Folding 'health' back into healthcare

David Green, AIA, principal at the London offices of Perkins+Will, and Basak Alkan, AICP, LEED AP / healthcare district planner, at the architect, interior, and urban design company's Atlanta, US base, examine growing moves in the US to re-evaluate planning policies to ensure that local environments are built that promote healthy activities, with the creation of so-called 'Health Districts'. Equally, they explain, healthcare 'systems' are starting to see the value in using their campuses to promote this process. In the UK, they argue, 'the timing is perfect for the re-evaluation of the relationship between the medical campus and the city'.

David Green focuses on large-scale urban design and planning projects.

To varying degrees the global healthcare industry in developed nations is undergoing significant transformations to address the challenges brought on by a number of circumstances, including demographic, economic, and regulatory changes. These circumstances vary by country and region, but there are some basic conditions that span all of these communities. In the UK in particular, there is a move to re-evaluate the relationship between the NHS medical campus and the cities and towns within which these campuses are located. This is a very similar situation to what is happening in the US, with a number of health systems re-integrating themselves back into their respective communities, physically, as well as programmatically.

In this article we will focus on some of the trends in the US, and how these might affect the future planning models for healthcare campuses, and, by extension, academic health science centres, in the UK.

US's 'silver tsunami'

In the US, the 'silver tsunami' of ageing 'Baby Boomers', and the growing population of chronic disease patients, continue to increase demand for healthcare, while, at the same time, reimbursements for those services continue to fall. Health systems are being asked to do the seemingly impossible: deliver better healthcare with new technologies for more people, and for lower fees.

A 2013 report on health in OECD (Organisation for Economic Co-operation and Development) countries shows that life expectancy continues to increase in developing nations at the same time that incidences of chronic disease rise. The severity of the US health crisis, however, has generated a groundswell of ideas and innovative solutions that are changing the way healthcare is delivered, and this has potentially beneficial and significant lessons for other countries.

'Conventional' healthcare delivery challenged

At the core of this change is the understanding that current, conventional healthcare delivery is a generally inefficient means to achieve individual health. US public health models show that access to conventional healthcare accounts for as little as 20 per cent of beneficial health outcomes. Individual choices around diet, physical activity, and tobacco and alcohol use, play a much more significant role.

Interestingly, socio-economic factors and the built environment also help individuals to make the right choices for better health outcomes. There is a growing body of research that ties the level of investments in transportation, housing, and open space, to health outcomes, such as obesity and chronic disease. It appears that one potential way to increase the health of the general population may be to re-evaluate our planning policies to ensure that we are building environments that promote healthy activities.

> Health systems are starting to see the value in using their campuses to promote this process

Formation of a 'Health District'

Equally, health systems are starting to see the value in using their campuses to promote this process. There are some significant examples of this trend throughout the US. One of the most interesting and progressive planning initiatives is in Baton Rouge, Louisiana. Here (see Figure 1), two hospitals and other academic and healthcare partners are collaborating to form a Health District – an organisation dedicated to promoting health in the community.

Led by a team of planners from Perkins+Will, district partners are planning for clinical integration of a number of operational platforms, including an expanded infomatics system based on an integrated IT program, integration of post-acute care in the district, and, through the creation of a diabetes and obesity centre with health education (cooking and exercise classes), behavioural therapy, clinical trials, and translational research. Funding partners for the new centre will include government agencies, private insurers, pharmaceutical companies, and medical technology firms.

A 'larger, systematic improvement'

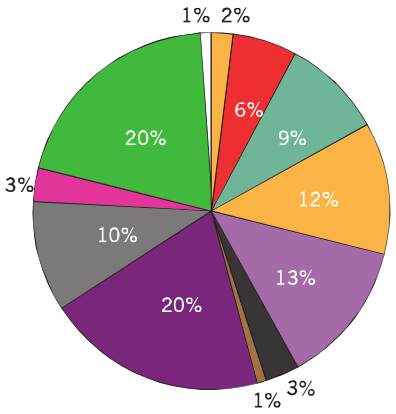
This is a critical example of multi-stakeholder collaboration that results in a centralised, and more efficient, facility.

Figure 1: In Baton Rouge, Louisiana, two hospitals and other academic and healthcare partners are collaborating to form a Health District. The photograph shows the various buildings' location and the main categories of use.

The placement of the centre, and its accessibility, are also critically important – the development is designed to facilitate healthy habits and integration into the broader community. As such, the new centre is part of a larger systematic improvement that allows patients, staff, and others, to walk to the facility and other participating institutions in the district, as well as the city beyond. In addition, the District is proposing joint investments in transportation infrastructure and housing, to enable employees to live within walking distance of their workplace. While this may seem obvious in more urban areas in the UK and Europe, it is not the conventional planning strategy in more suburban areas, and unfortunately many of the regulations set up for development are counter to this structure.

Digital tracking systems

Beyond the idea of integration and planning for physical activity and healthy lifestyle, there is a trend to utilise the same rigorous methodologies in the planning and execution of Health Districts that are used in basic healthcare research. As such, there is growing acceptance of setting baseline metrics that enable partners to track and improve programme and project outcomes. A key component of this is setting up digital tracking systems from the start, and using these systems to evaluate the efficacy of the various elements of the district. Unfortunately, much of the last 60 years of planning has been predicated on quasi-scientific assumptions, and has operated in the absence of post-construction evaluation and modification based on actual outcomes. This is an example of how the healthcare industry can beneficially affect the planning professions, and furthers the idea that the entire process should promote health and be structured around measurable outcomes, not just 'feel-good' ideas.



Use Categories
(Percentages of total gross square feet)

- Residential - Single family
- Retail and services
- Office - General
- Residential - Multi-family Educational
- Institution
- Industrial / Infrastructure
- Residential - Assisted Living
- Hospital
- Parking deck
- Hotel
- Medical Office/Outpatient Clinic
- Vacant

Better integrating hospitals into their communities

Examples like the Baton Rouge Health District demonstrate the need for new typologies for future healthcare facilities and campuses. As funding shifts away from acute care towards prevention in low-cost settings, hospitals in particular will need to become better integrated into the fabric of the communities that they serve. As such, healthcare campuses which were traditionally inward-focused are opening up to their surrounding communities. One set of issues now being addressed more comprehensively are the core principles that make healthy communities and environments, including small, walkable block sizes, inviting streetscapes, active ground floor uses, and accessible green spaces. These are often at odds with conventional healthcare planning and design practices, but thankfully this is starting to change.

A focus on place

In a recently recorded conversation among four healthcare CEOs, John Bluford of Truman Medical Centres (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'. The last decade has seen a growing trend of hospitals sponsoring low-cost, high-impact prevention programmes such as farmers' markets, and recreational trails to connect with their communities on health and wellness. A more recent trend is the construction of new outpatient facilities with cafés or stores that capture demand while also creating a new, retail-like, healthcare interface for the community.

A step in the right direction

These steps do not add up to comprehensive strategy for future campus

design, or, even more broadly, for the creation of Health Districts, but it is a step in the right direction. Projects such as the St John Medical Center exemplify this approach. The facility, a 100-year of charitable institution in Tulsa, Oklahoma, has worked with the City and surrounding historic neighbourhoods on a Small Area Plan and zoning code update (critical to the long-term efficacy of the planning process) that will align future campus growth with the health needs of residents. The MX-I (mixed-use institutional) zoning protects community character at the edges of the campus, while enabling campus growth at the clinical core. This will create a healthcare campus that is a healthy place to heal, work, learn, and live, and this is by design.

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Healthy, beneficial, urban planning

The health district planning framework brings healthy, beneficial urban planning practices to the design of medical campuses and districts, enabling healthcare institutions to assess the impacts of their operations not only on patients, but also on the health of employees, visitors, and neighbours. It also enables a broader understanding of institutional impacts at the city, region, and state level, and the tying of those impacts back to the determinants of health. This makes sense; healthcare systems are in many ways the obvious place to assess the impact of the built environment on health.

An inviting 'public realm'

A simple, yet commonly dismissed, component of health district design is the creation of an inviting and connected public realm that flows seamlessly from and through the campus. This adaptable urban infrastructure is also beneficial in facilitating the transition of today's medical centres and campuses into the districts of the future, enabling new uses to be inserted as some services move out into the community, and at the same time creating healthier options for daily movement and activities. The difference, however, is that in the healthcare system these activities can be tracked, monitored, and evaluated for success, and, when found to be less effective than initially supposed, the systems can initiate research to determine the shortcomings and address these within appropriate timescales.

Health Districts also support collaborative efforts in the delivery of healthcare, integrating programmes and services that

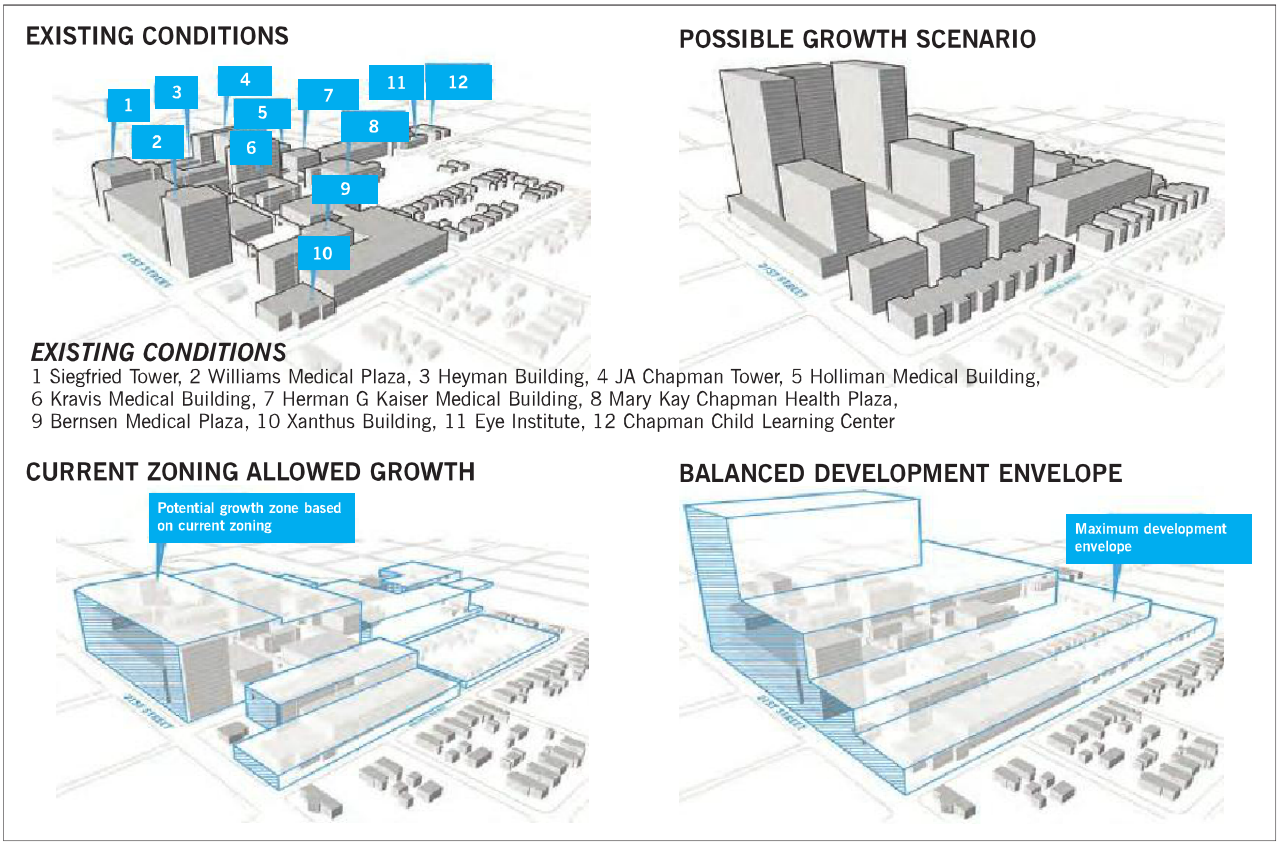

Figure 2: At the St John Medical Center in Tulsa, MX-I (mixed-use institutional) zoning protects community character at the edges of the campus, while enabling campus growth at the clinical core.

help partners in the monitoring, management, and improvement of population health. The focus on population health is a necessary addition to the programme of the future medical campus, and addresses the growing need for healthcare institutions and their partners to improve the diagnosis, maintenance, and prevention, of chronic disease among community members. The goal is to redefine and recalibrate definitions of district functions to accommodate population health approaches.

Focus on population health

The population health approach is not new, but is new to healthcare. It 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. It is based on the idea 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 sector initiatives. While pioneers of epidemiology and public health worked to prevent the spread of infectious diseases in the late 19th century, the focus in population health has shifted towards the chronic disease epidemic.

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 growing number of physician groups, hospitals, and health systems, are partnering with public health and community organisations around disease prevention efforts within the community. As healthcare reimbursements are increasingly tied to population health metrics in the future, hospitals and their partners will also have strong financial incentives to invest in community health. Beyond the compelling business case, many hospitals recognise the need to focus on prevention and primary care as a means to bring them closer to their health mission, and this collaborative platform is strengthened by the formation of the Health District.

Partnerships' benefit

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. As mentioned, there are many precedents of hospitals partnering with local government or other non-profit-making organisations to influence socio-economic determinants of health. The difference with the health district approach is for hospitals to pursue these partnerships to support initiatives that are critical to the implementation of health and wellness projects.

Identifying and matching the network of implementation and funding partners are key components of a Health District Plan. It is, in many ways, a cataloguing of shared interests and complementary capabilities. A regional medical centre, 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 to 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. Ultimately, these partnerships are critical to the success of any health district, in the same way that they are critical to the function of cities and towns in general.

Economic development

Beyond the health-related issues discussed above, it also turns out that Health Districts are superb for facilitating economic development. This has been a critical component for the adoption process in the US, because it increases the overall value to the community in which health campuses are located. The comprehensive platform for physical, mental, and economic health, has proved to be a very strong message, and something that the NHS should evaluate as it looks to reposition assets on its current campuses. These assets can be incorporated into health district planning efforts that both facilitate healthy environments, and maximise economic return – for the system, and for the local communities.

Timing 'perfect' for the UK

In the UK the timing is perfect for the re-evaluation of the relationship between the medical campus and the city, and for creating a national and local set of policies that directly ties the future of healthcare facilities to the creation of environments that promote health and reduce the negative impact of chronic disease. Much of this began in the 19th century, with the work of John Snow, and his analysis of the Broad Street area in an effort to scientifically address the cholera epidemic in London. Somehow these values should be reincorporated into our general planning process, and these should draw on the rigorous methodologies intrinsic to healthcare research and the delivery of patient care. It will take some work, but in the long run it is critical to addressing so many of our emerging health challenges. ✚

David Green

David Green has been involved in the execution of hundreds of projects in the past 25 years, ranging from the adaptive re-use of multiple historic structures, to 'multi-thousand acre' urban design and planning projects.

He currently focuses on policy, and issues of development and design for healthcare and research districts, particularly within an urban framework, and the metrics that drive these districts. He also provides innovative strategies for appropriate policy implementation for seamless incorporation of research and healthcare-specific elements in new districts across the globe.

Awarded the AIA's (The American Institute of Architects) Atlanta Chapter Silver Medal in 2003, as well as the AIA Georgia Bronze Medal in 2008 for his work in urban planning, he received a Master of Architecture and a Bachelor of Science from the Georgia Institute of Technology. He was a member of Georgia Tech's College of Architecture faculty from 1992 until 2013, where he taught architecture and urban design, and was a Professor of the Practice of Architecture. He lectures widely on issues of urban design, planning, and architecture.

Basak Alkan

Basak Alkan, AICP, LEED AP is an urban designer who specialises in Health District Planning – 'the application of healthy community design principles to the design and planning of healthcare facilities and campuses'. She has a diverse background in research, urban design, and planning that informs her holistic approach to the planning of walkable, mixed-use communities that build community and generate economic development.

Her portfolio features civic and institutional projects from the US and the Middle East, including her hometown of Istanbul. She is a founding member of the Congress for the New Urbanism's Health Districts Initiative, and has lectured on topics related to sustainability and healthy community building. She holds a Master of Architecture and Master in City Planning from the Massachusetts Institute of Technology.