

PERKINS+WILL

# Research Journal

+7  
2014 / VOL 06.02



www.perkinswill.com

## 05.

### A VISION AND PLANNING FRAMEWORK FOR HEALTH DISTRICTS OF THE FUTURE

**Basak Alkan, AICP, LEED AP,** *basak.alkan@perkinswill.com*

#### ABSTRACT

The U.S. healthcare industry is undergoing the transformation of a century. The move away from the fee-for-service payment model and the Affordable Care Act are driving a paradigm shift towards disease prevention and population health management with services increasingly delivered in lower-cost, community-based settings.

Redefining healthcare typologies and planning methods is an integral part of this transformation. An increasing number of hospitals and health systems are already joining forces and partnering with community organizations to invest in programs that are intended to keep citizens healthy and out of the hospital. Many of these initiatives, however, fall short of addressing the socio-economic and environmental root causes of unhealthy behaviors, which are impacted by the planning, design, and operations of health facilities.

This research paper proposes a new planning paradigm for healthcare called Health District Planning. A Health District is a place where investments are targeted to improve population health outcomes and to inspire healthy behaviors. Best practices from various case studies, and related evidence from public health and healthy community design research is synthesized into a four-part framework—the 4 P's of Health District Planning: (i) population health, (ii) place, (iii) partnerships, and (iv) performance. The goal is to offer a guideline for planning the Health Districts of the future.

**KEYWORDS:** health districts, planning, healthcare design, population health outcomes, healthcare reform, healthy community design, sustainable urbanism

#### 1.0 INTRODUCTION

The U.S. healthcare industry is undergoing the transformation of a century to address the tremendous challenges brought on by demographic and economic changes. The “silver tsunami” of aging Baby Boomers and the growing population of chronic disease patients continues to raise demand for healthcare, while government reimbursements for those services continue to decline. Hospitals and health systems are being asked to do the seemingly impossible: to deliver better care with new technologies for more people and less money.

The 2010 Patient Protection and Affordable Care Act (ACA) has amplified these challenges by increasing the number of Americans covered by federal and state insurance programs, and expanding rights, benefits, and

protections to insured Americans. The ACA has also brought forth regulatory mandates and incentives to address systemic shortcomings in quality, outcomes, cost and equity that continue to plague the U.S. health care system in spite of its global recognition as a leader in healthcare science and technology<sup>1</sup>. As a result, the business of healthcare is changing and more systemic changes are expected to follow suit in the following decades<sup>2</sup>. The National Commission on Physician Payment Reform, a bipartisan senate organization, has prepared a plan to phase out of the fee-for-service model by 2020. The very definitions of healthcare, medical education, and medical research are also being reformulated to align with changing priorities and new technologies. These structural shifts are creating new performance criteria that are impacting the way we plan for

and design our medical facilities and campuses. It is a time of tremendous change, but also an opportune time for healthcare institutions to plan for the future.

This research paper proposes a new planning paradigm for healthcare called Health District Planning. A Health District is a place where investments are targeted to improve population health outcomes and to inspire healthy behaviors. The term “health” is used here instead of “medical” because a medical campus, by definition, is focused solely on the treatment of sick patients. A Health District, by contrast, is a hub that integrates and links services across the continuum of care. Similarly, the term “campus” is replaced with “district” because a campus, by its definition, is a separate entity from the surrounding community. A health district, by contrast, is integrated into the surrounding community with public infrastructure, distinguished from its context only by its specific uses and character. In Section 2.0, Health District Planning goals are identified by drawing on changes in the healthcare industry. An expanded concept of health is introduced to make a case for the alignment of medical facility and campus design with the health needs of the entire community. In Section 3.0, the vision for Health Districts is detailed by looking at best practices from various case studies, and related evidence from public health and healthy community design research. Lessons learned from best practices are synthesized into a four-part framework—the 4 P’s of Health District Planning: (i) population health, (ii) place, (iii) partnerships, and (iv) performance. Finally, Section 4.0 evaluates the effectiveness of this working framework as applied to ongoing planning work in Baton Rouge, Louisiana, where a complete Health District is being planned from scratch. The potential of a Health District lies in any medical campus or facility.

## 2.0 THE LOST “HEALTH” IN HEALTHCARE

The U.S. is experiencing a “health crisis” with growing rates of obesity and related chronic diseases seen in adults and children. Americans rank towards the bottom of health indicators when compared to peer nations while spending, on average, two-and-a-half times more on healthcare<sup>3,4</sup>. Our healthcare spending, in other words, has not translated into better health for citizens.

This seeming paradox is explained simply by analyzing what makes one healthy. Public health research shows that individual behaviors such as smoking and lack of physical activity—and the socio-economic and environmental factors that influence those behaviors—are greater contributors of overall health than genetics or access to healthcare<sup>5</sup>. Clinical care (or healthcare) accounts for

no more than twenty percent in health outcomes (Figure 1), yet consumes almost ninety percent of health spending in the U.S. Majority of this spending goes to treat preventable chronic diseases that are caused by unhealthy behaviors<sup>6</sup>. The U.S. health crisis, and the crisis of the U.S. healthcare economy, in other words, are both fundamentally linked to a failure to invest in services and places that help keep people healthy.

The way out of our health crisis is a significant shift of funds and resources from sick care to disease prevention and health promotion<sup>7</sup>. This includes addressing the socio-economic determinants of health, such as access to quality education. Investment in communities will also play a role: a child growing up in a neighborhood where it is not safe to walk or where there are no grocery stores will be less likely to get enough physical activity or eat well enough to maintain his or her health.

If the road to a healthy nation is outside of healthcare, where does that leave our hospitals and health systems in the near future? Until recently, healthcare providers have profited from treating a growing number of sick patients. The continued increase in the healthcare costs has reversed that trend: as government reimbursement for medical services continues to fall, hospitals and health systems are facing financial losses from treating a growing number of chronically ill and/or aging patients with government insurance<sup>8,9</sup>. Reducing demand for care is an imperative in today’s healthcare business. Instead of waiting for sick patients to come through their doors, many hospitals and health systems are now partnering with community organizations to provide low-cost disease prevention and health promotion services, such as diabetes screening and education in local churches.

Community outreach is not a new concept for healthcare. There are many, well-documented cases of large hospitals and health systems using their economic engine for the good of the community, with initiatives ranging from local purchasing and job development programs to partnerships in neighborhood redevelopment and revitalization. A medical center is often the largest employer in any given city. The American Hospitals Association estimates that each hospital job supports about two more jobs, and every dollar spent by a hospital supports roughly \$2.30 of additional business activity for the community<sup>10</sup>. In Minneapolis (MN), Phillips Partnership has helped mobilize \$1.5 billion in resources to build housing and infrastructure and reduce crime in its seventeen years of existence. Phillips Partnership was established in 1997 by Abbott Northwestern Hospital, Children’s Hospitals and Clinics, City of Minneapolis,

# A Vision and Planning Framework for Health Districts of the Future

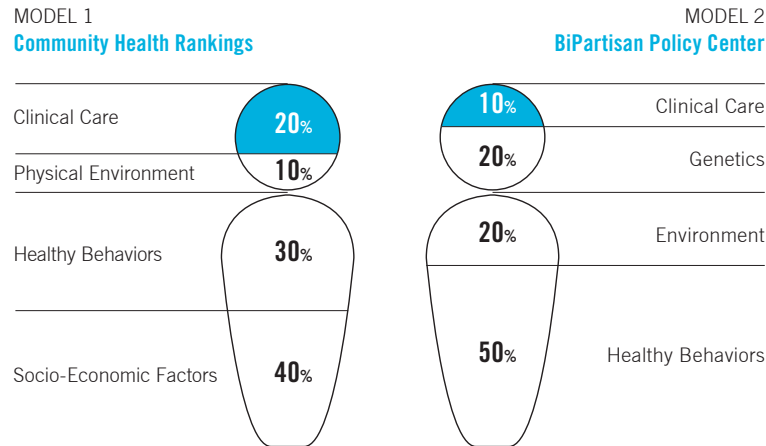


Figure 1: Two different models on health factors (i.e. what makes us healthy) illustrate the small role of healthcare in overall individual health.

Hennepin County, Metro Transit, and Wells Fargo Home Mortgage. In La Crosse (WI), Gundersen Health System has built a local renewable energy economy to serve the sustainability goals of its campus. Bon Secours Health System in Baltimore (MD) has built more than 650 units of affordable housing in surrounding neighborhoods<sup>11</sup>. In today's healthcare economy, initiatives such as these have new significance as potential pathways to improved community health that help secure the financial stability of hospitals and health systems.

## 2.1 The Paradigm Shift from Sick Care to Prevention

Economic, demographic and regulatory pressures are driving a paradigm shift that will fundamentally change the way healthcare is delivered in the future. At its core, the change has to do with how most insurers in the U.S. pay for healthcare. With the current “fee-for-service (F.F.S.), volume-based” payment model, a provider (such as a doctor) is reimbursed for each service delivered to each patient, even if the patient gets worse. Care is “fragmented,” meaning that each provider keeps their own set of patient records and runs their own tests, with little incentive to coordinate with others who see the same patient. The terms “provider-centered” is also used to indicate that the patient is not empowered to take part in maintaining their health outside of the healthcare system. In fact, financial incentives are stacked against services such as primary or preventative care that keep people out of the hospital.

The F.F.S model was already well under scrutiny in 2010, when the Affordable Care Act was signed into law. In February 2009, physicians gathered at the Institute of Medicine (I.O.M.) summit called for a move away from the current fragmented system towards integrative medicine, a health care system that focuses on efficient, evidence-based prevention, wellness, and patient-centered care that is personalized, predictive, preventive and participatory. Integrative medicine, as defined, expands healthcare beyond sick care. Patients and community members are empowered to become stewards of their health through patient education, behavioral health support, policy changes, and community-based efforts<sup>12</sup>. Later that spring, the Robert Wood Johnson Foundation (RWJF)—the nation's largest philanthropy devoted solely to the public's health—published significant findings from a one-year study led by its non-partisan Commission to Build a Healthier America. The commissioners concluded that “building a healthier America will hinge largely on what we do beyond the healthcare system” and recommended targeted investments in early education, nutritional support and healthy community design in addition to reforms that may be conducted in healthcare<sup>13</sup>. Taken together, these two reports highlight the foundations of the paradigm shift towards public health and prevention in the U.S.

The Affordable Care Act has accelerated the pace of the paradigm shift. The law provides financial incentives for integrative-care models under Medicare with programs that offer financial rewards or penalties to

voluntary groups of providers who can demonstrate improved health outcomes for a defined “population” and not just individual patients who come through the door. Participants in each group share patient information in order to “coordinate” or “integrate” care across the “care continuum,” collectively providing services ranging from flu shots to post-surgery rehabilitation (Figure 2). These “performance-based” or “value-based” models are expected to be adopted by private healthcare industry, pushing hospitals and health systems further into the territory of population health management.

The shift from volume to value in healthcare is not a simple adjustment. It is re-defining of aspects of our health infrastructure, from the way we educate doctors and dispense medical research dollars, to the way we design of facilities where care is delivered. Our standards for medical education have not changed for over a hundred years. A global independent commission called for comprehensive reform in the training of healthcare professionals with a focus on training “enlightened change agents”, who are able to adapt global knowledge and resources to local health problems<sup>14</sup>.

Resources previously spent in building hospital beds and imaging suites for individual patients will now be shifted towards health and wellness programs<sup>15</sup>. As a result, healthcare delivery will continue to shift away from the clinical settings, with a greater number of less costly services being delivered in the community—such as a healthy cooking demonstration at a local YWCA or a phone conversation with a care coordinator (Figure 2).

### 2.2 Envisioning the Future of Medical Facilities and Campuses

In a recently recorded conversation among four healthcare CEOs, John Bluford of Truman Medical Centers (Kansas, MO) stated that “the future of the hospital can’t be the building on the corner or down the street. It’s got to be immersed in the daily culture of the community that it serves”<sup>17</sup>. The last decade has seen a growing trend of hospitals sponsoring low-cost, high-impact prevention programs such as farmers’ markets, and recreational trails to connect with their communities on health and wellness<sup>18</sup>. A more recent trend is the construction of new outpatient facilities with cafés or

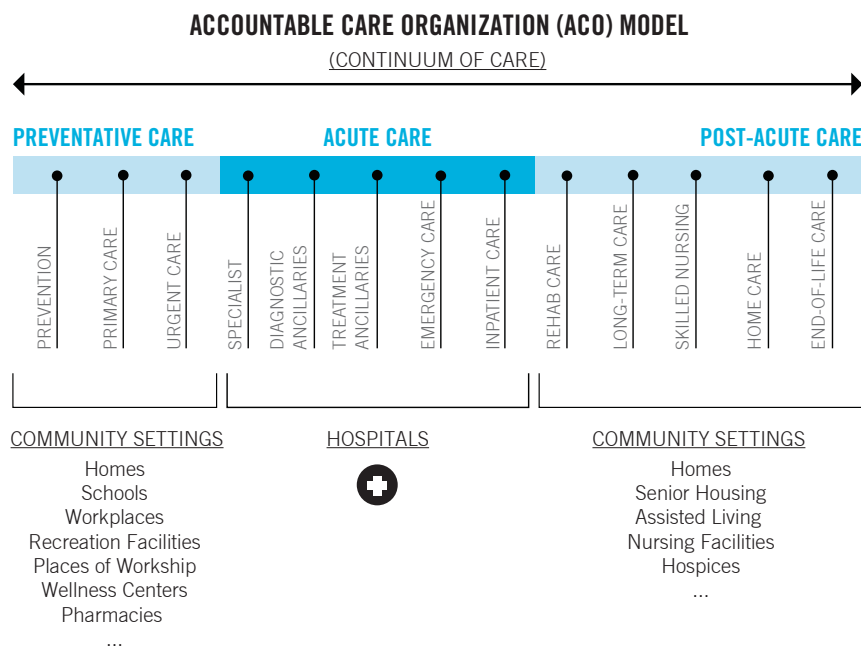


Figure 2: Hospitals and health systems have traditionally focused solely on acute care. The Medicare Accountable Care Organization (ACO) model incentivizes groups of providers to coordinate patient care across the entire care continuum. First year results from early adopters show promise: 32 pioneer groups who piloted the ACO model were, as a collective, able to hamper cost increases and generate \$33m savings for Medicare<sup>16</sup>.

# A Vision and Planning Framework for Health Districts of the Future

stores to capture demand while also creating a new, retail-like healthcare interface for the community<sup>19</sup>. While headed in the right direction, these steps do not add up to comprehensive strategy for future campus design.

It is not clear what will become of medical facilities that become obsolete or redundant as healthcare delivery shifts into community settings. Discussions on this topic tend to be focused on the negative, citing impacts of the growing number of hospital consolidations and the subsequent closures of small community and rural hospitals<sup>20</sup>. It is clear that we need a compelling vision to shape places where health services will be delivered in the future. Targeted strategies will also need to be developed to address four potential scenarios: closed hospitals, shrinking campuses, growing campuses, and new campuses. Both the vision and strategies will need to align closely with the expanded role of the healthcare institution to keep populations healthy.

This highlights a particular problem: our healthcare campuses are not designed as health-promoting environments. They are typically designed with an inward-

focus on the patient: the health needs of the community members—including medical staff and visitors as well as neighborhood residents—are of secondary importance. For most of the twentieth century, hospitals have focused their resources internally to give the patient the best chance for recovery. For early hospitals, this meant building a series of airy, daylit pavilions in pastoral settings outside the city. With air conditioning, the typology shifted towards a single tower that consolidates all patient services. As cars became the predominant mode of travel, many hospitals built drop-off plazas facing new parking lots at back, turning their front door away from the public street<sup>21</sup>. Today, healthcare planning is an inward-focused endeavor that is driven primarily by adjacency requirements of hospital components. In fact, the imperatives of healthy community design—small block sizes, walkable streetscapes, active ground floors, and open green spaces—are often at odds with conventional healthcare planning and design practices (Figure 3). When viewed from the community perspective, hospitals are akin to ocean liners in a sea of cars. Car-oriented culture intensifies the disconnect, forcing growing hospitals to expand into neighborhoods

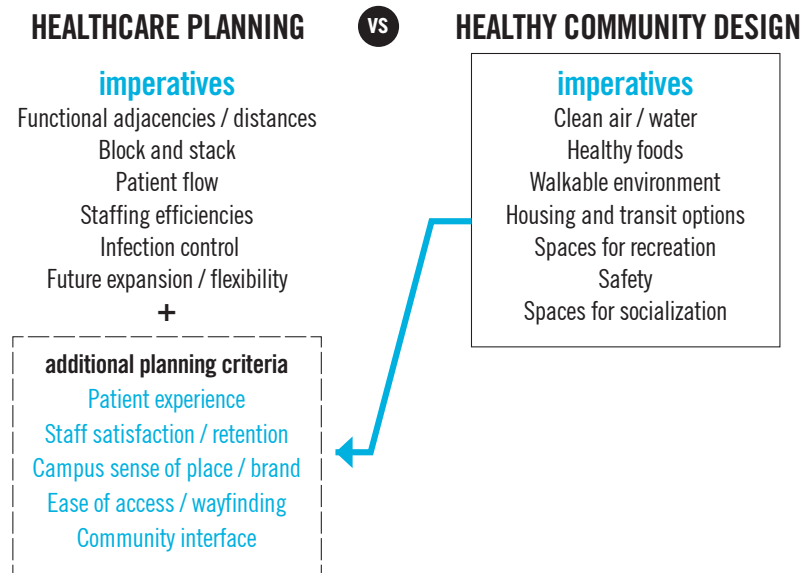


Figure 3: The planning and design of medical facilities prioritizes operational efficiency to ensure patient outcomes. The imperatives of healthy community design, which contribute to positive health outcomes for patients as well as those who work at and live near the medical facility or campus, is often not part of the equation. Additional planning criteria that have emerged over the last decade have the potential to bring healthcare planning into closer alignment with healthy community design.



Figure 4: The Health District planning approach draws inspiration from medical districts such as the Longwood Medical Area, that have achieved a healthy balance between the operational needs of the hospitals and the health needs of the community from the urban environment.

as parking needs grow. While examples of community-integrated, pedestrian-friendly campuses do exist in our older urban centers (Figure 4), it is difficult to find a healthcare campus that is a healthy place to heal, work, learn and live by design. This is why we need a new planning paradigm for the future of our medical facilities and campuses.

### 3.0 THE HEALTH DISTRICT VISION AND PLANNING FRAMEWORK

The future state of today's medical facility or campus is emerging to become what is referred to in this paper as a Health District: a place where investments are targeted to improve population health outcomes and to inspire healthy behaviors. Health Districts support collaborative efforts in the delivery of healthcare, integrating programs and services that help partners in the monitoring, management and improvement of population health. The focus on population health addresses the growing need for healthcare institutions and their partners to improve the diagnosis, maintenance and

prevention of chronic disease among community members.

The analysis in Section 2.0 identified four key elements integral to the definition of a Health District, each of which affect the program and operations of a healthcare institution and campus to enable it to respond to the non-clinical factors impacting health (Figure 1):

1. A focus on population health
2. A focus on place
3. A focus on partnerships
4. A focus on performance.

#### 3.1 A Focus on Population Health

##### 3.1.1 Background

Population health is a scientific field of study and related practices focused on “the health outcomes of a group of individuals including the distribution of such outcomes within the group”<sup>22</sup>. It is based on the democratic ideal that all citizens should have the benefit of equal protection from disease and injury, and as such, is largely supported through government and non-profit

# A Vision and Planning Framework for Health Districts of the Future

sector initiatives. Pioneers of epidemiology and public health worked to prevent the spread of infectious diseases in the late 19th century. Since the 1980s, however, the focus in population health has shifted towards the chronic disease epidemic. The 2011 launch of the National Prevention Strategy—a cross-sector and integrated plan to align government actions around chronic disease prevention—has crystallized this new focus. Led by the National Prevention Council comprising of 17 heads of departments, agencies, and offices across the Federal government, the National Prevention Strategy aims to “improve America’s health by helping to create healthy and safe communities, expand clinical and community-based preventive services, empower people to make healthy choices, and eliminate health disparities”<sup>23</sup>. The strategy is a big part of the population health focus embedded in the Affordable Care Act.

Population health, in many ways, is antithetical to the traditional business of healthcare, which provides individual care to sick patients. Its emergence in healthcare circles is a recent phenomenon driven largely by the growing cost of treating chronic disease patients. A recent study of the Canadian case found, similarly, that hospitals view the population health approach as an effective method to reduce the use of costly emergency room and hospital services by chronic disease patients<sup>24</sup>. A growing number of hospitals and health systems are joining forces, and partnering with public health and community organizations to implement initiatives to prevent disease and promote health in community settings. A leading example comes from Dallas, where Baylor Health Care System Foundation partnered with the City of Dallas Parks and Recreation Department to renovate an aging recreation center to include a Diabetes Health and Wellness Institute (DHBI). The DHBI at the Juanita J. Craft Center takes diabetes care, diagnosis and prevention programs to the heart of the Frazier community in South Dallas, where high rates of diabetes and lack of access to diabetes care were manifest in the state’s highest rates for diabetes-related hospitalization<sup>25</sup>. The outcome is not only improved health in a medically underserved population, but also long-term cost and capacity savings for the Baylor Health Care System where close to a third of hospital admissions are linked to diabetes. Beyond the compelling business case, many hospitals recognize the need to focus on prevention and primary care as a means to bring them closer to their health mission.

There are opportunities in each community for healthcare institutions to step beyond their walls to impact population health and to save costs in so-doing. The Af-

fordable Care Act has required each charitable hospital to complete and implement actions to address a Community Health Needs Assessment (CHNA) every three years to maintain its non-profit and tax-free status. In many communities, CHNAs are being completed by a consortia of hospitals and local public health agencies, which is considered to be a best practice that can lead to greater success through shared goal-setting, visioning and project implementation. Section 501(r) IRS requirement (or the “CHNA” requirement, as it is widely known) currently lacks regulatory teeth, but is expected to become more onerous as the IRS strengthens its guidelines for approval in the coming years<sup>26</sup>. Free online resources such as Dignity Health’s nationwide Community Needs Index have made it easy for communities to include information on socio-economic barriers to health, such as lack of access to housing, in their assessments.

### 3.1.2 Application in Health District Planning

CHNAs can be integrated directly into the Health District Planning process to define future space and program requirements for disease management, prevention and health-promotion services in addition to the typical healthcare market analysis that are used to estimate future clinical space demand. Health District Planning also takes into account estimated reduction in utilization that can be expected to occur through successful implementation of population health measures. A population-health focused market analysis can identify specific opportunities for the hospital or health system to expand services into community settings (as in the Baylor example) or build specifications for new spaces, such as a health food store, which can be incorporated into the district to advance employee and community health. Other opportunities for the institution to impact socio-economic barriers to health, such as local purchasing or jobs development programs, can also be identified.

Funding remains the biggest barrier to widespread adoption of the population health approach in healthcare. Payment models are simply not set up to reimburse non-healthcare spending. In New York, State Commissioner for Health has unsuccessfully bid for the use of federal Medicaid matching funds to build supportive housing even though each unit is expected to save the government over \$30,000 a year in emergency room visits or stays in shelters or jails<sup>27</sup>. Similar challenges exist in the private market even when the return on investment is apparent. However, healthcare is changing. As healthcare reimbursements are increasingly tied to population health metrics in the future,



hospitals and their partners will have stronger financial incentives to invest in community health<sup>28</sup>.

### 3.2 A Focus on Place

Each Health District is a unique place set in a specific context, with built environment supports for healing and healthy lifestyles for employees, visitors and residents. The focus on place brings the community perspective into Health District Planning with an emphasis on the projected health outcomes of facility planning decisions on surrounding communities. The goal here is not only to take actions that mitigate negative impacts associated with healthcare facility operations, but to re-curate the built environment of the facility or campus with uses and amenities that enable healing and healthy lifestyles.

#### 3.2.1 Background

Public health research has identified two main pathways through which the built environment impacts health (Figure 5). The first path, exposures to toxic elements in the air and the water, is well accepted and regulated. The other path is less known: we have only

recently come to appreciate the significant impact that the built environment can play in enabling as well as preventing healthy behaviors, such as walking and healthy eating. Some of the earliest work on this topic originated at U.S. Centers for Disease Control and Prevention (CDC) in the early 2000s, and has grown into a burgeoning research and practice field known as “healthy community design”. At its core, “healthy community design” seeks to re-establish the links between urban planning and public health that date back to the shared origins of both professions in the late 19th and early 20th centuries. The CDC still provides some of the latest research in this field through its interdisciplinary Built Environment and Health Initiative. This research has been instrumental in establishing a link between the design of our suburban environments (i.e. disconnected street patterns and low density development) and our obesity epidemic<sup>29</sup>. In its application, healthy community design is an extension of smart growth and sustainable urbanism practices, with a greater focus on individual health outcomes.

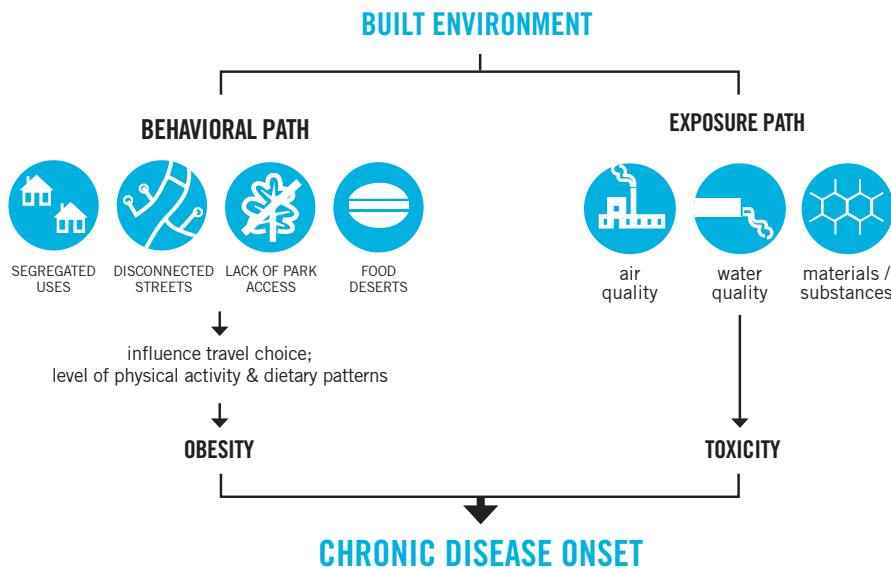


Figure 5: The built environment impacts individual health directly through exposures or indirectly by creating barriers to healthy choices. In many underserved communities, disinvestment in the built environment (such as lack of safe parks) compounds the impact of socio-economic barriers to health (such as lack of time for recreation).

# A Vision and Planning Framework for Health Districts of the Future

A parallel field of inquiry—evidence-based design (or EBD)—has transformed healthcare facility design during the past decade by focusing on design elements such as natural daylight, which are demonstrated to promote healing among patients. Healthcare’s focus on the patient, however, has prevented the expansion of this logic to the outside of the facility, where the large parking lots often abut the neighborhood edge, degrading walkability and safety. Urban communities with strong planning traditions and agencies such as Boston (MA), New York (NY) and Portland (OR), have used zoning regulations, design guidelines and review processes to create community-integrated medical facilities and campuses. With the paradigm shift in healthcare, a growing number of institutions are looking at these best practices to improve the health of their facility and campuses.

### 3.2.2 Application in Health District Planning

Health District Planning seeks to balance the space and operational needs of medical facilities and campuses with the quality of life needs of patients, families,

employees and neighbors. This is best accomplished through a well-facilitated, multi-stakeholder planning process informed by clear goals and a comprehensive built environment analysis. While these methods are commonly used in urban planning, their use in the healthcare setting has been limited to regulatory approvals.

A 2013 Health District Plan prepared for Gundersen Lutheran Medical Center and the adjoining Powell-Poage-Hamilton neighborhood in La Crosse, Wisconsin illustrates the power of these facilitation tools in maximizing health outcomes for all users in the community. The neighborhood was named Powell-Hood-Hamilton at the time of the study. The 9-month long participatory planning process revealed shared health need of employees and neighbors around safety, affordable housing and healthy food options, making a case for greater collaboration between the city and the health system for implementation. The planning team used sustainable urbanism metrics from the LEED for Neighborhood Development Guidelines to create a long-term

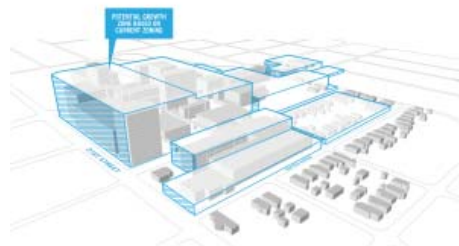
## EXISTING CONDITIONS



## POSSIBLE GROWTH SCENARIO



## CURRENT ZONING ALLOWED GROWTH



## BALANCED DEVELOPMENT ENVELOPE

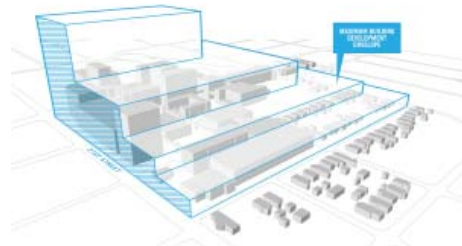


Figure 6: Conceptual diagram showing re-distribution of campus density to enable height and character transitions between St. John Medical Center and adjoining historic neighborhoods in Tulsa, Oklahoma.

Street Framework Plan that will provide improved connections between the neighborhood, campus and the Mississippi riverfront<sup>30</sup>. A Health Impact Assessments (HIAs) were not produced, but recommended for use as project-specific decision making tools are during the implementation process.

Zoning (build-out) analyses are also used in Health District Planning to identify regulatory barriers to healthy community design. In Tulsa, Oklahoma, a build-out analysis of the St. John Medical Center (SJMC) was used to establish the need for new zoning stipulations that enable to hospital to build taller to avoid encroachment of medical uses into historic and residential neighborhoods (Figure 5). The recently adopted Mixed-Use Institutional Zoning (MX-I) category enables Tulsa hospitals, such as SJMC, to get closer to the Health District ideal with each new development<sup>31</sup>. As with the La Crosse project, the success of the SJMC Health District Plan is a direct outcome of the planning team's engagement of government and neighborhood stakeholders.

### 3.3 A Focus on Partnerships

Health Districts are driven by diverse and multi-stakeholder partnerships to reach shared health goals. Partnerships are a necessity for a healthcare institution seeking to impact population health, or engage in place-based initiatives (or do both, at the same time). As previously mentioned, there are many precedents of hospitals partnering with local government or other non-profits to influence the socio-economic determinants of health. In Health District Planning, however, these partnerships are not only desired, but critical for the implementation of projects and programs that improve community health.

#### 3.3.1 Background

The perception is that hospitals, due to the competitive nature of their business, are more likely to work with partners outside of healthcare than those within. A 2011 survey conducted by the American Hospital Association shows that is not the case: 98 percent of healthcare CEOs who responded were open to partnerships with other clinical providers and physicians to address health care issues that they cannot accomplish on their own. Only 67 percent, by contrast, said that they would pursue partnerships with community, public health and government agencies towards the same goal. These results may stem from a variety of reasons—including a healthcare entity's previous negative experience with government processes—that can be overcome through facilitated and focused dialogue.

#### 3.3.2 Application in Health District Planning

Identifying and matching the network of implementation and funding partners is a key part of a Health District Plan. It requires cataloging of shared interests and complimentary capabilities. A regional medical center, for example, may be interested in improving transit access to its campus, but does not have a transit agency's ability to draw on federal funds. The solution here would be the build a partnership between the two, where the transit agency can show the hospital as a civic partner in its grant applications and strengthen its case by including a description of the employee transit incentives the hospital aims to offer if transit is brought to its campus. This "matchmaking" effort begins early on in the planning process and involves a large number of individual interviews and group discussions during the planning period.

Partnerships are also an excellent panacea to the problem of funding discussed under Population Health (see Section 3.1.). In La Crosse, the Health District Plan is currently being implemented through a reverse-TIF (tax-improvement financing) agreement that enables Gundersen Health System to fund projects that will revitalize its surrounding neighborhood in return for future reimbursements through increased tax revenue. The projects are being managed by a recently-formed Joint Development Corporation (JDC) that includes city, health system and neighborhood representatives as decision-makers. Formal partnerships like the JDC may become more common as more healthcare institutions look for ways to experiment with population health initiatives.

### 3.4 A Focus on Performance

Health Districts make investment decisions based on best available evidence, and monitor and evaluate results to ensure outcomes.

#### 3.4.1 Background

Medical practice has well-established protocols for diagnosis and treatment of a patient<sup>32</sup>. After recording a patient's complaints, a doctor orders some tests – and if necessary – corroborates his ideas with scientific studies before finalizing a diagnosis and treatment plan. There is, in many cases, a follow-up that is scheduled to see how the patient is progressing, and adjustments are made to medications – if needed – at that appointment. In some cases, new and unexpected results are documented in medical journals to be used as "evidence" in the treatment of the next patient.

# A Vision and Planning Framework for Health Districts of the Future

## 3.4.2 Application in Health District Planning

To ensure outcomes, a Health District Plan integrates the similar approach into its processes. Recommendations are backed up with evidence (from literature review, case studies or project-specific modeling) that the expected results will most likely be delivered. Innovative projects for which no precedents exist are implemented as pilots in order to build evidence around outcomes before expanding the scale of application. Tools and methods (such as randomized controlled trials, online surveys, anonymous and user-initiated mobile data gathering) are put in place to enable monitoring of outcomes, with touch points scheduled for evaluation of results and necessary corrections. Findings are documented and, where possible, publicized to add to the body of knowledge to guide and add credibility to future actions.

The growing availability of “user-generated big data” is expected to make this methodology much more commonplace and feasible. A partnership initiative between Boston Medical Center (BMC)—the largest safety net hospital in New England—and the City of Boston demonstrates how this may work. The initiative enables BMC doctors to “prescribe” patients with transportation and weight issues a \$5 year-long membership to the city’s \$85-a-year bike-share program. By matching patient data collected at follow-ups with data on their bike usage, the partners can build evidence around the types of programs that do improve health outcomes among those who are most in need<sup>33</sup>. As solutions are developed to enable the collection, sharing and analysis of data without harm to groups or individuals, we will have additional ways to harness data to achieve the desired results.

## 4.0 THE FRAMEWORK IN APPLICATION: THE BATON ROUGE HEALTH DISTRICT

The Baton Rouge Health District Plan is one of the first projects where the Health District Planning Framework outlined in this paper is being applied to a multi-stakeholder planning process. The plan was initiated in 2013 by the Baton Rouge Area Foundation (BRAAF) to identify ways to increase formal collaborations between competing hospitals, large physician groups, a regional insurance company, and academic institutions that are loosely clustered in a 1000+ acre area of South Baton Rouge. The planning team worked with BRAAF to establish an advisory group of healthcare and academic leaders, along with a 60+ Task Force of experts who helped produce recommendations in four study areas: (1) Innovation in Healthcare (2) Health Education and

Research (3) Healthy Places, and (4) Emergency Preparedness. A fifth group focused on implementation strategies, starting with the formation of a shared governance entity to manage funds and partnerships.

The four elements of the Health District Planning Framework were integrated to varying degrees to each one of the four study areas identified by the district leadership for the plan. The real power of the framework, however, can be seen in the potential health impact of shared initiatives that have come out of the planning process. These include:

- A data-driven Diabetes and Obesity Center that consolidates education, research, treatment and policy-making efforts under one roof to address a critical health need in the community
- A Clinical Trials Consortium (CRC) that facilitates research partnerships between the Pennington Biomedical Research Center, LSUHealth, local healthcare pillars and industry partners to bring cutting-edge treatments and new jobs to Baton Rouge
- District Health loop: multi-use trail installation along Ward Creek in partnership with BREC (Recreation and Parks Commission). The trail would connect the hospital and university anchors, neighborhoods, and existing park amenities including the currently inaccessible 440-acre Burden Center
- Public and institutional support for the addition of a new arterial to reduce congestion on the two regional arterials serving the hospital emergency rooms. The new arterial is the first project to come out of the District Street Framework Plan, which doubles the connectivity of streets serving the area
- Zoning updates to encourage the development of compact, pedestrian-friendly, mixed-use clusters around each of the three anchor healthcare campuses.

## 5.0 CONCLUSION

Healthcare is changing rapidly: new models of care are being tested, new partnerships are being formed, and new technologies are shifting the role of the patient. In this time of sea change, planning is of incredible value: hospitals and health systems that plan today will be well-positioned to implement transformative change as the industry transitions to performance-based models. Health District Planning is a nascent planning paradigm that can be expected to grow and get refined as more communities, hospitals, and health systems adapt its framework to plan for a healthier future.

Health District Planning is designed to highlight synergies and enable collaborations towards improved community health. Bringing voices to the table is a first necessary step. Many cities now have venues for ongoing discussions on health between hospitals, health systems, provider groups, insurers, employers, government entities, non-profits and citizen groups in each community. The opinions of patients and families, and healthcare professionals are also being included. These groups will be instrumental in the alignment of local health cultures with more global changes in healthcare. The ability to aggregate, organize and share digital information will be a critical for the future success of these collaborations.

### Acknowledgments

The author would like to express appreciation for the leadership of the Baton Rouge Area Foundation, Gundersen Health System, City of La Crosse, WI, and the St. John Medical Center in completed and ongoing Health District Planning projects, and thanks project team members for their contributions. Special thanks goes to the Urban Design Group at the Perkins+Will Atlanta office, and to David Green, AIA, who provides tremendous support and guidance for ongoing research on health district planning and other innovative urban design initiatives.

### REFERENCES

[1] Institute of Medicine, (2013). “Best Care at Lower Cost: The Path to Continuously Learning Health Care in America”, Retrieved on 10/2014 from [http://www.nap.edu/catalog.php?record\\_id=13444](http://www.nap.edu/catalog.php?record_id=13444).

[2] Haberkon, J., (2013). “Commission Advocates Ending Fee-For-Service System”, March 4, Retrieved on 7/2014 from <http://www.politico.com/story/2013/03/commission-advocates-ending-fee-for-service-88348.html#ixzz39YPn79z2>.

[3] Kane, J., (2012). “Health Costs: How the U.S. Compares With Other Countries”, *Public Broadcasting Service*, October 22, Retrieved on 7/2014 from <http://www.pbs.org/newshour/rundown/health-costs-how-the-us-compares-with-other-countries/>.

[4] Institute of Health Metrics and Evaluation, (2013). “The State of US Health: Innovations, Insights and Recommendations from the Global Burden of Disease Study”, Report, Retrieved on 7/2014 from <http://www.healthdata.org/policy-report/state-us-health-innovations-insights-and-recommendations-global-burden-disease-study>.

[5] Marks, J., (2009). “Why Your Zip Code May Be More Important to Your Health than Your Genetic Code”, *Huffington Post*, April 23, Retrieved on 7/2014 from [http://www.huffingtonpost.com/james-s-marks/why-your-zip-code-may-be\\_b\\_190650.html](http://www.huffingtonpost.com/james-s-marks/why-your-zip-code-may-be_b_190650.html).

[6] Centers for Disease Control and Prevention, (2009). “Chronic Disease: The Power to Prevent, the Call to Control”, Report, Retrieved on 7/2014 from <http://www.cdc.gov/chronicdisease/resources/publications/aag/chronic.htm>.

[7] Lavizzo-Mourey, R., (2012). “We Must Focus on Preventing Disease if We Want Our Nation to Thrive.” *The Atlantic*, May 30, Retrieved on 7/2014 from <http://www.theatlantic.com/health/archive/2012/05/we-must-focus-on-preventing-disease-if-we-want-our-nation-to-thrive/257759>.

[8] Bipartisan Policy Center, (2012). “Lots to Lose: How America’s Health and Obesity Crisis Threatens our Economic Future” Report, Retrieved on 7/2014 from [http://bipartisanpolicy.org/sites/default/files/5023\\_BPC\\_NutritionReport\\_FNL\\_Web.pdf](http://bipartisanpolicy.org/sites/default/files/5023_BPC_NutritionReport_FNL_Web.pdf).

[9] Lowes, R., (2013). “Medicare Rates Continue to Fall behind Practice Expenses”, *Medscape Medical News*, August 29, Retrieved on 7/2014 from <http://www.medscape.com/viewarticle/810242>.

[10] American Hospital Association, (2013). “The Economic Contribution of Hospitals Often Overlooked”, Retrieved on 7/2014 from <http://www.aha.org/content/13/13brief-econcontrib.pdf>.

[11] Zuckerman, D., (2013). “Hospitals Building Healthier Communities”, The Democracy Collaborative at the University of Maryland, Report, Retrieved on 7/2014 from <http://community-wealth.org/content/hospitals-building-healthier-communities-embracing-anchor-mission>.

# A Vision and Planning Framework for Health Districts of the Future

- [12] Institute of Medicine, 2009. "Integrative Medicine and the Health of the Public: A Summary of the February 2009 Summit", Report, February, Retrieved on 7/2014 from <http://www.iom.edu/Reports/2009/Integrative-Medicine-Health-Public.aspx>
- [13] Robert Wood Johnson Foundation, (2009). "Beyond Health Care: New Directions to a Healthier America", Report, April, Retrieved on 7/2014 from <http://www.rwjf.org/en/research-publications/find-rwjf-research/2009/04/beyond-health-care.html>.
- [14] Frenk, J., Chen L., et al., (2010). "Health Professionals for a New Century: Transforming Education to Strengthen Health Systems in An Interdependent World", *Lancet*, 376, December 4 , pp. 1923–58. Retrieved on 7/2014 from <http://www.healthprofessionals21.org/docs/HealthProfNewCent.pdf>.
- [15] Davis, K., (2014). "The Hospital of Tomorrow: Redefining Hospitals under Affordable Care Act", *Forbes*, May 21, Retrieved on 10/2014 from <http://www.forbes.com/sites/robertlenzner/2014/05/21/the-hospital-of-tomorrow-redefining-hospitals-under-the-affordable-care-act/>.
- [16] Bunis, D., (2013). "Pioneer Accountable Care Organization First-Year Results Include Savings and Losses", *CQ HealthBeat*, July 22, Retrieved on 8/1/2014 from <http://www.commonwealthfund.org/publications/newsletters/washington-health-policy-in-review/2013/jul/july-22-2013/pioneer-aco-first-year-results>.
- [17] Butcher, L., (2014). "More than a Building: 4 CEOs Rethink Their Hospitals' Place in the New, Wide World of Health Care", *Hospitals and Health Networks*, April 8, Retrieved on 7/2014 from [http://www.hhnmag.com/display/HHN-news-article.dhtml?dcrPath=/templatedata/HF\\_Common/NewsArticle/data/HHN/Magazine/2014/Apr/cover-story-redefining-hospital](http://www.hhnmag.com/display/HHN-news-article.dhtml?dcrPath=/templatedata/HF_Common/NewsArticle/data/HHN/Magazine/2014/Apr/cover-story-redefining-hospital).
- [18] Park, M., (2009). "Farmers Markets Bloom at Hospitals", June 3, Retrieved on 7/2014 from <http://www.cnn.com/2009/HEALTH/06/03/farmers.markets.hospitals>.
- [19] Kutscher, B., (2012) "Outpatient Care Takes the Inside Track", *Modern Healthcare*, August 4, Retrieved on 7/2014 from <http://www.modernhealthcare.com/article/20120804/MAGAZINE/308049929>.
- [20] Benson, B., (2014). "2014 Bodes Ill for Hospitals", *Crain's New York Business*, January 5, Retrieved on 7/2014 from [http://www.craigslist.com/article/20140105/HEALTH\\_CARE/301059978/2014-bodes-ill-for-hospitals#](http://www.craigslist.com/article/20140105/HEALTH_CARE/301059978/2014-bodes-ill-for-hospitals#).
- [21] Burpee, H., (2009). "History of Healthcare Architecture", *Mahlum Architects Healthcare Design Insights*, Autumn, Retrieved on 7/2014 from <http://www.mahlum.com/pdf/MahlumHDIAutumn2009Issue01.pdf>
- [22] Kindig, D., and Stoddart, G., (2003). "What Is Population Health?", *American Journal of Public Health*. Vol. 93, No. 3, pp. 380-383.
- [23] National Prevention Strategy. Retrieved on 7/2014 from: <http://www.surgeongeneral.gov/initiatives/prevention/strategy/>.
- [24] Cohen, D. et al., (2014). "The Population Health Approach: A Qualitative Study of Conceptual and Operational Definitions for Leaders in Canadian Healthcare", *SAGE Open Medicine*, Retrieved on 7/2014 from <http://smo.sagepub.com/content/2/2050312114522618>.
- [25] Baylor Healthcare System. "Diabetes Health and Wellness Institute", Retrieved on 10/2014 from <http://www.baylorhealth.edu/CommunityOutreach/Pages/DiabetesHealthandWellnessInstitute.aspx>
- [26] Shaw, F. et al., (2014). "The Patient Protection and Affordable Care Act: Opportunities for Prevention and Public Health", *Lancet*, Vol. 384, pp. 75-82, Retrieved on 7/2014 from <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2814%2960259-2/abstract>.
- [27] Aronczyk, A., (2014). "New York Debates Whether Housing Counts as Health Care", July 28, Retrieved on 10/2014 from <http://www.npr.org/blogs/health/2014/07/28/335324046/new-york-debates-whether-housing-counts-as-health-care>.
- [28] Larkin, H., (2014). "Population Health: The Risks & Rewards", *Hospitals & Health Networks Magazine*. February 11, Retrieved on 7/2014 from [http://www.hhnmag.com/display/HHN-news-article.dhtml?dcrPath=/templatedata/HF\\_Common/NewsArticle/data/HHN/Magazine/2014/Feb/cover-story-population-health](http://www.hhnmag.com/display/HHN-news-article.dhtml?dcrPath=/templatedata/HF_Common/NewsArticle/data/HHN/Magazine/2014/Feb/cover-story-population-health).

[29] Ewing, R. et al., (2014). "Relationship between Urban Sprawl and Physical Activity, Obesity, and Morbidity – Update and Refinement", *Health and Place*, Vol. 26, pp. 118-126, Retrieved on 7/2014 from <http://www.sciencedirect.com/science/article/pii/S135382921300172X>

[30] Perkins+Will, (2013). "Joint Neighborhood and Campus Plan for Powell-Hood-Hamilton and Gundersen Lutheran Medical Center", Report, Retrieved on 7/2014 from <https://www.cityoflacrosse.org/Document-Center/View/7561>.

[31] City of Tulsa Zoning Code, Chapter 7A – Mixed-use Institutional District Provisions, Retrieved on 10/2014 from <http://www.incog.org/city%20of%20tulsa%20zoning%20code.html>.

[32] Kinney, E., (2004). "The Origins and Promise of Medical Standards of Care", *Virtual Mentor: American Medical Association Journal of Ethics*, Vol. 6, No. 12, Retrieved on 7/2014 from <http://virtualmentor.ama-assn.org/2004/12/mhst1-0412.html>.

[33] Khazan, O., (2014). "How Being Poor Makes You Sick", *The Atlantic*, May 21, Retrieved on 7/2014 from <http://www.theatlantic.com/health/archive/2014/05/poverty-makes-you-sick/371241/>.