

# Exploring developers' understanding of health strategies in multifamily development

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**ABSTRACT:** Discussions around health are increasingly seen in design. Stakeholders across different built environments are beginning to break apart the meaning of “health”. Despite multifamily housing being forecasted to add an additional 4.4 million units by 2025 (Freddie Mac 2016), market-rate multifamily developers are largely latecomers to health conversations. This paper outlines the structure, methodology, and findings of a multi-year project supported by the Robert Wood Johnson Foundation addressing how multifamily developers understand, talk about, and execute health strategies. Using an exploratory case study methodology to address how and why (Yin 2017), three multifamily developers situated as early adopters of health strategies were recruited to better understand how they conceptualized, executed, and evaluated health strategies. In-depth interviews were held in the developers' home offices in the southeast United States, using a semi-structured interview protocol to explore standard processes, partnerships, designs, and strategies specifically related to health. Cyclical memoing, data collection, transcription, and analysis allowed for reflexivity and protocol modification as new issues emerged. Site visits, web site analysis, and clicks through national online real estate databases also contributed to triangulation and a holistic perspective of this complex problem. Results suggest that private multifamily developers focus on commonly accepted and easily marketable strategies with little application of evaluative metrics (Rider et al. 2018). When directly questioned about health strategies, participants focused on place making, community building, and social and mental wellbeing, as well as designated fitness spaces. Participants were uncomfortable discussing health strategies in terms of health outcomes through a public health lens. This research aims to suggest a shift in interdisciplinary conversations around health in multifamily real estate, ultimately supporting a more diligent adoption of health strategies in this difficult building type. These results can support stakeholders in design, development, private investment, property management, public health, community design, and policy.

**KEYWORDS:** health, built environment, multifamily development, case study, real estate

## INTRODUCTION

Private developers in the multifamily market are late to discussions about health and wellbeing strategies in their projects. With the establishment of building rating systems such as the WELL Building Standard and Fitwel, discussions of health are gaining more exposure with professionals in the design and construction industries, as well as with end users. However, these discussions primarily address office spaces, followed by built environments for special populations such as K-12 schools and environments for the aging; multifamily housing has largely been absent from both national discussions and notable implementation. With the increase in urban living and a growing population, multifamily projects are anticipated to add an additional 4.4 million units nationally by 2025 (Freddie Mac 2016). Given this projected boost combined with increased time at home due flexible work hours, homeschooling, and retirement, the importance of supporting health and wellness in home environments cannot be overlooked. Urban Land Institute's (ULI) Building Healthy Places Initiative supports this idea by emphasizing the creation of communities through development, at the hands of the developer. Funded by the Robert Wood Johnson Foundation (RWJF) and Academy Health under RWJF's Culture of Health Initiative, this paper explores how a select group of leading

multifamily developers in the southeast United States perceive, understand, discuss, and implement health strategies in their projects.

**1.0. BACKGROUND**

The adoption of different movements in the building industry, like the green building movement, have a curve of engagement that takes time to foster. LEED was officially established in the late 1990s but took years to hit its stride and become popular practice, changing both conversations and the market around green building. Because of the journey with, and adoption of, green building rating systems, the industry is slightly quicker overall to welcome rating systems addressing a topic related closely to sustainability: health. As illustrated in Figure 1, the green building movement serves as a precedent to the healthy building movement, with important parallels including market transformation and purpose. This research has a focus on understanding the multifamily real estate perspective, which is considerably different from other project types addressing health such as workplace, schools, or design for aging. In those program types, the argument for working toward a healthier population is not difficult. Multifamily real estate, on the other hand, has such a diverse population inhabiting the spaces for widely different timeframes, making developers more unwilling to take innovative risks in their decision-making around health. Despite health outcomes being linked to home environments, as reviewed below, health strategies for multifamily projects are difficult to identify.

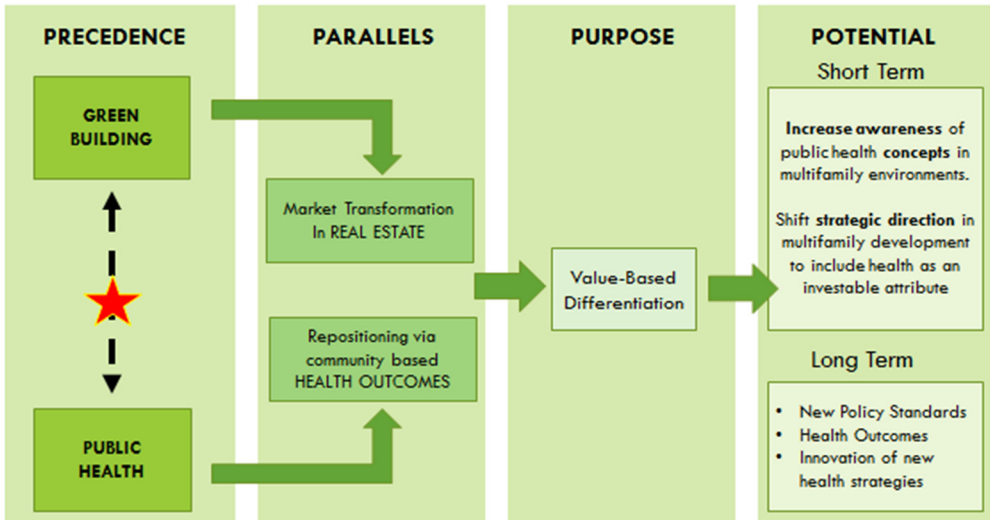


Figure 1. Area of interest

This research study explores the unique business approach to multifamily residential projects overlaid with considerations of outcome-driven health strategies. The aims for the research include increasing awareness of outcome-based health concepts and strategies, while helping to shift the direction of multifamily development to think of health as an investable attribute. Long term, the findings can contribute to policy standards, either at the company or jurisdiction level, as well as connect health outcomes with multifamily design strategies.

**2.0. FRAMEWORKS AND RESEARCH QUESTIONS**

Rooted in the built environment, this research borrows the Robert Wood Johnson Foundation’s (RWJF) Culture of Health Action Framework to provide structure for the inquiries and to begin to reach toward a new understanding of knowledge around health in the built environment.

**2.1. Public health approach**

The American Public Health Association (APHA) defines public health as “promot(ing) and protect(ing) the health of people and the communities where they live, learn, work and play. ...those...working in public health try to prevent people from getting sick or injured in the first place. We also promote wellness by encouraging healthy behaviors.” (APHA 2018) Achieving this requires an understanding of the critical health outcomes linked to built environments. Much of the research in this area focuses on access to public green spaces - such as parks, sporting fields, greenways, trails, community gardens, and nature conservation areas (Wolch et al. 2014), as well as transportation systems - such as infrastructure that supports bicycling, walking, and use of public transportation. Evidence shows that children and adults with more access to parks and recreational facilities are more active than those with less access (Roux et al. 2007). Additionally, attractiveness and size of public open space encourages more physical activity, especially if perceived as aesthetically pleasing with minor traffic, sidewalks, trees, and nearby retail shops (Wolch et al. 2014). Proximity and use of public green spaces have also been inversely related to weight gain. Children, for example, who lived in greener neighborhoods experienced less excess weight gain than children in neighborhoods with less green space (Bell et al. 2008). Transportation related research has found that walking- and cycling-friendly cities are associated with more walking (Owen et al. 2007; Salis et al. 2015), less obesity (Creatore et al. 2016), and less sedentary time in cars (Frank et al. 2004). Additionally, transit-associated walking links to increased physical activity, with one study revealing that transit walking contributed to meeting daily levels of physical activity (Freeland et al. 2013).

Additionally, studies have shown that some environments have salutatory effects on mental health and well-being. These salutatory settings can include: legible places; attractive, well-maintained, safe places; places with appropriate contact with other people, and contact to green space (Sullivan & Chang 2011). Day (2008) reported that places that provide views, or direct exposure to, trees and other forms of vegetation are associated with an increased sense of well-being, higher levels of self-reported peace and quiet, and greater satisfaction with home and neighborhood environments. Similarly, exposure to open green spaces and tree canopied areas are associated with reduced levels of stress (Grahn & Stigsdottir 2003).

Where and how populations achieve recommended healthy lifestyle behaviors are increasingly reliant on immediate home environments. For example, research indicates that during an average week - including weekends and weekdays - people are spending more time within their home domain. Not only is this true for all ages, but the research indicates that home environments are a primary venue for healthy behaviors, especially physical activity. A study of 6 to 11 year olds found that youth spend 47.2% of their day at home, accounting for 43.6% of their moderate and vigorous physical activity (MVPA) (Tandon et al. 2014). Adults were found to spend 51.3% of their time within 125 meters of home, accounting for over 20 percent of their MVPA (Hurvitz et al. 2014). Moreover, as technological capabilities expand, the workforce will increasingly conduct work from home. In 2016, nearly a quarter of employed persons did some or all of their work from home and forty-three percent of workers with an advanced degree performed some work at home (American Time Use Survey 2016). While work, school, and extracurricular environments are important determinants in health behaviors, the home environment must also be considered. Provided that multifamily housing serves as both housing and a community domain (with indoor and outdoor communal areas), the way in which these developments are designed has great potential to deliberately encourage healthy behaviors.

## **2.2. Culture of Health Action Framework**

This research adapts the Culture of Health Action Framework developed by the Robert Wood Johnson Foundation. Introduced in late 2015, and building on their Culture of Health vision from 2014, the framework focuses on empowering action through data being gathered across sectors, industries, communities and populations (RWJF 2015). The framework “translates the broad range of sectors and people involved in building a Culture of Health into four interconnected Action Areas.” (RWJF 2015) By outlining Action Areas, Drivers, and Measures,

RWJF provides a roadmap for outcome-driven action toward healthier communities. This project's adaptation of the framework to the multifamily field is shown in Figure 2.

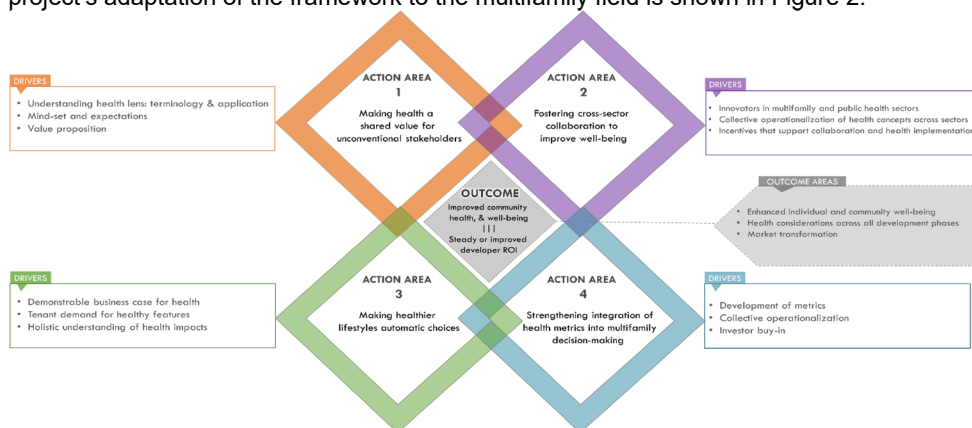


Figure 2. Adapted research framework (RWJF, 2015)

## 2.2. Research questions

The scope of the larger research project addressed the conceptualization of health, company mission, organizational structure, differentiation in the market, company evaluation metrics, assessment scales, decision-making processes, market trends, use of evidence-based data, internal health discussions, and investor relationships from the private developer's perspective. This paper will particularly focus on the fundamental question of how these private developers working in different levels of the market (affordable housing, market-rate, high-end) conceptualize and discuss health strategies in their internal conversations and design processes.

**RQ 1:** How do private developers define health strategies?

In other words, for those developers that identify as early-adopters of health and wellness, what terms are used to talk about these issues during design development? Are health and wellness goals explicitly established, and how are these communicated to the design team? Do these definitions and conversations change as rent command changes (mixed income, market-rate, or luxury)? This research question focuses on the fundamental issue of how collaborating disciplines might understand health differently within the multifamily market, making the larger goal of healthier populations as outlined in public health frameworks more difficult to achieve.

**RQ 2:** What strategies to support health and wellbeing are being considered and included, and why, in the design and construction of multifamily development projects?

This question specifically addresses the engagement of health and wellness strategies throughout the design phases of the project and ultimately the operationalization of these strategies in the final project. Which design strategies are being considered, and which are actually implemented, in multifamily projects that claim to work toward healthier residents and communities? This question starts to pick apart potential relationships between building strategies particular to multifamily projects from the design side with possible health outcomes from the public health perspective. Together, these questions seek to establish a solid foundation from which to strengthen the relationship between multifamily design and public health.

## 3.0. METHODOLOGY, DATA COLLECTION, AND ANALYSIS

Given the specific research questions of *How* and *Why* early-adopters in multifamily development are addressing health and wellness in their developments, an exploratory case

study approach was used. While mixed methods were used to gather data in the larger study, interviews were the primary source of data collection for these particular questions.

### 3.1. Case study framework and participant sample

The case study methodology is viewed by Yin as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context” and focuses on questions addressing *How* and *Why* (Yin 2017). Creswell states that a case study is an in-depth analysis of one particular case, or a small set of cases, bounded by a particular time and activity (Creswell 2014). An exploratory case study investigates particular phenomena that lacks significant preliminary research, particularly in terms of testable hypotheses (Streb 2012). Streb (2012) also notes that these types of exploratory case studies frequently serve as a preliminary step toward causal or explanatory research in a field where these particular topics have not been clearly detailed or explored, while providing the research team flexibility with the research design and data collection.

Because interest area at the intersection of health and multifamily development is very particular, a specific, purposeful sample of participants was necessary to support the in-depth exploration needed to uncover the desired data.

*...purposeful sampling involves selecting information rich cases for study in depth, cases that offer insights into issues of central importance to the purpose of an evaluation.... Small purposeful samples yield in-depth understanding and insights rather than empirical generalizations. (Patton 2005, 343-344)*

Two developer partners were identified early based on their self-proclaimed, cutting-edge approach to healthy communities. One was a market-rate private developer in North Carolina, and one was an affordable housing community development organization in Florida. Both agreed to participate before the funding application was submitted, and was a partner participant from the beginning. To test the interview protocol prior to lengthy interviews in the offices of the participants, a local developer was engaged for a pilot interview. This developer has a reputation for quality and community-making, but not necessarily health engagement. The conversation during the pilot revealed that the third developer was actually considerate of health strategies in their projects, and was added to the study sample for a total of three partner developers.

### 3.2. Data collection

To address the research questions for this study, data needed to be rich and detailed. Because of the need to gather an in-depth understanding of participant developers' experiences, interviews were used as the primary data collection strategy (Rubin & Rubin 2012). To allow the participants to share their thoughts and experiences freely, a semi-structured interview protocol was used. The semi-structured interview is a data collection method where the researcher team can ask participants a sequence of predetermined but open-ended questions (Ayres 2012). A series of questions were crafted to address issues ranging from company mission, to speak to the pervasiveness of the importance of health, to assessment scales, market trends, and more. The protocol was broken down by interview session to strategically frame the order and scaffolding of the discussions, and the same protocol was used with each participant developer. For each interview session, developers were asked to have a broad range of participants engaged from different sectors of their business including marketing, sustainability, design managers, leadership, construction administration, and finance. While not all could attend all eight hours of interviews, a diverse group participated in the sessions at each office.

Two rounds of interviews were held; the first series of interviews was completed in the fall of 2017, while the second was completed in the spring of 2018, after the data from the first round of interviews was preliminarily analyzed. The overall timeline for data and analysis can be seen in Table 1. The goal of the first round of interviews was to gather initial data for coding and theming, with the second round of interviews to provide a time for emergent follow-up questions as well as engage in member-checking of initial findings. However, the second round of interviews in the spring were limited to four hours in one day.

Two days were allocated for each of the partner interviews in their home offices. The first four-hour interview session was held on the afternoon of Day 1, focusing on issues such as company mission, organizational structure, perceived differentiation in the market, and market trends. The second four-hour interview session was held on the morning of Day 2, and became more specifically focused on questions of health, addressing evaluation metrics, assessment scales, use of evidence-based data, internal health discussions, and investor relationships. The gap in interview sessions was purposeful, allowing the research team to review the first session in the evening. This review time between the first two interviews enabled the research team to engage simultaneously in data collection and analysis to inform the next round of data collection, as frequently seen in qualitative research (Charmaz and Belgrave 2015). The pilot interview session was held with the first developer in June 2017, with the second in July 2017 and the third in September 2017. All follow up interviews were held the following spring.

**Table 1.** Data collection and analysis timeline

	Grant Year 1 (partial)						Grant Year 2 (partial)								
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug
Partner 1 (Pilot) - Round 1	*														
Partner 2 - Round 1		*													
Partner 3 - Round 1				*											
Partner 1 (Pilot) - Round 2									*						
Partner 2 - Round 2									*						
Partner 3 - Round 2									*						
Memoing/ Analysis															
Transcription															
Initial coding															
Themeing															
Theme synthesis															
Writing/ Dissemination															

### 3.3. Data analysis

Research team members used memoing during the interviews. According to Birks, Chapman, and Francis (2008), memos can help to clarify thinking on a research topic, provide a mechanism for the articulation of assumptions and subjective perspectives about the area of research, and facilitate the development of the study design. This process allowed the researchers to be reflexing in the data collection process, facilitating a deeper understanding of the data in context. These memos were reflected upon between interview sessions, as well as throughout the overall data analysis process to help anchor the researchers to the context during data theming and synthesis.

All interviews were recorded with multiple devices and sent to a third-party for transcription. Once transcribed, the documents were read through and coded for emergent themes by different members of the research team. Before starting the coding process, the team met together and jointly coded one transcript, establishing guidelines and expectations for processes and themes. The interdisciplinary team had representatives from architecture, public health, urban planning, real estate, and business. At least two team members coded each transcript, and the same two team members reviewed all of the transcripts to ensure consistency across codes. The data collection and analysis timeline is shown in Table 1.

Initial open coding was used to establish the general categories of interest observed in the discussions. Once the initial coding was completed, those codes were then put through another round of analysis to establish themes found within the codes, both within the cases (individual developer participants) and between the different developer participants.

### 4.0. FINDINGS AND DISCUSSION

The coding and theming of the interviews established a series of common terms discussed when asked about health. These themes were labeled “Amenity Buckets” based on the way in which developers spoke about health strategies, and can be seen in Table 2 (Rider et al. 2018). These Amenity Buckets were then grouped into Categories of health, as described by the partner developers, which were Mental, Nutrition, Physical, Safety, Social, and Wellbeing.

**Table 2.** Codes (Amenity Buckets) and Categories

<i>Collapsed Amenity Buckets</i>	All	Mental	Nutrition	Physical	Safety	Social	WB	Grand Total
								4
Art						1	11	12
Bikeable				13		1		14
Biophilia		1		1			14	16
Connectivity				6	1			7
Convenience				2	1	1	16	20
Dogs				2		4	6	12
Fitness Center				30			1	31
Fitness Programming	1			3		1		5
General	15	1			1		3	20
Greenway				6				6
Healthy Food			17			4	5	26
Indoor Comfort				2			10	12
Outdoor Play or Fitness				6				6
Place Making	3	1		1	2	25	28	60
Pool						3	4	7
Public Transit				6		1	3	10
Security					7		1	8
Walkable				15	1		1	17
WELL Building Certification	12						5	17
Yoga	2			1			2	5
<b>Grand Total</b>	<b>33</b>	<b>3</b>	<b>17</b>	<b>94</b>	<b>13</b>	<b>41</b>	<b>110</b>	<b>315</b>

The most frequent concept addressed in the interviews was Placemaking with 60 instances, relating back to ULI’s Building Healthy Places Initiative (ULI 2019), of which Creative Placemaking is a subset. Similarly, this approach is supported by the literature reviewed about salutatory effects on mental health and well-being, including issues of legible places; well-maintained, safe places; places for contact with other people, and connection to green space (Sullivan & Chang 2011). The second most frequent mention was Fitness Center, which is an obvious connection to health, with approximately half of the mentions of Creative Placemaking at 31 instances. Following these, there are a group of codes with between 17 and 26 instances of mention: Healthy Food [26], Convenience [20], General [20], Walkable [17], and WELL Building Certification [17]. Of the Categories, Wellbeing was the most frequently cited with 110 instances, followed by Physical health with 94 instances.

Given the data, private developers largely define health strategies in terms of amenities, and most frequently relate the idea of health to placemaking. Participant developers discussed placemaking as not just as a marketing strategy, but more as an intentional method of community development to facilitate social interaction and support between the residents, linking back to literature around access to public green spaces including parks, fields, greenways, trails, and transportation systems (Wolch et al. 2014). They all believe that these placemaking strategies contribute to mental health and wellbeing, explaining the alignment between the leading instances of Placemaking and the instances of Wellbeing. Similarly, there is alignment between the emphasis of Physical health and Fitness Centers.

Overall, evidence-based strategies to directly support health and wellbeing are not being considered for multifamily projects. Instead, the strategies that are being considered by the participants are more general and common, such as fitness centers and swimming pools. Similarly, social spaces are included as mental health and wellbeing support, but without

reference to literature or outcomes. Other health strategies that are considered and included in participants' projects are strategies found in green building rating systems such as LEED (USGBC 2019) and the National Green Building Standard (NGBS 2019), such as daylight, views, and low-VOC materials.

The selected strategies are not yet connected to measurable health outcomes, nor are they strategically included for increased levels of health. They are included as amenities, not fundamentally as health strategies. Developers feel that they are providing desirable amenities, like fitness centers and swimming pools. Participants also indicated that they viewed health at the community level, and something that they were providing access to, but not that they were necessarily responsible for supporting directly in their projects. Their claim to health through placemaking was seen through both community building and connectivity. While providing spaces to socialize within their developments, they also sought to provide access to greenways, health facilities, fresh food, and entertainment.

## CONCLUSION

Multifamily developers, particularly those in market-rate housing, are uncomfortable discussing and implementing strategies specifically addressing health. Instead, they consider health in terms of amenities and resident satisfaction, which they feel improves mental health through happiness and convenient lifestyles. This anecdotal approach is likely the result of little awareness of or access to evidence regarding multifamily design strategies and outcomes for health. The lack of this easily-accessible evidence thereby limits their understanding of how specific health strategies can not only benefit resident health over time, but can lead to improved market performance for their investments. For example, because developers are driven primarily by the bottom line, including lease-up rates and rent command, evidence-based health strategies need to be related to a return on investment. Ultimately, developers need clear guidance as to what strategies qualify as health promotive, how these strategies relate to both community-wide and tenant health outcomes, and case studies addressing attractive financial incentives and returns for engaging these strategies. Effective guidelines for increased health strategies in the multifamily sector will require a collaborative approach among public health and real estate. To catalyze success, health conceptualizations must be commonly understood, holistically, across these disciplines.

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