

Chapter 21. Urban planning: leveraging the urban planning system to shape healthy cities

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1. Introduction

Given the strong influence of the urban environment on population health and wellbeing, urban planning offers a strategic and impactful opportunity to improve urban health. The purpose of planning is to manage urban change in a way that is sustainable, equitable, and efficient. The practice of planning involves creating and delivering land-use management and other place-based policies and programs (such as those for housing, transportation, and employment) in collaboration with the community and private and public sector stakeholders. Planning activities have a larger leverage on health than the physical and natural environment alone, for example, through integrated policies which seek to ensure that schools, jobs, and recreational activities are created alongside quality affordable housing and transportation services. Further, planning activities which prioritize sustainable development (through reducing environmental footprints and increasing resilience to environmental change) play a significant role in planetary health and associated health impacts. Scholars and practitioners of population health can contribute to the planning process at multiple stages to shape places that will positively influence health and wellbeing for decades.

Although planning can support health objectives, there are a number of characteristics of the planning system that create challenges. Urban planning may appear to be a highly technical and scientific field, easily adaptable to the evidence-based approach of the health professions, but in reality, planning policy and decision making is highly complex and contingent on economic forces and the democratic system in which it operates.

Understanding and addressing these complexities is essential to work effectively with the planning system to promote health.

This chapter will equip readers with the knowledge required to engage with urban planning services to improve population health and wellbeing. Public health and urban planning fields have shared beginnings and values.^{1,2} We review historic urban planning/design solutions to health challenges and highlight a way forward for future planning and development. We give an overview of the planning process and suggest stages at which health interventions could be most effectively deployed. We also explore some of the complex challenges for healthy urban planning, providing a selection of frameworks as potential solutions. We describe urban planning theories, practice, and terminology based on our experience of the planning systems in the UK, North American, and Australia. The chapter is of relevance to a global audience; however, it is most relevant in high-income countries where planning is part of a democratic system of government.

2. Learning from past attempts to improve health through urban form

The foundations of public health and urban planning linked health with the social and physical environment in overcrowded and polluted nineteenth century cities. A number of planning and design solutions have been trialled and adopted over the last century with the aim of improving urban health. The early town planner Ebenezer Howard proposed removing people from squalid living conditions to health-promoting “utopian” Garden City settlements in the countryside.³ The Swiss-born architect Le Corbusier proposed vertical cities in the form of tall buildings with multiple healthy design measures.⁴ Many architects of British and American 1950s and 1960s high-rise housing estates were purportedly inspired by his ideas but failed to implement features that he deemed essential, such as the provision of management services, and infamous examples like the Pruitt-Igoe projects in St. Louis,

Missouri, have since been demolished.⁴ Contemporary developments still struggle with adequate provision and management of amenities and facilities, resulting in avoidable health impacts. For example, residents living in communities with poor access to recreation facilities and parks are more likely to be overweight and are less physically active than residents with greater access.⁵

Urban sprawl is a widely acknowledged failure of twentieth-century development, often blamed on urban planning, but driven by many factors.⁶ Compact city development with mixed land uses and public transportation is now recognized and advocated as a healthy form of urban development globally.⁷ However, a complex range of factors continue to result in the development of communities that are physically and socially disconnected from urban centers and associated opportunities including jobs and education. Socio-economically disadvantaged communities tend to live in the least accessible neighborhoods and those most afflicted with environmental nuisances (noise, pollution, etc.) creating numerous physical and mental health impacts.⁸

In the 1980s and 1990s global initiatives such as the World Health Organization's Healthy Cities Movement and the community-driven Local Agenda 21 created momentum to integrate health and sustainable development objectives into the activities of municipal built environment departments, including planning, housing, regeneration, and transportation.^{9,10} The 2015 global commitment to the United Nation's Sustainable Development Goals (SDGs) marks a push to renew links between sustainable development, health, and city planning.^{11,12} The Copenhagen Consensus of Mayors, an initiative of the WHO Healthy Cities Network in Europe, demonstrates clear leadership to improve urban health through policies that prioritize people and the planet (in alignment with the SDGs), including through urban planning.¹³ Today's planners are aware of the successes and failures of the past and are interested in working alongside health professionals to create health-promoting cities. Yet many would

argue that more advocacy, training, and leadership is required to ensure health is a core objective in urban planning and related fields.¹⁴

3. Integrating health in urban planning activities

Planning policies and decisions will guide investment, design, and construction for 15 to 20 years with subsequent health impacts lasting for decades. Figure 1 shows a simplified version of the urban planning system. The planning process stages (central circles) in this diagram should not be viewed as discrete tasks. Planning is an iterative process that should be informed by its successes and failures and adapt accordingly. Community and stakeholder engagement are integral to planning and will occur throughout the development and delivery of local plans. Planning activities are informed and constrained by social, economic, and environmental factors and overseen by elected politicians. The form and function of local planning systems are set out by national (and/or state) regulations and policies. Each stage in this diagram represents an opportunity to influence the built environment to improve health and wellbeing.

[INSERT FIGURE 21.1 HERE]

3.1. Community and stakeholder involvement

Community participation and political decision making are built into planning legislation, ensuring that land-use and investment decisions have been reached through a democratic process. This aligns with contemporary health practice (and policy making generally) which promotes public participation to engage local communities in the decision making process and ultimately to improve decisions and outcomes by taking into account a wide range of views.¹⁵ Planners collaborate with local organizations and developers during

plan development and they also elicit the direct involvement of the community through collaborative planning exercises.

Observations about place are complex and there may be conflicting views among community members and experts about what is required. There are a range of methods to gather community perceptions about health and place including: asset mapping, workshops, photo-surveys, participatory mapping, street audits, and digital engagement.¹⁶ Beyond their role as a stakeholder in the planning process, health professionals may also be able to assist with these engagement activities.

The democratic nature of planning can create challenges when stakeholders within the community represent competing interests. These tensions can be directly related to health. For example, a group of residents living in derelict housing may resist urban renewal with concerns of raising property prices. Politicians may also prioritize the short-term objectives of economic growth over the costs of creating high quality sustainable environments. These complex problems require diverse stakeholders (the community, the local authority, developers, and other partners) to debate priorities and collaboratively create solutions; in practice this is difficult to achieve.

3.2. Evidence gathering

Evidence for planning purposes consists of data about the current and projected circumstances of a place and its residents. Data may come from government statistics agencies, surveys, and topic-based studies (such as a housing needs assessment). Health professionals can provide valuable data about the current and projected health needs of the local population and how this relates to the built environment. For example, a high prevalence of non-communicable diseases can be used to advocate for features which support physical activity including active transport infrastructure, playgrounds, greenspaces, and

sports facilities. A health impact assessment can also be used as evidence for a proposed plan or new development.

3.3. Plan, policy, and regulation development

The contents of a local plan, and the extent to which it addresses health and wellbeing topics, will depend on legislation and local requirements. The plan will usually include sections on employment, economy, transportation, housing, education, healthcare, green/blue spaces, environmental issues (e.g. flooding), and other topics of local importance. From a social determinants of health lens, it is clear that planning policies cover many factors that can influence health and wellbeing. Health professionals and planners should work together to ensure health considerations are integrated throughout the local plan.

3.4. Development management

The process of development management (as it is termed in the United Kingdom) involves reviewing applications for proposed changes to the built environment and working with developers to achieve growth requirements in line with policy objectives. In low- and middle-income countries much development happens without planning consent and enforcement activities rarely occur, creating a number of health risks.⁹

Healthy design measures can be incorporated into multiple stages of the development management process (Figure 2 outlines a UK example). It is important to influence the design and application process at the earliest stages to achieve healthy planning aims. Planners may negotiate with developers about the interpretation of local policies on a specific project, including the way in which health-related objectives (such as adequate daylighting) are translated into detailed designs. There are a number of tools to assist this process: healthy planning checklists, health impact assessment, and certification systems (e.g. WELL,

Leadership in Energy and Environmental Design (LEED), and Building Research Establishment Environmental Assessment Method (BREEAM)).

[INSERT FIGURE 21.2. HERE]

Planning authorities may require developers to pay a fee toward the cost of new infrastructure, such as sidewalks and parks. Charging arrangements will be set out in policy documents, although contributions are often negotiated on a site-by-site basis. It is not usually possible to achieve all policy aspirations on a single site for many reasons, often related to cost (known as economic viability). A significant challenge for development management planners, and a core task of urban planning, is thus to balance multiple competing interests and objectives.

3.5. Monitoring and review

The final stage in the cycle of urban planning involves reviewing the success of local policies against the plan's objectives. Many policies will be associated with monitoring indicators which should be reported publicly to increase transparency in local government. Unfortunately, this stage is not usually well-resourced and may be done poorly or not at all. A recent review of indicator tools about the physical environment impact on health found that a growing number report data at the neighborhood scale, allowing communities and policy makers to explore spatial and health equity issues within cities.¹⁷ Public health teams can offer significant support to planners in analyzing and interpreting municipal data related to health and the built environment which then becomes evidence for future plan preparation.

4. Frameworks for addressing the complexity of healthy urban planning

The relations between the urban environment, health, and policy solutions are complex, creating challenges for understanding and managing healthy cities. Complex systems are characterized as being uncertain, resistant to policy interventions, and likely to produce unintended consequences.¹⁸ There are a number of challenges associated with urban planning that contribute to the complexity of creating and delivering health-promoting policy and design interventions, including: competing objectives and demands (e.g. sustainability and economic growth); tensions with market-led versus public sector-led development; political decisions and priorities; short-term versus long-term considerations; and representation of community interests in land use. In addition, the complexity of the urban health system makes it difficult to investigate specific cause and effect relations and interconnections across features in the built environment.⁹ A number of frameworks have been proposed to address the complexity of urban health and associated planning policy responses.

Cummins et al. argue that a “relational” view of place and population health is needed for both policy and research purposes, specifically to address health inequalities. This approach would involve a more detailed investigation of people and place by rethinking spatial boundaries, the impact of social networks, and the dynamic nature of places.¹⁹ Corburn proposes this approach for healthy urban planning due to the many social, political, and governance processes involved.²⁰

Corburn also proposes an adaptive management framework to address the complexity of healthy urban planning and particularly health equity. Adaptive management acknowledges and works with complexity and uncertainty by closely monitoring policy interventions (through indicators and an evaluation framework) and making adjustments where necessary. A range of stakeholders should be involved in developing a model for

change, considering and prioritizing policy interventions, monitoring impacts over time, and adjusting policy responses as necessary.²¹

In line with the adaptive management approach, Rydin et al. also recommend experimenting with local policy solutions and closely monitoring policy impacts. They also propose that cities undertake complexity analyses to understand the connections between features of the urban environment and health and related policy interventions.⁹

A final healthy urban planning framework is the Health Map, proposed by Barton and Grant as a tool to promote dialogue and local investigation into health and place.²² This tool is informed by the Dahlgren and Whitehead social determinants of health model with reference to sustainable development principles.²³ The Health Map seeks to address the complexity of this policy area by improving understanding and collaboration across health and planning professionals. Beginning with people, the Health Map moves through social, economic, and environmental components of a settlement and encourages consideration of how each of these spheres impact health and wellbeing. A combination of the tools and frameworks discussed here can be applied by urban planners and public health professionals in the process of healthy city planning.

5. Conclusion

Barton argues in a *City of Well-being* that planning needs to get back to its century-old roots when “promoting a healthy environment was not viewed in opposition to economic development. Rather, it was seen as a prerequisite for it, increasing productivity and creativity.”²⁴ Today’s planners are charged with many tasks. Improving health and wellbeing is among these, but it may not be considered the most important by politicians, communities, or planners themselves. The task of planners and health professionals who seek to promote healthy urban planning is to raise the status of healthy design on the agenda of local leaders

and the community. Advocating for active transport, greenspace, and high-quality buildings requires a clear estimation of the co-benefits these features create for local economies (jobs and productivity), social justice and the environment, as well as the health benefits. In addition, planners in low- and middle-income countries play a key role in coordinating essential infrastructure requirements to meet the demands of rapidly growing cities such as water, waste, and sanitation services. Just as in high-income countries, planners need to consider infrastructure resilience to the effects of climate change and natural disasters, such as structural safety, overheating, drought, and adaptability to flooding. Our chapter has provided a summary of the planning system and a selection of frameworks to help health professionals harness the power of the planning system to shape healthy cities for the future.

References

1. Dannenberg AL, Frumkin H, Jackson R, eds. *Making healthy places: designing and building for health, well-being, and sustainability*. Washington, DC: Island Press; 2011.
2. Barton H, Thompson S, Burgess S, Grant M, eds. *The Routledge handbook of planning for health and well-being: shaping a sustainable and healthy future*. New York, NY: Routledge; 2015.
3. Howard E. *Garden cities of to-morrow*. Revised ed. Eastbourne, UK: Attic; 1985.
4. Marmot AF. The legacy of Le Corbusier and high-rise housing. *Built Environment*. 1981; 7(2):82–95.
5. Gordon-Larsen P, Nelson MC, Page P, Popkin BM. Inequality in the built environment underlies key health disparities in physical activity and obesity. *Pediatrics*. 2006; 117(2):417-424.
6. Howard, F. *Urban sprawl and public health: designing, planning, and building for healthy communities*. Washington, DC: Island Press; 2004.
7. *Global report on urban health: equitable, healthier cities for sustainable development*. Geneva, Switzerland: World Health Organization; 2016: 242.
8. *Addressing the social determinants of health: the urban dimension and the role of local government*. Copenhagen, Denmark: World Health Organization; 2012.
9. Rydin Y, Bleahu A, Davies M, et al. Shaping cities for health: complexity and the planning of urban environments in the 21st century. *Lancet*. 2012; 379(9831):2079–2108.
10. Kickbusch I, Gleicher D. *Governance for health in the 21st century*. Copenhagen, Denmark: World Health Organization; 2013.

11. Giles-Corti B, Vernez-Moudon A, Reis R, et al. City planning and population health: a global challenge. *Lancet*. 2016; 388(10062):2912-2924.
12. *Resolution adopted by the General Assembly on 25 September 2015: transforming our world: the 2030 agenda for sustainable development*. NY, New York: United Nations General Assembly; 2015.
13. *Copenhagen consensus of mayors: healthier and happier cities for all*. Copenhagen, Denmark: World Health Organization; 2018.
14. Grant M, Brown C, Caiaffa WT, et al. Cities and health: an evolving global conversation. *Cities & Health*. April 2017;1-9. doi:10.1080/23748834.2017.1316025
15. Martin GP. Public and user participation in public service delivery: tensions in policy and practice. *Sociol Compass*. 2009; 3(2):310-326.
16. Pineo H. *Healthy planning and regeneration: innovations in community engagement, policy and monitoring*. Watford, UK: Building Research Establishment; 2017. doi: 10.13140/RG.2.2.22459.11048
17. Pineo H, Glonti K, Rutter H, Zimmermann N, Wilkinson P, Davies M. Urban health indicator tools of the physical environment: a systematic review. *J Urban Health*; 2018:1-34.
18. Sterman JD. Learning from evidence in a complex world. *Am J Public Health*. 2006; 96(3):505-514.
19. Cummins S, Curtis S, Diez-Roux AV, Macintyre S. Understanding and representing ‘place’ in health research: a relational approach. *Soc Sci Med*. 2007; 65(9):1825-1838.
20. Corburn J. Urban inequities, population health and spatial planning. In: Barton H, Thompson S, Grant M, Burgess S, eds. *The Routledge handbook of planning for health and well-being: shaping a sustainable and healthy future*. New York, NY: Routledge; 2015:37-47.

21. Corburn J. *Healthy city planning: from neighbourhood to national health equity*. New York, NY: Routledge; 2013.
22. Barton H, Grant M. A health map for the local human habitat. *J R Soc Promot Health*. 2006; 126(6):252-253.
23. Whitehead M, Dahlgren G. Concepts and principles for tackling social inequities in health: levelling up Part 1. Copenhagen, Denmark: World Health Organization; 2007.
24. Barton H. *City of well-being: a radical guide to planning*. New York, NY: Routledge; 2017.

Figure titles

Figure 21.1.

Title: Simplified process of urban planning system

Figure 21.2.

Title: Development management process

Caption: Development management process for developer-led minor and major development in England and Wales with diamonds indicating points at which health and wellbeing considerations could be integrated.