (families and seniors). Projects were in various stages of the predevelopment process, with construction beginning after the end of the pilot. Each CDC received a $10,000 grant to facilitate their partnership with a local public health professional, technical assistance from national experts, and connection to a Community of Practice peer network. Participants were expected to benefit from deep technical support on a single housing project and apply the knowledge they gained going forward.

Methods

The formative evaluation took a mixed-methods approach to understand how implementing the Health Action Plan framework influenced decision making and the kinds of assistance necessary to scale adoption of the framework across the industry. More specifically, the evaluation was designed to answer the following questions.

- How did the developers identify and use local health data and resources? What evidence informed the creation of their Health Action Plans?
- To what extent did the developers partner with local health providers and public health professionals?
- Did the developers engage community stakeholders? Who were the most relevant voices at the table?
- How did the developers staff this activity and delegate roles and responsibilities?
- What amount of resources did the developers use?
- What factors in the process influenced decision making?

The pilot project also sought to increase the developers' capacity in four key areas: (1) organizational commitment to embedding health in future site design and operations decisions; (2) development of partnerships with public health professionals; (3) data collection, analysis, and interpretation; and (4) stakeholder engagement around resident and community health issues.

Data were collected throughout the pilot using both formal and informal methods. Monthly Community of Practice calls were a rich source of information on the challenges the developers faced in locating and contracting with a public health professional, engaging with community stakeholders, and interpreting the requirements of the Health Action Plan process. The open-ended agendas for these calls enabled each group to share their successes and challenges and to learn from the experiences of their colleagues. The calls, which were recorded, were well attended by the pilot participants, and staff from Enterprise and the Health Impact Project joined to provide technical assistance.

The monthly calls enabled the evaluators to stay abreast of changes in the development process and gauge their impact on completing the steps of the Health Action Plan. For example, one developer had to delay their search for a public health professional to secure project funding when a planned-for source fell through. Real-world circumstances such as this offered important insights into how developers might implement the Health Action Plan process while responding to the inherent uncertainties of affordable housing construction.

Individual structured interviews were also held with each CDC at the midpoint and end of the pilot project. Each hour-long interview involved all members of the developer team, as well as the primary evaluator and Enterprise project director. A set of common questions were used, with time allowed at the end of each interview for unstructured discussion. Interview notes were transcribed and coded to discern cross-cutting themes.

To determine the influence of the pilot project on developer capacity, a brief assessment survey was administered via an online survey at project start and, with some modifications, re-administered at project end. The evaluator created the survey and other members of the Enterprise team and staff from the Health Impact Project reviewed it. A convenience sample was used to pilot test the survey instrument. A link to the survey was sent via email to each organization. This procedure was used for both the prepilot and postpilot surveys.

One person from each CDC completed the survey on behalf of their organization; in all but one case, the same person completed both surveys. Using the Organizational Capacity Matrix (exhibit 2), which was developed for the purposes of this evaluation as a guide, the prepilot and postpilot survey responses were evaluated to determine the organizations' movement along the awareness continuum for each dimension. Data on resource expenditures, including staff and consultant time spent on the Health Action Plan process, were also collected.

Exhibit 2

Organizational Capacity Matrix

Outcome	Organizational Capacity	Partnerships	Data Collection and Analysis	Stakeholder Engagement
Consistently apply	Deep organizational commitment to health outcomes as evidenced by a formal policy and dedicated staff and other resources at organization level.	Ongoing partnership with public health professionals. Partnership resulted in health-enhancing design features or programming in at least one project.	Consistently uses health-related data to inform decision making.	Consistently engages with stakeholders around health issues.
Act	Demonstrated organizational commitment to health outcomes as evidenced by dedicated staff or project resources at project level.	Partnered with a public health professional on at least one project. Partnership resulted in health-enhancing design features or programming in at least one project.	Has used health-related data but does not do so consistently.	Engages with stakeholders on issues, but lacks experience engaging around health issues.
Intention or willingness to act	Interested in increasing health focus in future.	Interested in partnering with a public health professional.	Interested in using health-related data but is unsure how to do so.	Interested in engaging stakeholders around health issues.
Awareness	Somewhat aware of connection between health and housing.	Does not intend to partner with a public health professional.	Identified barriers to using health-related data.	Does not regularly engage stakeholders.

Results

The experiences of the five participating CDCs provided a candid look at the process by which affordable housing developers implement the Health Action Plan framework. Each organization approached the key implementation steps differently, and all but one successfully created a Health Action Plan as outlined in the Criteria. The Implementation and Monitoring Plan proved problematic for several groups, in part because of their lack of experience in monitoring resident outcomes related to building design. Despite these challenges, four of the five developers either had fully developed monitoring plans or had the basics of a plan that could be solidified by the time final building design decisions were made. The products these four developers created would qualify for the full points available in the Green Communities certification process. One developer

began the Health Action Plan process after final construction drawings were complete and missed the opportunity to create a project-specific Health Action Plan. However, their participation in the pilot resulted in design guidelines that will be valuable in the future.

Enterprise and the Health Impact Project were also interested in whether participating in the pilot had increased the CDCs' ability to implement the Health Action Plan framework in the future. As a result of participating in the pilot, each group saw an increase in their organizational capacity in at least one dimension (exhibit 2). Every group gained a deeper appreciation of how the built environment can influence resident health outcomes. Most gained the ability to partner with a health professional in the future, and several expected to continue the partnership they had formed during the pilot. The types of partners they selected varied and included healthcare providers, nonprofit public health institutes, private consultants, and in one case, a public-health-oriented architect.

Those groups that engaged community members found the experience to be a critical complement to published health data and believed that they had gained the skills necessary to conduct community meetings in the future. One developer conducted key stakeholder interviews, while another held two community focus groups. A third sought to leverage a local health fair as a way to engage the community, although this plan did not happen within the timeframe of the pilot project.

The one dimension along which most groups did not substantially increase their capacity was data collection and analysis. The developers relied on their public health partners for data collection and analysis, and most expressed that they would continue to rely on these partners for data analysis. Data used in the development of the Health Action Plans were drawn from publicly available, secondary data sources, including the American Community Survey, local health atlases, and neighborhood plans. Some groups committed to conducting an annual resident survey as part of their Implementation and Monitoring Plans but expected to engage a third party to analyze their results.

Exhibits 3 and 4 provide the results of the evaluation. Exhibit 3 offers information about each CDC, including details about their projects, the public health professionals they partnered with, the data sources used, and the ways in which they engaged key stakeholders. Exhibit 4 summarizes the findings in terms of the evaluation questions posed at the start of the pilot.

In addition to these results, several key lessons emerged that have broader implications for scaling this work. For each of these lessons, a participant quote provides additional context and meaning.

- **Participating in the pilot broadened the developers' understanding of the relationships between health and housing.** "As developers, we are not service providers, so we don't think about what kind of a room could be best for delivering services or how a space can welcome people. Before this pilot, we didn't realize that place and design can intersect to increase the health and wellness of our residents."
- **Community engagement is an essential part of the process and revealed unexpected insights.** "The community members provided a lot of input on mental health issues, perspectives on safety issues, and knowledge of who in the community was providing health assets. The residents are the experts on what they're experiencing."

Exhibit 3

Findings by Participating Community Development Corporations

Developer	Development Type	Public Health Partner	Data Sources	Community Engagement
Grant HED (Los Angeles, CA)	76 units (multifamily); 13,000 square feet commercial retail; supportive services for formerly incarcerated residents	Raimi + Associates	LA City Health Atlas; Plan for a Healthy Los Angeles; California Health Interview Survey	Community health fair (planned to occur after pilot)
Gulf Coast Housing Partnership (New Orleans, LA)	40 units (single-family detached homes)	Andrew Ryan, MPH	Local hospitals and state health officials; local crime data	Neighborhood stakeholder interviews
LUCHA (Chicago, IL)	40 units (single-family detached homes)	Illinois Public Health Institute	U.S. Census; American Community Survey; Chicago Health Atlas; Illinois Hospital Association COMP data; Illinois Department of Public Health, Mortality Files	Community focus groups
Mercy Housing Southeast (Atlanta, GA)	77 units (housing for seniors) paired with 40,000-square-foot healthcare facility	Matt Finn, American Institute of Architects, National Council of Architectural Registration Boards, Leadership in Energy & Environmental Design Accredited Professional Cognitive Design, LLC	Annual Resident Survey	Resident and other stakeholder interviews
SKA Marin (New York, NY)	152 units (multifamily)	New York City Health + Hospitals Corporation; New York Academy of Medicine	2015 East Harlem Health Profile	Community leaders, local elected officials, local established institutions, public health professionals (completed prior to pilot)

- **Partnering with a public health professional is important, but it takes time to find the right fit.** "Our organization realized that we needed somebody who knew more about health, so we reached out to the NY Academy of Medicine who had just released a report about the health of the community in East Harlem. They were happy to work with us."

Exhibit 4

Findings by Evaluation Questions

Evaluation Question	Result
How did developers identify and use existing local health data and resources? What evidence informed the creation of their Health Action Plans?	In all but one case, the public health professionals reviewed and interpreted public health data for the developers. Two developers sought community feedback to ground truth these data and to prioritize the health issues identified.
Did the developers partner with local health providers and public health professionals?	Each developer team did partner with a public health professional; in one case, this individual was a health-focused architect. The process of locating a public health professional and negotiating a scope of work took more time than anticipated.
Did the developers engage community stakeholders? Who were the most relevant voices at the table?	Three of the five developer teams met with community stakeholders, including residents, service providers, and health experts. The others had either engaged stakeholders prior to the pilot project or had a scheduled event delayed beyond the timeframe of the pilot.
How did the developers staff this activity and delegate the roles and responsibilities required?	The lead staff person for the pilot project varied among the developer teams and included an executive director, project manager, and regional director. The responsibility for drafting the Health Action Plan and Implementation and Monitoring Plans fell to the public health professional engaged by the community development corporation.
What amount of resources did developers use?	Total costs incurred by the organizations ranged from $10,000 to $15,000. These costs were mainly attributed to staff time and partnering with the public health professional. The costs associated with partnering with a public health professional ranged from $5,100 to $9,500.
What factors in the process most influenced decision making?	Two factors were most important in influencing decision making—working with public health professionals and engaging community stakeholders.

- **Health data can inform design decisions and should be considered early in the process.** "We will use health data to make design decisions when planning for a particular type of community, such as senior housing or permanent supporting housing."
- **Development of the Monitoring and Implementation Plan and the need for continued monitoring posed the greatest challenge for the pilot participants.** "How can we give ourselves some indication down the road of how this went? Thinking about design impacts has an implication for monitoring—how can we get a sense that what we did had a meaningful impact, particularly as we think about what to include in future projects."
- **To ensure success, implementing the criterion should be a seamless addition to the typical development process, rather than another requirement.** "Success is tied to the development cycle of particular projects. This effort must be institutionalized as part of the organization's mission so that this process is part of all projects from the beginning."

Limitations

This formative evaluation had several limitations. The projects selected for the pilot were all new construction projects; thus, we were unable to observe how the Health Action Plan framework might be implemented by developers rehabilitating an existing property. The timeframe for the pilot did not reflect the affordable housing development cycle. The pilot project ran for 5 months; the predevelopment stage of an affordable housing project can run much longer and is subject to changes in financing, staffing, and so on. This artificially compressed timeframe did not enable the CDCs to implement the framework fully. Lastly, the $10,000 grant provided each organization the funds necessary to engage a public health professional, which alleviated the burden on the developer of finding the necessary resources within their project budget.

Qualitative data collection and analysis are subject to additional limitations. The small sample size limits the generalizability of the evaluation results. Although extensive notes were taken at each individual interview, these sessions were not recorded, and important observations could have been omitted from the analysis. The evaluator chose to manually code interview notes and, by doing so, may have introduced bias in assessing common themes and lessons learned. In addition, the unstructured agenda of the Community of Practice calls could have prevented key issues from being surfaced. To address these threats to validity, both quantitative and qualitative data collection methods and sources were used to increase confidence in the evaluation results.

Discussion

Four of the five participating CDCs successfully completed the pilot and developed a Health Action Plan (online appendix 1, available at huduser.gov/portal/periodicals/cityscpe/vol20num2/appendix1.html). In lieu of creating a Health Action Plan, one CDC developed common space design guidelines, which they plan to implement in all future housing projects for seniors. Each plan was uniquely tailored to the specific needs of the local community and varied in the number of health issues addressed and health-promoting strategies considered. Ultimately, the strategies selected depended on the project resources available. In one case, the developer noted that creating the Health Action Plan had allowed them to seek additional funding from local philanthropy to build a rock-climbing wall requested by the youth living within their affordable housing communities.

Considering public health data was an important part of the process, ground-truthing that data with local stakeholders proved equally important. Community members may prioritize health issues differently than the data would suggest. In Louisiana, the CDC found that the greatest health concern to the community was the potential for children to drown in a canal that was near the property. That concern was not captured by any publicly available data source and was only uncovered by talking with people living near the site. In response, the developer proposed a natural barrier consistent with the site design to make it difficult for children to access the water. In Chicago, community members were most concerned about depression and anxiety and identified a lack of fellowship with neighbors as a contributing cause. This finding led the developer to consider strategies to increase opportunities for neighbors to interact, including enhancing common areas and installing bulletin boards to advertise community events.

A review of public health data may also raise issues about which residents are unaware or unconcerned. For example, the Louisiana CDC found that local data indicated high crime rates near their project site. The developer team expected to hear from the community their concerns about safety. Instead, community members did not identify crime as a problem in the area. This apparent disconnect between the data and resident perception led the developer team to interview the local police chief who better explained the data and provided additional context. Working with the police department, the developer chose to install security cameras and lights to enhance resident safety.

As these examples indicate, an essential component of the Health Action Plan framework is the need to supplement public health data with the lived experiences of community stakeholders. Doing so provides a deeper and more holistic understanding of the needs and priorities of the community. This knowledge will enable a developer to select those health-promoting strategies that will lead to the greatest gains in resident health outcomes.

Conclusions

As part of their final interviews, each CDC was asked how the Health Action Plan framework could be scaled across the industry. Responses fell into three broad categories: (1) create additional tools (for example, list of public health professionals or a reference library of approved Health Action Plans and Monitoring and Implementation Plans); (2) consider changes to the criterion to provide flexibility in creating and implementing Health Action Plans encompassing both the built environment and programs aimed at improving resident outcomes (for example, exercise classes, computer labs, and so on); and (3) drive systems change to embed health considerations in the regulatory framework governing affordable housing. Regarding this latter suggestion, one key means of changing industry practice is through the Qualified Allocation Plan (QAP) process, which awards low-income housing tax credits to development projects meeting specific selection criteria within each state. Since 1986, most of the affordable housing in this country has been developed and maintained using these credits, and 22 states currently include the Criteria in their QAPs. To increase the competitiveness of their housing tax credit applications, developers are incentivized to follow the Criteria, which now includes the Health Action Plan framework. Consequently, QAPs are an important element of the Health Action Plan scaling strategy.

Enterprise continues to look for opportunities to partner in this work and has recently launched a project involving two CDCs in the Boston area that will implement the Health Action Plan framework within the context of a property retrofit. Additional tools and templates are being created to accelerate adoption of the Health Action Plan framework, including a list of public health professionals to assist developers in finding a suitable partner and a set of standardized health outcome metrics to relieve the need for developers to create their own. This latter effort responds directly to the challenges that the CDCs experienced in developing the Implementation and Monitoring Plan. Planning for the next version of the Criteria (to be issued in 2019) will consider additional strategies to expand adoption. Although implementing the Health Action Plan framework is relatively inexpensive (especially when considered relative to an overall project budget), developers often operate on razor-thin margins, and each additional cost must have demonstrated value.

The Health Action Plan Pilot Project was successful in demonstrating the ability of CDCs to approach development in ways that promote resident health outcomes. The need for widespread adoption of health as a design consideration in affordable housing was reiterated through the findings of this pilot. Creating a Health Action Plan provides developers with a keen understanding of the health needs of their residents and enables them to address those needs through thoughtful and intentional design and development practices. Improving resident health outcomes through the built environment is a relatively new priority for the affordable housing industry. The Criteria, and particularly the Health Action Plan framework, offers developers the tools necessary to achieve this goal.

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