



The Drive Toward Healthier Buildings: The Market Drivers and Impact of Building Design and Construction on Occupant Health, Well-Being and Productivity

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Executive Summary

Health and wellness are critical issues affecting today's society, economy and individuals' quality of life. Professions can play a role in helping mitigate health hazards through healthy design and construction practices in our nation's homes, schools, hospitals, workplaces and other buildings. However, in order to fully educate the public and convince owners to make investments, medical professionals need to fold recommendations about their patients' environments into their care policies, and today, doctors are overlooking the connections and advantages healthy design, construction and operations of our nation's buildings can have on the public's health.

Turning Medical Practitioners Into Advocates

Homeowners today typically look to friends, family, peers and their doctors for advice on healthy home and building decisions. The challenge is that they are not looking to the industry, which is most well-informed of the ways homeowners can improve the physical environments they occupy. Therefore, because physicians have the second highest influence on these decisions, it is critical that they become informed advocates of healthy design, construction, and operation and maintenance decisions.

GENERAL AWARENESS OF THE LINK BETWEEN HEALTH AND BUILDINGS IS LOW

Today, the medical professionals surveyed in this new study—general practitioners (GPs), pediatricians and psychologists/psychiatrists—do not make the connection between health and the built environment. In fact, only one of the three groups, pediatricians, has a majority that sees the connection. GPs are the least aware, with only 32% making the connection.

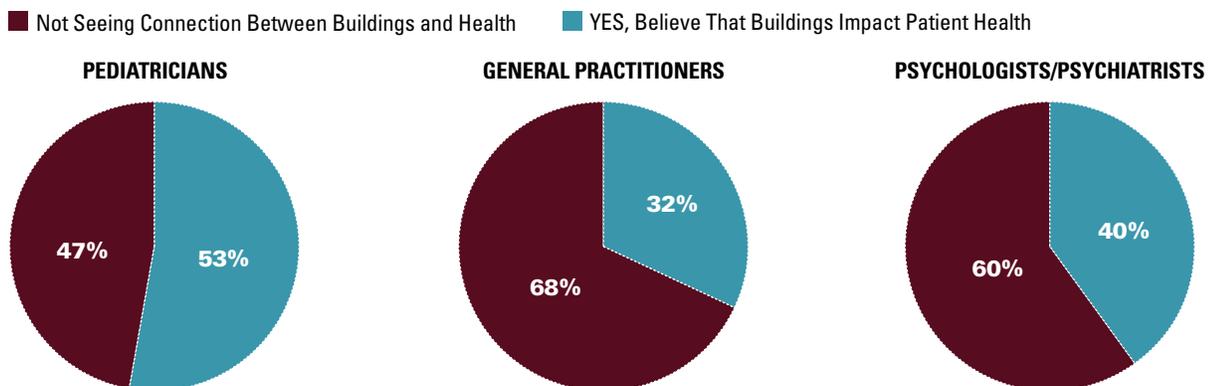
DATA EXPLAINING THE LACK OF AWARENESS

Several data points help explain why these professionals may not be making the connection.

- **Only 15% receive any information on the connection.** Therefore, physicians who make the connection do so with information they seek out on their own.
- **Also, most of the most serious health risks factors for adults and children/adolescents in the U.S. reported by physicians do not align with the types of information that they ask their patients about.** The issues they list of most concern are poor diet, lack of exercise, obesity, poverty, smoking and chronic stress. However, when they talk to their patients, these medical practitioners are not making the connection of how building decisions can help alleviate or help the patient deal with these significant health issues. Instead, the medical practitioners ask questions at a more specific level when they ask about patients' environments, focusing on chemicals and mildew, which are important to health, but do not as significantly impact the overall health issues that physicians believe are plaguing Americans.

Medical Professionals' View on Connection Between Buildings and Patient Health

Source: McGraw Hill Construction, 2014



OVERCOMING CHALLENGES

Though it is clear that medical practitioners need to be more educated on how building design, construction, and operation and maintenance decisions can affect their patients’ health, the solution is not as simple as providing more information. It is important to understand how these practitioners currently get information, as well as their culture and receptivity to additional information.

- **Information Sources: Medical journals are the main source of information for the few physicians who get information on the connection between health and buildings.** Considering these articles are likely to be submitted by their peers, rather than the design and construction community, this is a hurdle the industry will need to address. **Other information sources used—government resources and health-focused nonprofit organizations—offer more opportunity for the industry to form collaborative partnerships** that provide the necessary information in formats most familiar to medical professionals.
- **Receptivity to More Information:**
 - **More than a fifth (22%) say that more information would likely not change what they do today.** To face this challenge, the industry must focus on those physicians who are most receptive to getting more information.
 - **Though only a small portion say more information would have a strong/very strong impact on the advice they deliver (17%) overall, there is a good share (57%) that say it would likely have some impact.** This means there is receptivity in the market. The industry just needs to find a way to reach them—and in a format that is easy to digest. Medical professionals today face information overload, as well as changing information around insurance rules and elements of the Affordable Care Act, so the industry must convey information in as simple and clear a fashion as possible.

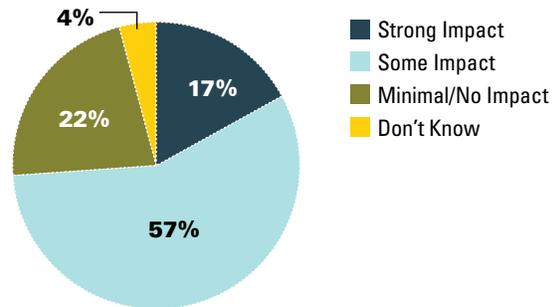
Encouraging the Industry to Continue to Increase Attention on Creating Healthier Environments for Occupants

CURRENT AND FUTURE EXPECTED IMPACT OF HEALTH ON DECISIONS

Many findings in the report show that industry professionals in both the residential and nonresidential sectors are aware of health as an important factor to incorporate into their design and construction activities.

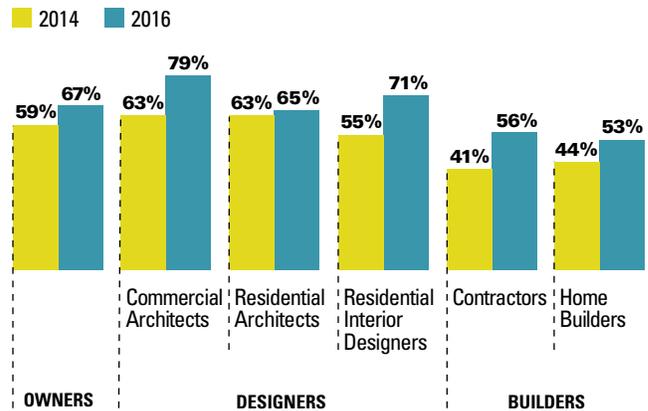
Impact Additional Information on the Connection Between Buildings and Health Would Have on Advice Offered to Patients

Source: McGraw Hill Construction, 2014



Impact of Buildings on Occupant Health Has a High Influence on Firms’ Design and Construction Decisions (By Industry Player Type)

Source: McGraw Hill Construction, 2014



- **As can be seen in the chart above, all the players expect health to have a higher influence on their activities over the next two years.**
- **Firm size and location do not affect these findings, but green level of involvement does. Firms that do more green work are also more likely to report the influence of health on their decisions.**

FACTORS CRITICAL TO DRIVE MORE INVESTMENT IN HEALTHIER BUILDINGS

In order to see this growth come to fruition, it is critical to encourage investment in healthier building practices and products by addressing the key industry drivers.

In many ways, the drivers align for the nonresidential

and residential sectors, with owner demand being the highest for both sectors.

Recommended actions that would trigger increased activities in both sectors:

- **Increase demand by creating greater public awareness of the health impacts of buildings. (This is also critical for the medical professions, as noted on pages 4 and 5.)**
- **Focus on better tools and methodologies to collect data and measure health impacts—and then share that data with the industry, particularly owners.**
- **Encourage codes and incentives to emphasize healthier building practices, both residential and nonresidential.**

USE GREEN BUILDING PRACTITIONERS AND REFRAME GREEN OUTCOMES TO EMPHASIZE HEALTH OUTCOMES

Across the board, firms doing more green work are also more invested in healthy building decisions. Not only do they report it having more influence on their decisions, they also report using more healthy building practices and products, measuring health outcomes more frequently and using a wider variety of information sources to keep themselves educated on the connection.

These greener firms can be champions for the market, particularly if they reframe their green projects from an

occupant-focused perspective. For example, several of the projects profiled in this report for their healthy aspects are also green projects that address energy, water, operations and resource efficiency.

However, the term “high-performance buildings” is often interpreted as relating to energy, water and operating efficiency. Therefore, we need to reframe the terms green and high performance in order to better capture the health and productivity advantages—and to reflect where companies really need performance gains. In fact, companies spend at least 10 times more on their employees than they do on utility or operating costs. We need to encourage and support organizations that are taking an active role in redefining these terms in order to be more reflective of the true costs and outcomes of our building decisions.

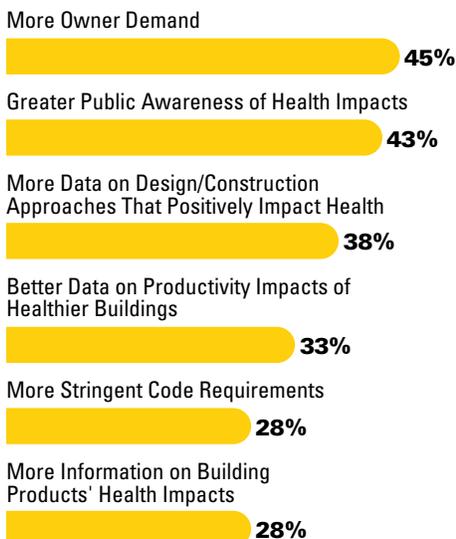
Motivating Owners to Make Healthy Building Investments

There are many reasons for owners to invest in healthy buildings, but the benefits to the occupants of buildings must be clear and trackable. Additionally, the industry should focus on the factors they most value.

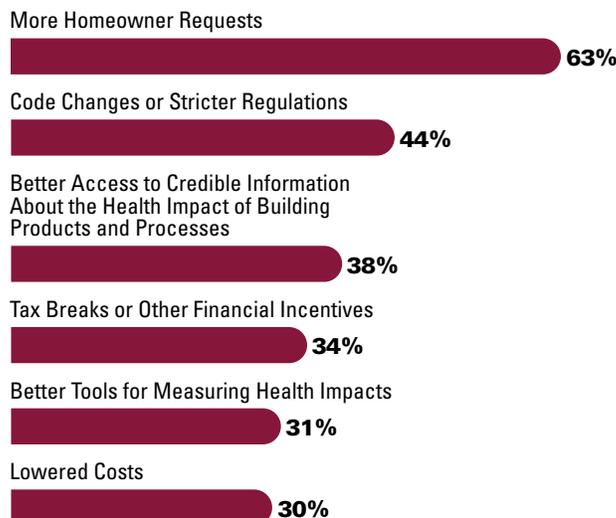
Top Drivers Encouraging Greater Industry Focus on Health Impacts in the Next Two Years (For the Nonresidential and Residential Building Sectors)

Source: McGraw Hill Construction, 2014

NONRESIDENTIAL



RESIDENTIAL



BENEFITS NEED TO BE BETTER UNDERSTOOD AND MORE FREQUENTLY MEASURED

Nonresidential building owners report many benefits of healthy buildings, most notably:

- 47% report healthcare cost reductions, ranging from 1% to 5%. However, most (52%) don't know.
- 66% report improved employee satisfaction and engagement.
- 56% report lower absenteeism at varying ranges, but the remainder doesn't know.
- 21% report higher employee productivity, though an overwhelming 56% don't know.

The high percentage that doesn't know suggests more measurement needs to occur—and that better tools are needed to do so. This is critical for the industry to address since owners' human resource executives report that greater worker productivity, lower absenteeism, reduced company healthcare costs, and improved employee satisfaction and engagement would contribute strongly to ROI and encourage more investment.

The same challenge arises on the residential side, with nearly half of those professionals reporting that they do not get reports from homeowners on the ongoing impact of their homes on their health.

SOCIAL ENGAGEMENT AND COMMUNITY AMENITIES MAKE A DIFFERENCE

In corporate offices, owners are interested in a number of features in the spaces they lease.

In particular, it is notable that spaces for social interaction are important. 66% currently consider this in leasing decisions today, and 75% expect to consider it in the future. The design community recognizes this need, with 70% expecting to engage in this activity by 2016. These are the kinds of design decisions that reflect the changing ways that spaces need to be designed in order to address productivity for a generation that does not work the same way as those that preceded them.

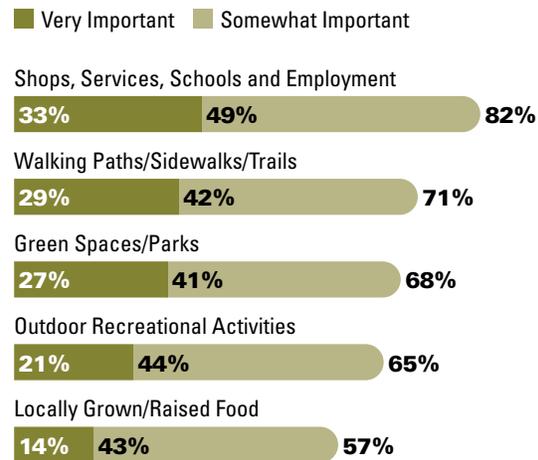
For the homeowner, there are community attributes that impact the decisions on where to live. The chart at right shows what factors are very important to them. It is notable that these were all underreported by home builders and residential architects, revealing a disconnect between what the industry offers and what homeowners value. The industry needs to recognize these needs.

What's Next?

This study is an important first step at connecting the

Importance of Home's Proximity to Community Amenities in Decision of Where to Live (According to Homeowners)

Source: McGraw Hill Construction, 2014



threads between the differing opinions of both the industry engagement and putting these healthier practices into action and the influence agents—homeowners, medical practitioners and human resource executives—who can encourage adoption of these practices. However, it is only the first step.

This project was limited by scope and budget so we focused on buildings as a first step. This study confirmed that building design, construction, operations and maintenance decisions are indeed critical in helping improve the well-being of occupants. It also demonstrated how interconnected buildings are with the communities around them. It is important that the next stage of research examines how urban design and planning can help compliment and increase the benefits of building decisions on human health and well-being.

This study also intentionally focused on medical professionals who actively treat patients because of their direct influence on the public. However, considering how much information they lack, it will clearly be important to incorporate public health, medical policy and the research community into the solution.

We see this report as the first step in an ongoing set of research investigations because there is no more important issue than encouraging the investment in healthier buildings and getting medical professionals to recognize the role the construction industry can play in improving human health and productivity.