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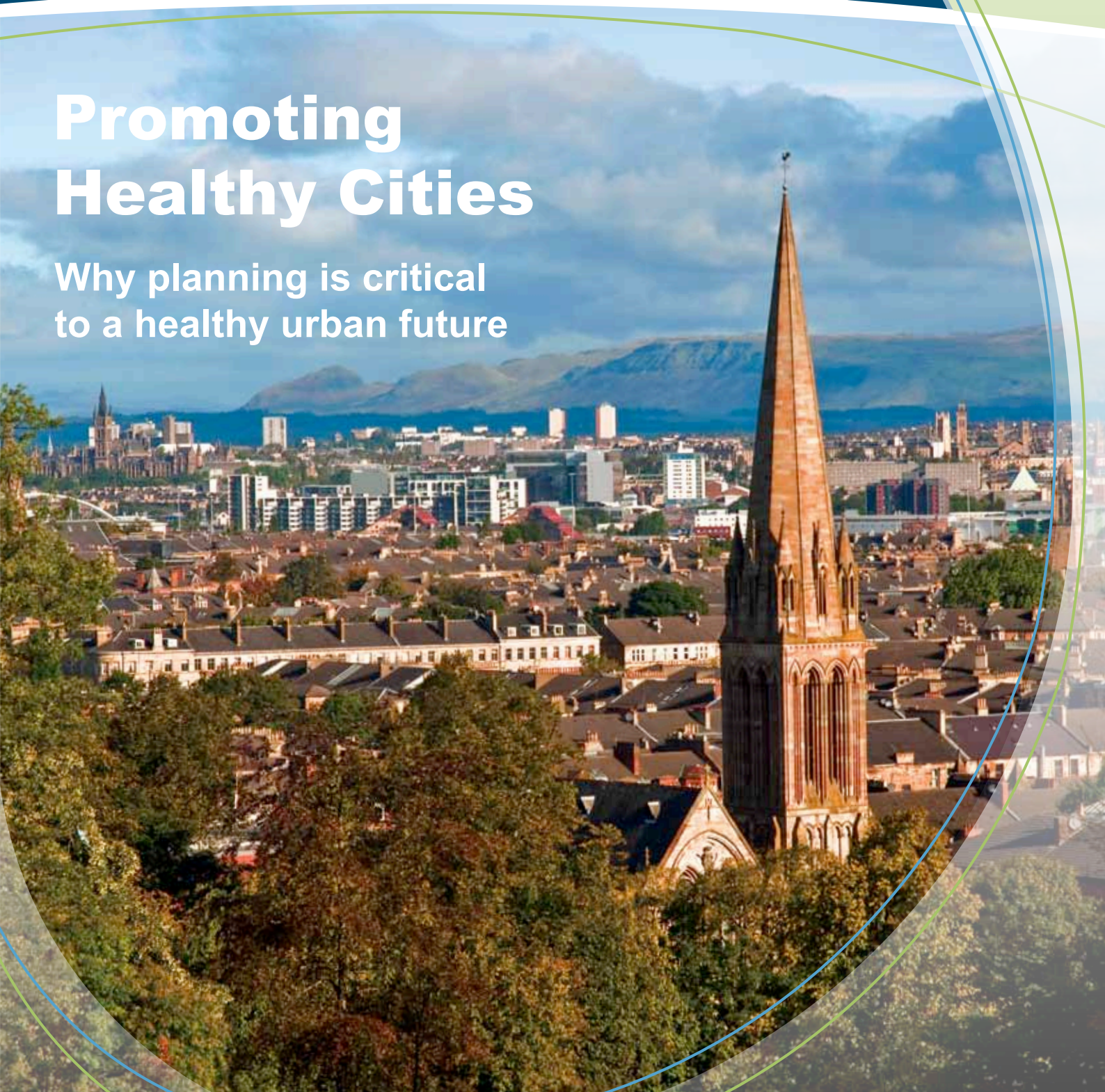
RTPI 2014
100 years of professional planning

PLANNING
Horizons

Promoting Healthy Cities

Why planning is critical to a healthy urban future



About the RTPI

With 23,000 members worldwide working in the public, private, charitable and educational sectors, the Royal Town Planning Institute (RTPI) is the largest institute for professional planners in Europe.

As well as promoting spatial planning, the RTPI develops and shapes policy affecting the built and natural environment, works to raise professional standards and supports members through continuous education, training and development.

Everything we do is inspired by our mission to advance the science and art of planning (including town and country spatial planning) for the benefit of the public.

Front cover: Glasgow is Scotland's largest city and a World Health Organization 'Healthy City'. While health in Glasgow has improved over the past century, it still has one of the poorest health profiles of any Scottish or UK city. Glasgow has adopted the approach of health equity in all policies at both strategic and operational levels. For instance, the main social housing provider has a strong focus on tackling health inequalities in all of its work, and the main strategy for employability in the city – Glasgow Works – similarly includes a focus on tackling health inequalities. In addition, community empowerment is a priority. This is supported by the Scottish Government, including several initiatives recognising the need to create positive physical environments, to approach health in an integrated manner, and to 'co-produce' urban health. Photo credit: Phillip Capper.

Foreword by the RTPI President

I am proud to be President during the Institute's Centenary Year of 2014. I am also proud to be a planner.

Planning was established as a discrete profession in response to the challenges of the day and a fundamental belief that the world needs planning. A century later, it is timely to review the challenges that we face now and their potential to shape professional planning for the next 100 years.

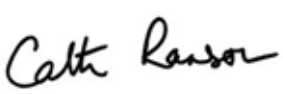
Our *Planning Horizons* series of papers considers how planning needs to respond to some of the major challenges we face in the twenty-first century. These challenges are already with us – from ensuring sustainable development and sharing economic growth, to responding to climate change and demographic pressures.

This third paper in the series considers one of the most pressing challenges facing our societies – ensuring the health and wellbeing of people who live in cities. Some cities are facing huge growth, other are facing declining populations, but whether in the developed or developing world there remain significant and in some places growing inequalities in health and wellbeing.

The paper summarises these challenges and our increasing understanding of how the urban environment shapes our health. It also provides examples of where planners, other professionals and decision-makers are leading responses to these health challenges, drawn from the UK and around the world.

This suggests that planning needs to be a critical part of our collective responses to the urban health challenge in the twenty-first century. Indeed, more generally, these papers demonstrate how the future of planning is critical to our collective future.

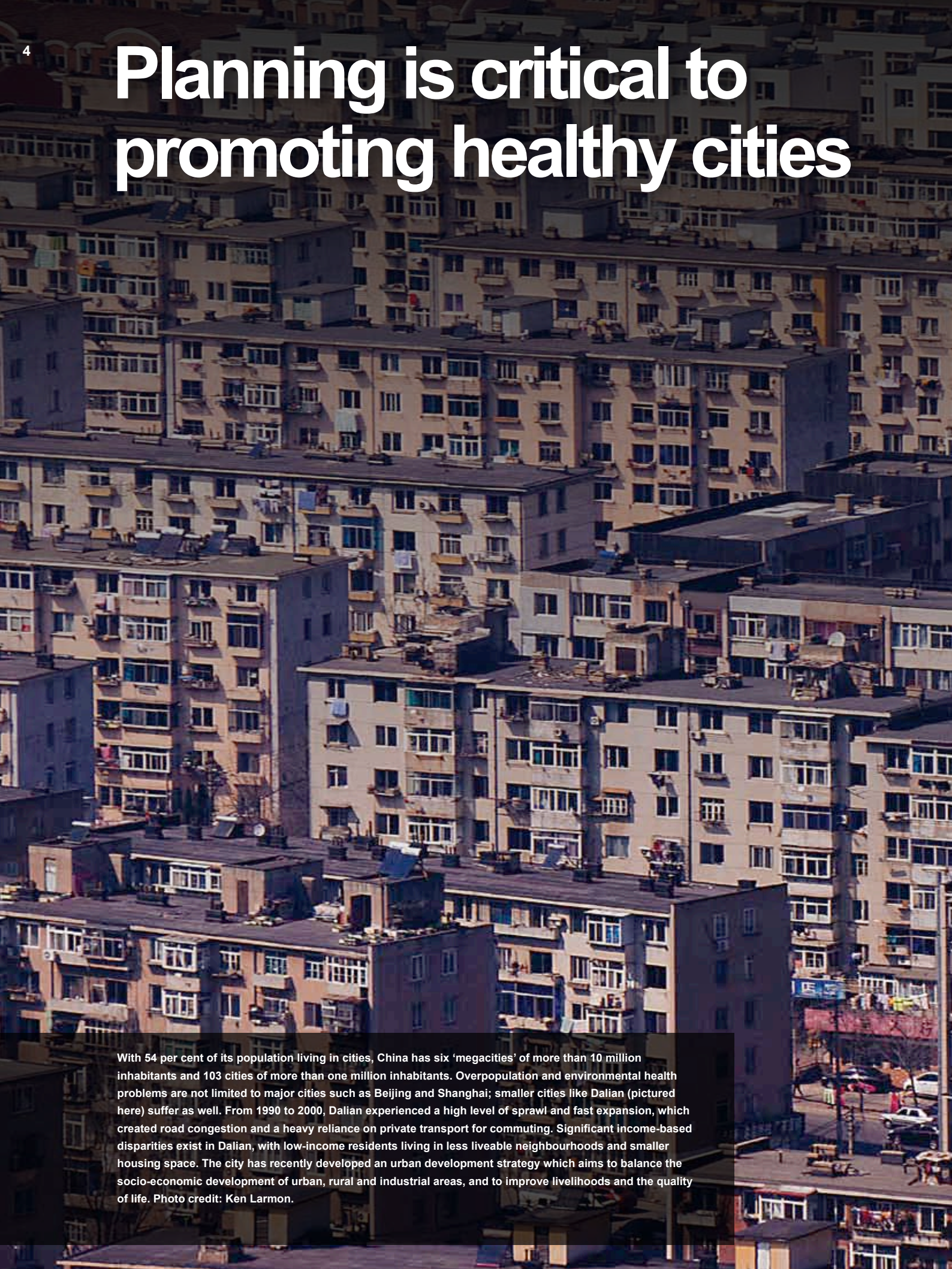
As a result, our profession will have to adapt and evolve as these challenges increasingly shape our world. In another respect, professional planning will need to return to its historic mission to create healthier, safer, stronger communities for all. This series of papers is just one part of the effort to give planning a renewed sense of purpose as a force for good.



Cath Ranson MRTPI

RTPI President 2014-2015

Planning is critical to promoting healthy cities



With 54 per cent of its population living in cities, China has six ‘megacities’ of more than 10 million inhabitants and 103 cities of more than one million inhabitants. Overpopulation and environmental health problems are not limited to major cities such as Beijing and Shanghai; smaller cities like Dalian (pictured here) suffer as well. From 1990 to 2000, Dalian experienced a high level of sprawl and fast expansion, which created road congestion and a heavy reliance on private transport for commuting. Significant income-based disparities exist in Dalian, with low-income residents living in less liveable neighbourhoods and smaller housing space. The city has recently developed an urban development strategy which aims to balance the socio-economic development of urban, rural and industrial areas, and to improve livelihoods and the quality of life. Photo credit: Ken Larmon.

The rise of health challenges such as non-communicable diseases, combined with urbanisation taking place on an unprecedented scale, means that cities will be the places that help to determine the health and wellbeing of the majority of the population in the twenty-first century.

'Health' is not limited to hospitals and clinics. The environment in which we live, work and spend leisure time – both the physical nature of places and the social environment of communities – has an enormous impact on our health and wellbeing. Health problems such as obesity, chronic heart disease, stress and mental health issues are intricately linked to the environments in which people live and work.

The lack of effective and proactive planning – in the broadest sense – for urbanisation can result in unhealthy places. If well-planned, however, cities can not only prevent many unhealthy outcomes but also promote better wellbeing, quality of life and opportunity for all. In this way, planning is an often neglected 'lever' to promote healthy cities – it can help to create successful places that enhance people's lives. Planning can promote healthy behaviours, environmental health, mental and physical wellbeing, and greater equity in health. In this paper we argue in that health and wellbeing need to be at the core of how we design and develop cities.

Executive summary

The state of our cities and towns will determine the health and wellbeing of most of the world's population in the twenty-first century. The majority of people now live in cities, and in the developing world urbanisation is occurring on an unprecedented scale. Despite the many advantages of living in urban areas, for many millions of people cities are places of ill health. On current trends, especially the rise of chronic non-communicable diseases and increasing rates of obesity, we face an urban health crisis. One of the keys to responding effectively to this crisis is to recognise the full range of environmental factors – physical and social – that can promote or harm health and wellbeing. Planning in the broadest sense – from development management and infrastructure to the location of health and community services – can play a crucial role in creating environments that enhance people's health and wellbeing.

This paper describes the scale and pace of urbanisation around the world, the health and wellbeing issues experienced by urban populations, and the environmental factors that shape these issues. By 2050, seven out of every ten people will be living in towns or cities – more than six and a quarter billion people. Globally, the urban population is growing by around 70 million a year, with 200,000 more people living in urban areas every day. This growth is greatest in Africa and Asia, followed by Latin America. In the developed world meanwhile, many cities are facing population decline or flight from urban centres, threatening their economic and social sustainability.

The developing and developed worlds face common but also distinct health challenges. A lack of effective and proactive planning for urbanisation can result in places which are poorly connected, overcrowded and polluted, with inadequate access to housing, services and employment, exacerbating inequality, social exclusion and poor health. For example, the number of people living in informal settlements could triple to three billion by 2050.

Further, the rise of chronic non-communicable diseases (NCDs) represents a major economic burden for both developed and developing countries. The global economic impact of the five leading NCDs – cardiovascular disease, chronic respiratory disease, cancer, diabetes and mental ill health – could total US$47 trillion (£28 trillion) over the next 20 years. Obesity represents another severe public health crisis. Globally, nearly 30 per cent of people are now either obese or overweight – more than two billion people. The prevalence of NCDs and obesity is projected to increase and the associated costs will be increasingly unsustainable for formal health systems but also societies generally.

Planned well, cities can expand the possibilities for economic growth, innovation and social development, and improve people's access to work, education, healthcare, housing and other services. In this way, better cities can be a major part of preventative health. However, for too many people, cities are failing to deliver this 'health dividend'.

To plan healthier cities for all, we need to recognise that cities have environmental characteristics – both physical and social factors – that can promote or harm health. Conditions such as obesity, chronic heart disease, stress and mental health are intricately linked to the environments in which people live and work. Many of these environmental factors derive from and reflect social and economic inequalities, which in turn, drive health inequalities. Transport, access to green space, pollution, housing quality, access to food, community participation,

and social isolation are all shaped by social inequality and in turn have significant implications for health. The location and accessibility of healthcare facilities also has a direct impact on the health of populations. We also now need to recognise that climate change may be the biggest health threat facing our societies, including the impact on safe drinking water, sufficient food and secure shelter.

Cities grow because they generate significant economic advantages through 'agglomeration effects'. In the twenty-first century, we need to create cities that maximise health alongside economic growth, by making health and wellbeing one of the primary factors in how we design, develop and manage urban environments.

For this, we need a new, wide-ranging urban health agenda. While planners and public health specialists will be central to this – planning and health once had a close relationship and need to be 'reunited' in many ways – the formal health sector and other policy areas will also need to be integrated into this. Further, in both developed and developing countries, in many cases policies can encourage location decisions which result in sprawling communities with poor connections and inadequate access to services, exacerbating inequality, social exclusion and poor health. The possibility of a wider and more integrated urban health agenda is not only undermined by the institutional division between planning and public health, but fragmented further between formal healthcare, social services, housing, education and regeneration as well as the private sector.

While there are no simple solutions for the complex health problems facing cities, some countries such as Scotland have recognised the scope and scale of the urban health challenge and have invested in the need to create positive physical environments which actively nurture better health and wellbeing. More countries need to do the same, and there are some important steps that nations, regions, cities and towns can take.

- **Develop more integrated strategies for healthy placemaking**

Cities need to adopt a more integrated approach to urban health. Cross-sectoral action is required to improve health, as well as location policies supporting health. In addition, health providers need to work much more closely with urban planners and other infrastructure providers, in particular to address location of healthcare services and how to improve access to them.

- **Gather greater intelligence**

Urban planners and policy- and decision-makers need a clearer picture of the social and economic determinants of health in their area to guide decisions and investments. Currently there are limitations and gaps in the evidence that prevent health issues from being effectively and efficiently incorporated into planning decisions, and vice versa. In the developing world, for informal settlements, where development has happened outside planning and building regulations, there is often a lack of basic data about populations.

- **Reform and strengthen institutions**

Ultimately it is not urbanisation that necessarily produces ill health but the failure to develop systems of governance that promote healthy urban environments. Governance and the greater integration of health and other policies are crucial as cities become an important scale at which to tackle health issues, and city governments often need to have the powers necessary to tackle them. This requires strategies at city level through which actions for better urban health can be achieved.

- **Involve professions and communities**

'Health' needs to be better understood and included in policy decisions outside of healthcare and public health, including by planners. Equally, urban planning needs to be much better understood by health professionals. Further, many communities' lack of power and control over their environments can also contribute to poor health. To promote healthy cities it is crucial to involve communities in urban planning in the broadest sense.

Cities, urbanisation and health

Mexico City had 21 million inhabitants in 2014, making it the fourth most populated urban area in the world. The city has experienced significant growth over the past few decades, from a population of three million in 1950. This growth has created numerous problems, including the inability to keep up with services and housing, which led to huge informal settlements on the outskirts of the city which lack basic services. Photo credit: Kasper Christensen.

A lack of adequate planning for urbanisation can result in sprawling environments, poorly connected places, limited access to services, housing and opportunities, exacerbating inequality, social exclusion and poor health. If planned well, however, cities expand the possibilities for economic growth, innovation and social development, and improve people's access to work, education, healthcare, housing and other services.

Urban areas need to be planned more effectively to enhance their benefits and reduce the threats to healthy development. According to the World Health Organisation (WHO), the determinants of healthy urbanisation include stimulating job creation, land tenure and land-use policy, transportation, sustainable development, settlement policies and strategies, community empowerment, vulnerability reduction and better security, among other factors.[1] Rapid urbanisation in developing countries presents a particular challenge, as rates of urban migration often accelerate beyond the capacity of cities' infrastructure and job opportunities, which in turn exacerbates inequality and disadvantage.

Demographic change

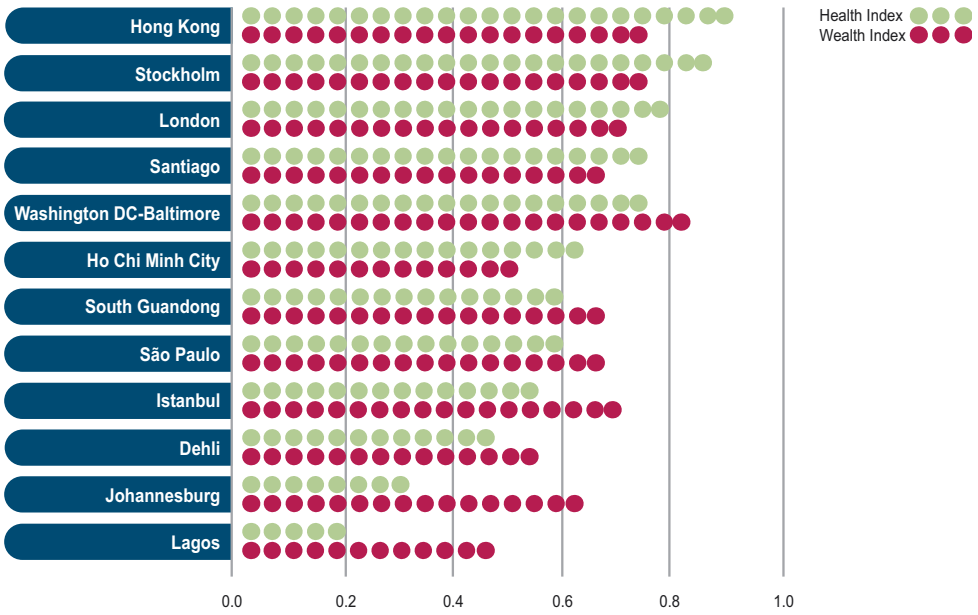
More than half of the world's population now live in urban areas, compared to 29 per cent in 1950 and 15 per cent in 1900. By 2050, it is estimated that seven out of every ten people will be living in towns or cities – more than 6.25 billion people. During the period 2000-2050, developing regions could add 3.2 billion new urban residents, a figure larger than the entire world's population in 1950.[2] At a global scale, the urban population is growing by around 70 million a year, which translates to 200,000 more people living in urban areas every day.

City growth is not uniform of course; some cities are growing and others are declining or facing suburbanisation. Urban growth will be greatest in Africa and Asia, followed by Latin America. This growth will not only result in more megacities, increasingly concentrated in Asia, but also in more medium-sized cities, especially in Africa. Nearly 12 per cent of the global population (828 million) live in informal settlements, and this number could reach two billion by 2030 and three billion by 2050.[3]

In China, the number of people living in cities has surged from 191 million (17 per cent of the population) to 622 million (50 per cent of the population) since 1980, and much of this is the result of the migration of rural workers into cities. Today, Lagos, Delhi and Dhaka are growing at the rate of over 300,000 people a year, and Mumbai is set to overtake Tokyo and Mexico City as the world's largest city in the next few decades with over 35 million people.[4]

Urbanisation in many developing countries has often not been accompanied with a supply of adequate housing, basic amenities and infrastructure. In Nigeria, demand has led to high rents, overcrowding (with an occupancy rate as high as six per room) and development of slum settlements. Non-compliance with building by-laws and regulations has led to environmental degradation, with serious consequences on the health of city residents. Most of the problems in Nigeria's main cities, such as Lagos, Idaban, Kano (pictured), Enugu and Benin City, result from the fact they were never fully planned.[5] Photo credit: Eugene Kim.

Health index and wealth index



Source: LSE Cities.[6]

This graph shows how a selection of metropolitan regions worldwide perform in terms of health and wealth, ranked by health performance in decreasing order. As the level of development decreases, wealth performance is often better than health performance, indicating the need to focus more on health as part of development.

An ageing population

Japan is currently the only country in the world with more than 30 per cent of its population aged over 60. By 2050 there will be 64 countries in the same situation.[7] Between 2000 and 2050, the proportion of the world's population aged over 60 will double from about 11 per cent to 22 per cent – an increase from 605 million to two billion.[8] In the UK, over the next 50 years the population aged over 65 will double and that the population aged over 85 will quadruple, and yet a House of Lords report has suggested that the UK is 'woefully underprepared' for this.[9]

Older age is related to chronic diseases, which are typically more prevalent as longevity increases, for example cancer, diabetes, heart disease, respiratory conditions, stroke and dementia and depression.

This means that the proportion of people living with a chronic disease for longer will also increase. Due to this, healthcare costs have risen in Europe to support a larger population in ill-health.[10] Disability in old age can be frequent and lowers quality of life, and in addition to providing care and rehabilitation demands that we consider the issue of accessibility in cities (discussed further in this paper). Age-friendly local physical environments are shown to be a key factor in ensuring active, healthy ageing, and mobility.[11]

Demographic change is also considered in the *Planning Horizons paper* on *Future-Proofing Society* (June 2014).

Are cities good or bad for health?

The historical perspective is that cities produce excessive morbidity and mortality (an 'urban health penalty'), but there is also an 'urban health advantage'.[12] Globally, higher health levels are associated with urbanisation, for instance in higher life expectancies, lower infant and child mortality rates, sanitation and secure nutrition.[13] Urban life can also be rich and fulfilling since it is more diverse, stimulating, and full of new opportunities.

The effect of urbanisation on health can be double-edged however, as a result of overcrowding, pollution, social deprivation, crime, and stress. Urbanisation can also result in hypertension, heart disease, obesity, diabetes and asthma.[14] Communicable diseases such as pneumonia and diarrhoeal diseases are the leading causes of childhood death globally and can be a particular problem in urban settings due to overcrowding, indoor air pollution and poor access to healthcare.[15] In terms of the proportion of deaths that are due to NCDs, high-income countries have the highest proportion – 87%. However in terms of number of deaths, 28 million (about three-quarters) of the 38 million of global NCD deaths in 2012 occurred in low- and middle-income countries,[16] where NCDs are rapidly increasing due to changing diets and lifestyles, transport modes and lack of physical activity. The global economic impact of the five leading NCDs – cardiovascular disease, chronic respiratory disease, cancer, diabetes and mental ill health – could total US$47 trillion (£28 trillion) over the next 20 years.[17]

A key issue for developing countries is the 'double burden of disease' which occurs as part of the 'epidemiological transition' associated with development from communicable to non-communicable diseases. Although in the mid-twentieth century urban mortality rates fell below rural mortality rates in low-income countries, the urban poor can often be worse off than the rural poor. In Africa, Asia and the Americas children from the poorest urban families are roughly twice as likely to die as those from the richest urban families.[18] Access to healthcare, social services, and cultural activities are in many cases better in the cities, but may not be evenly distributed among the population.[19]

The global increase in obesity

The urban environment can encourage excessive food intake and discourage physical activity.[20] Globally, at least 2.8 million people die each year as a result of being overweight or obese. The prevalence of obesity has nearly doubled between 1980 and 2008,[21] and a report by the Overseas Development Institute (ODI) puts the number of overweight and obese adults in developing countries at more than 900 million. In the UK, more than 24 per cent of the adult population is now obese; the equivalent figure in Ireland is more than 22 per cent.[22] The estimated cost to the economy from physical inactivity is £8.2 billion annually, but this does not include the contribution of inactivity to obesity, estimated at £2.5 billion annually.[23]

Childhood obesity is one of the most serious public health challenges of the twenty-first century. Globally, in 2010, 42 million children under the age of five were overweight, including 35 million children in developing countries.[24] In the UK, in 2010, three in ten children aged two to 15 were classed as either overweight or obese, up from 17 per cent in 2001.[25]

The rise of diabetes in China

Shenzhen, China. Photo credit: flickrMarcus.

A large-scale study into diabetes in China was published by the China Noncommunicable Disease Surveillance Group in September 2013, based on a survey of nearly 100,000 people. In 1980 less than one per cent of the Chinese population was diabetic; now the figure is 11.6 per cent, with half of the population showing signs of being pre-diabetic. This compares to a diabetes rate of 8.3 per cent in the US. Given the scale of the country, the financial implications of the disease are understandably immense.[26]

The role of place in health outcomes

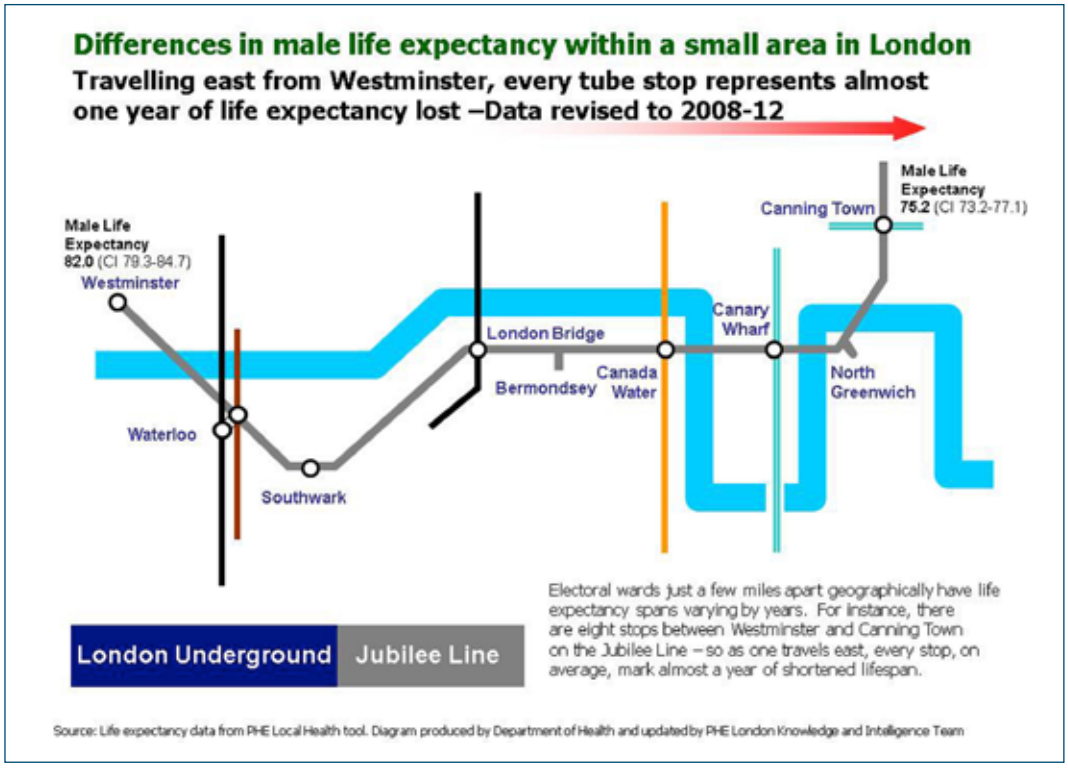
Disparities in life expectancy do not just happen between nations, but also within regions, states, and cities, all the way down to the local level. In addition to individual circumstances, there is growing evidence for the impact of area level factors on a range of physical and mental health outcomes.[27]

The social determinants of health

In England, the *Fair Society, Healthy Lives* report (the Marmot Review) in 2010 showed that there is a 'social gradient' in health: those living in the most deprived neighbourhoods die earlier and spend more time in ill health than those living in the least deprived neighbourhoods. In part this is because those living in the most deprived neighbourhood are more exposed to environmental conditions which negatively affect health. Transport patterns, access to green space, pollution effects, housing quality, community participation, and social isolation are all structured by social inequality.[28] These social and economic inequalities underpin the determinants of health – the range of material, social, environmental, psychosocial, behavioural and biological factors that shape health and wellbeing.

In Scotland for example, there is a twenty-year gap in male life expectancy across Glasgow: male life expectancy in the Parkhead West and Barrowfields areas is 59.9 years, compared with 80.1 in the Kelvinside and Jordanhill areas.[29]

Relatedly, there are large disparities in physical activity. In England, only 12 per cent of adults who are degree educated are physically inactive. In contrast, people with no qualifications are three times as likely to take little or no exercise.[30]



Neighbourhoods with low socio-economic status usually have fewer physical activity resources than medium to high socio-economic status neighbourhoods, and this can lead to more inactivity among neighbourhood residents.[31]

An integrated approach for planning and health

WHO initiated the Healthy Cities movement in Europe in the 1980s, which was motivated by the new risks posed to health from the urban environment. The Healthy Cities movement is associated with a new inter-sectoral understanding of public health as being concerned with a broad range of social and environmental determinants of health. This involves a critical role for planners and others.

In England, the Marmot Review and 2010 Public Health White Paper *Healthier Lives, Healthier People* recommended that planning, transport, housing, environment and health systems should be fully integrated to address the social determinants of health.[32] In Scotland, the 2008 *Good Places, Better Health* implementation plan has encouraged a 'system-based' rationale for action to reduce health inequities and the links with other governmental strategies related to this domain.[33]

Taking an integrated approach to promote healthy cities also means considering other dimensions of sustainable development. Health cannot be thought of in isolation to the economy and the environment. Employment is a key determinant of health and wellbeing, and unemployment and underemployment have adverse mental and physical health consequences, such as increased stress and depression.[34]

Further, climate change may ultimately be the biggest health threat facing our societies. Climate change affects the social and environmental determinants of health, including safe drinking water, sufficient food and secure shelter. The global warming that has occurred since the 1970s has caused over 140,000 excess deaths annually up to the year 2004. The direct costs to health (excluding costs in health-determining sectors such as agriculture and water and sanitation) is projected to be between US$2-4 billion a year by 2030. Extreme high air temperatures contribute directly to deaths from cardiovascular and respiratory disease, particularly among elderly people. Many of the major killers such as diarrhoeal diseases, malnutrition, malaria and dengue are highly climate-sensitive and are expected to worsen as the climate changes. Studies suggest that climate change could expose an additional two billion people to dengue transmission by the 2080s.

Rising temperatures and variable rainfall are likely to impact the production of staple foods in many of the poorest regions, by up to 50 per cent by 2020 in some African countries. This will increase the prevalence of malnutrition and undernutrition, which currently cause 3.1 million deaths every year. By the 2090s, climate change is likely to widen the area affected by drought, double the frequency of extreme droughts and increase their average duration six-fold.[35]

Climate change and economic development are considered in the *Planning Horizons* papers on *Future-Proofing Society* (June 2014) and *Creating Economically Successful Places* (November 2014).

Urban environments and health

‘Health’ was defined by WHO in 1946 as a “state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity”. The environment has an impact on health outcomes, and planners can play an important role in positively influencing health including through the design of neighbourhoods.[36] This section looks at health from the perspective of the built environment.

The location and accessibility of healthcare facilities have a direct impact on the health of populations, likewise the location and quality of housing. In developing countries it is especially important that basic infrastructure such as water and waste disposal are improved. Transport systems need to incentivise ‘active travel’ and tackle car-dominated environments. Other key dimensions are the availability of green infrastructure and access to good food.

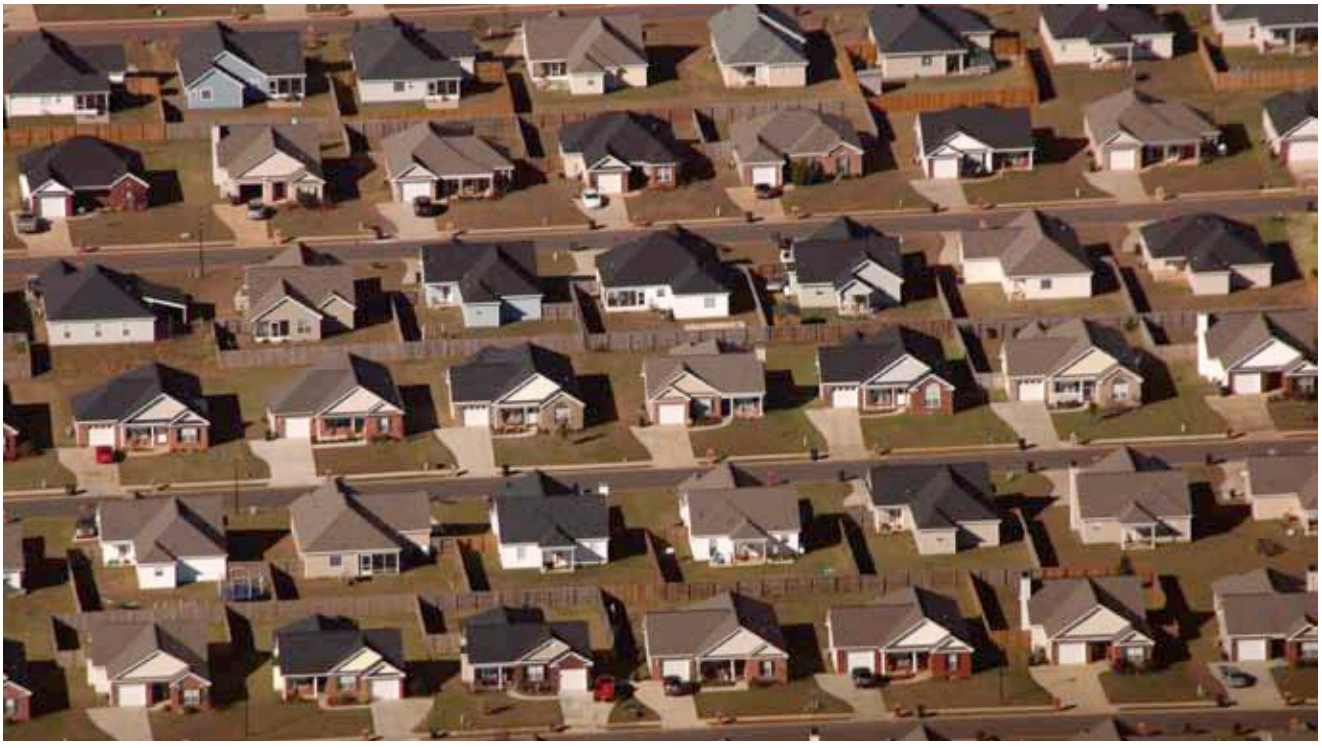
Times Square, New York City.
The New York City Department of Transportation (DOT), led by commissioner Janette Sadik-Khan between 2007 and 2013, created 50 pedestrian zones throughout the city, through repurposing 26 acres of space previously allocated to cars, and built hundreds of miles of cycling lanes in the city. On Broadway Avenue, which goes through Times Square, the DOT took out two lanes for car traffic, and turned the space into a bike lane, buffered by a sitting area that is separated from the regular lanes by concrete planters. Photo credit: Justin Swan.

Urban form and health

When unplanned and poorly managed, cities can expand into rural areas and large tracts of land can be developed in a 'leapfrog' low-density pattern. Such development patterns can have serious economic, environmental and social as well as health costs.

Cities characterised by low residential density, low employment density and low 'connectivity' are associated with less walking and cycling and more car travel than denser communities.[37] Sprawl can result in long commutes, a lack of access to fresh food, and isolating, car-oriented communities. As a result, the frequency of chronic medical conditions such as asthma, diabetes, hypertension and cancer increases with sprawl.[38] People living in sprawl areas are more likely to be overweight and obese.[39] Sprawl is also associated with lower social capital, stress and mental ill health.[40] Long-distance commuting raises employee absenteeism and reduces productivity. Research in the US has found that as areas became less sprawling and more compact and connected, several quality of life factors improve: people have greater economic opportunity; spend less of their household income on housing and transportation; and have a greater number of transportation options available to them.[41]

Despite this, sprawl is becoming more prevalent in low-income countries. As governments are also often unable to provide subsidised public transport systems, those without choice are



The Hickory-Lenoir-Morganton ('Unifour') metropolitan area consists of four counties in the Catawba Valley region of western North Carolina. The area was ranked as the 'most sprawling' in research published in 2014.[43] This research also found that sprawl correlates with higher rates of obesity, traffic fatalities, ozone pollution, lack of social capital, vehicle miles travelled, physical activity, and residential energy use. Photo credit: Mark Strozier.

often left to depend on informal transport or on walking. In India for instance, most city centres have to abide by the floor space index (restrictions on the floor space allowed to be constructed per unit of land area), which has limited the height of buildings, and thus density. This, in turn, has pushed urban growth to the city outskirts, effectively increasing the length of trips and the prevalence of motor transport.[42]

Mixed use development and higher density reduce the need to travel by providing services close to where people live, providing opportunities for social interaction and economic mobility. It is essential for governments to encourage and pursue location policies which take these issues into account.

Design and public realm improvements can positively contribute to health

Frequently, environments in poorer neighbourhoods can be lacking in amenities compared to more affluent communities.[44] However, the physical environment can be shaped through various planning and design processes to improve health outcomes. Street-scale urban design and land-use approaches can support physical activity and safety. Several countries have introduced the concept of 'active design' in guidelines to address obesity and related diseases by encouraging physical activity through the design of the environment.[45] Other practices include good quality, well-maintained public spaces, improved street lighting or infrastructure projects that increase the ease and safety of street crossing, better street connectivity, traffic calming measures, and enhancing the aesthetics of streets through landscaping. Urban environmental design can also contribute to reduced crime and violence.[46]

At a larger scale, urban design and land-use regulations, policies, and practices can make environments healthier, for example encouraging transit-oriented development, addressing street layouts, the density of development, the location of more shops, jobs and schools within walking distance of where people live.[47]

Another important aspect for health is making cities more inclusive. 'Inclusive design' refers to the design of urban space in a way that aims to remove the barriers that create undue effort and separation, for instance poorly dropped kerbs. It enables everyone to participate equally, confidently and independently in everyday activities, which is important to health and wellbeing. Inclusive design requires that decision-makers and planners consider all of the potential users of public spaces and what their particular needs are. This is important as 14 per cent of the UK population has mobility difficulties.[48]

Access to healthcare and the quality of healthcare provision

The availability and access to healthcare services in urban environments is a key dimension of healthy cities.[49] Despite this, we still tend to consider health systems and policies mainly at the national level, and as if they are detached from the environments in which they operate.[50] We need to consider where healthcare facilities are provided, including as part of new developments, and how public services are organised and offered spatially.

Globally, healthcare provision is undergoing significant transformation in so far as services interact with the city. Whilst responsibility for paying for healthcare varies in different territories, a common trend is for its delivery to be increasingly fragmented into complex combinations of private, public and non-profit provision. The fragmentation of NHS services in England is one example. This results in an increasing disconnection between city management on the one hand, which answers to local concerns, and healthcare provision on the other, which may have to answer to management, shareholders or donors at some distance, even in different countries.

This can result in the location of healthcare facilities in places that may not be best for city populations and in the disconnection between facilities and the communities around them, such that the positive economic spin-offs of these facilities and personnel (including for health research) to local regeneration are lost. The location of health research is a key tool in government policy to support regions. In Scotland, the Town Centre First Principle encourages uses creating footfall, such as health services, to locate in town centres to help them to thrive. In addition, funding polices for new health facilities is not related to where population change is happening; for instance it would appear that the NHS in England has no strategy for responding to internal population migration other than expecting developers to finance it.

The choice of sites for new services is key to satisfying rising patient expectations of accessibility and quality of care. According to the UK Department of Health, during a 12-month period, 1.4 million people miss, turn down or choose not to seek medical help because of transport problems. Issues such as site ownership and availability often impact negatively on access and therefore on health inequalities. Crucial to the accessibility and efficiency of services are the appropriate choice of sites alongside local amenities where possible, proximity to existing and proposed pedestrian and cycling routes, and public transport. Healthcare services could also be more integrated with services such as social care, leisure, sport, housing advice, police and community development.

Healthcare access remains a challenge in developing cities

In the developing world, urbanisation has generally been associated with improved health outcomes. This is because cities offer more or improved basic services (for example potable water and sanitation) and health facilities including specialised services, which is not always the case in rural settings. However, the picture is more complex and these improvements mask the fact that health outcomes can be worse in cities than in rural areas, as the WHO 2010 report *Hidden Cities: Unmasking and overcoming health inequities in urban settings* shows.

Photo Credit: Reading Tom

Case study: Bromley by Bow Centre

The Bromley by Bow Centre in the London Borough of Tower Hamlets aims to serve the local community by providing a wide range of services and activities, which are integrated and co-operative in nature. It hosts the local general practice surgery, a variety of social enterprises, a children's centre, artists' studios, a healthy living centre, and provides adult education courses, care and health services for vulnerable adults, outreach programmes and a range of advice services. This approach enables GPs to refer patients to services that help to tackle the social determinants of ill health, including welfare, employment, housing and debt advice services. The centre has received international recognition for its entrepreneurial approach to community regeneration and effective delivery of integrated services.

Although child survival rates in urban areas are mostly higher than in rural areas, as noted, the poorest urban children are twice as likely as the richest to die before the age of five.[51]

Of all the basic human services available to people living in informal settlements, one that is often beyond the control of residents are health services. None of these services can be provided or created by residents themselves, although in some cases informal health services exist in these settlements. The continued neglect of ever-expanding slum populations could lead to greater expenditure and diversion of healthcare resources to the management of end-stage complications of diseases that are preventable.[52]

Housing

Health issues are not always acknowledged in housing requirements, even though the quality, design and context of housing can have significant effects on health and wellbeing. Planners have an important role in providing the right housing for populations, along with other built environment actors. This means quality housing that is located in the right place, with the right services nearby.

In developed countries, many people still live in inappropriate housing

Poor quality housing is a health burden for many people, including in developed countries. In the UK it has been estimated that poor quality housing costs the NHS at least £760 million and society £1.9 billion annually.[53] Poor conditions such as overcrowding, damp, mould, indoor pollutants and cold have all been shown to be associated with physical illnesses including asthma and breathlessness, eczema, allergies, hypothermia and heart disease. The physical characteristics of housing can also impact on mental health, as families have to cope with the stress of living in cold and damp conditions.[54] It is estimated that around three in ten people live in bad housing in the UK (3.6 million children, 9.2 million working age adults and two million pensioners).[55] In 2011, the number of households in fuel poverty[56] in the UK was estimated at around 4.5 million, representing approximately 17 per cent of all households.[57] Alternatively, planning for cooling, shading and ventilation during heatwaves is also important, especially to protect elderly populations. In some housing there is not enough space to adequately store, prepare or cook food, which can result in a higher reliance on fast food.

Houses in Swansea, Wales. Photo credit: Marie.

Housing shortages can also affect health and wellbeing, increasing overcrowding and forcing people to live in sub-standard housing. As the UK's population is growing, pressure on housing and public services will increase in some areas. The increased cost of housing for families can lead to trade-offs in terms of healthy food and healthcare because of the cost of housing.[58] Indirect factors related to housing also have an impact on health; houses need to be in close proximity to community facilities, and accessible by existing public transport and pedestrian and bike paths.

Case study: Wales Arbed

Arbed is a strategic energy performance investment programme in Wales. Phase one of the Arbed project has been the largest programme of its type in the UK. The programme has invested £36.6 million and worked with social housing providers to make communities in deprived areas of Wales more energy efficient. This was done by retro-fitting homes with measures including solid wall insulation, solar panels and heat pumps.

Housing challenges in developing countries

As noted above, nearly 12 per cent of the global population live in informal settlements today. Urban growth is projected to be highest in developing regions, where 32.6 per cent of the urban population lived in slums in 2010.[59] Slums are characterised by crowded living conditions and inadequately constructed housing, which put people most at risk of injury. Although this is not limited to developing countries, according to WHO over 95 per cent of people killed by natural disasters are from low-income countries. These risks were realised in the aftermath of the earthquake that devastated Haiti in January 2010 for example, where 86 per cent of the people living in Port-au-Prince were in tightly-packed, poorly-built, concrete buildings, largely contributing to the high death toll (estimated at 220,000 people).[60]

In many lower income countries, the exposure to indoor air pollution from the burning of biomass and other cheap energy sources for heating and cooking can cause significant health burdens. It is estimated that 1.5 million people die every year as a result of indoor air pollution from unclean fuels.[61] Investing in cleaner household energy will also help contribute to achieving global greenhouse-gas reductions.

Transport

Transport policies and planning decisions can affect health and wellbeing in various ways; both directly, for example through traffic accidents, commuter stress, or people's access to health-related goods and services, and indirectly, for example through higher rates of cancer, cardiovascular diseases and respiratory illnesses as a result of pollution or contributing to sedentary lifestyles.

Further, transport infrastructure shapes people's decisions about where to live and work, and can transform and regenerate places.[62] It can provide access to employment and services, provide opportunities to be physically active, contribute positively to lively communities and a liveable city. Conversely, transport can contribute to community severance, which has a significant effect on social cohesion.[63]

Active and soft modes of transport

There are many health benefits to using alternative methods of transportation to motorised personal vehicles. Improving public transport and walking and cycling conditions has been shown to improve people's mental health by increasing physical activity and community cohesion.

High-quality walking environments create the opportunities for people to walk for transport or pleasure.[64] Areas that improve incidental physical activity most are characterised by higher density land-use mix including local shops and services, distance to destinations, good connectivity and safety.[65]

Appropriate planning and infrastructure can help encourage more cycle-friendly and walking-friendly cities. This requires a holistic and integrated approach to urban mobility where the shape, structure, function and demographics of cities are all vital components of the urban transport system.[66] Urban planners can prioritise providing well-connected and safe pedestrian environments in their land-use and transport planning and decision-making.

Case study: Active travel in Wales

The Active Travel (Wales) Act 2013 is a landmark law to make it easier for people to walk and cycle in Wales. The Act, considered to be a world first, makes it a legal requirement for local authorities in Wales to map and plan for suitable routes for active travel, and to build and improve their infrastructure for walking and cycling every year. It creates new duties for highways authorities to consider the needs of walkers and cyclists and make better provision for them. It also requires both the Welsh Government and local authorities to promote walking and cycling as a mode of transport. By connecting key sites such as workplaces, hospitals, schools and shopping areas with active travel routes, the Act will encourage people to rely less on their cars when making short journeys.

Traffic is a major contributor to ill health

Not only does traffic contribute to various forms of pollution and respiratory illnesses such as asthma and lung cancer, it also puts people at a greater risk of accidents.[67]

Poorer communities tend to experience higher concentrations of pollution and have a higher prevalence of cardio-respiratory and other diseases. In England, 66 per cent of carcinogenic chemicals emitted into the air are released in the 10 per cent most deprived wards. As for road traffic accidents, children are four times as likely to be hit by a car in the 10 per cent most deprived wards than in the 10 per cent least deprived wards.[68] Cities can use traffic-calming measures to prevent traffic related injuries. For instance, in Birmingham, a traffic calming exercise led to a reduction in child casualties which led to significant savings for the local NHS. WHO has predicted that traffic accidents will be one of the leading causes of death by 2020.[69] Traffic is also one of the worst health hazards facing the urban poor: WHO estimates that 130,000 premature deaths and 50-70 million incidents of respiratory illness are caused by urban air pollution in low-income countries every year, half of which are in East Asia.[70]

Hong Kong's air quality is a significant health risk to local citizens. A review of air quality in 2011 ranked Hong Kong's nitrogen dioxide levels (a key indicator of roadside pollution) 31st out of 32 major cities in China, despite Hong Kong being the richest city in China with the best infrastructure for environmental protection. For some commentators there has been a lack of urgency in the Hong Kong Government's approach to target the most serious threats to public health. Emissions from vehicles, for example, have been addressed by schemes that require new vehicles to meet the highest standards, but do not force the oldest and most polluting off the road. Civic Exchange, a public policy think-tank that has been working to improve air quality in Hong Kong, was supported by a group of concerned local citizens to establish the Clean Air Network (CAN). The objective of the CAN is to bring together and amplify voices on air quality in Hong Kong. The Government has introduced new Air Quality Objectives (AQOs) for Hong Kong in 2014 and a comprehensive programme to reduce street level pollution in 2012 in order to improve air quality. Photo credit: Michel Heiniger.

Transport continued

Mobility and transportation equity

To many, equitable access to urban mobility is a basic human right. Mobility in this sense is more than just transport and developing infrastructure and services; it is about "overcoming the social, economic, political and physical barriers to movement, such as class, gender relations, poverty, physical disabilities and affordability". For instance women in many countries worldwide are less likely to have access to private motorised transport.[71]

Photo credit: Claudio Olivares Medina.

Case study: Transmilenio in Bogotá

Bogotá is one of the cities in Latin America which has implemented the Bus Rapid Transit (BRT) system. The system includes pedestrian walkways, parks and bike paths. Since it opened in December 2000, travel times have reduced by 32 per cent, pollutant emissions by 40 per cent and the accident rate by 90 per cent.

Case study: Walkability in Belfast

The Walkability Assessment for Healthy Ageing (WAHA) tool was designed for use by older people and organisations to evaluate the age-friendliness of the built environment on local streets and in parks in Belfast. The project was piloted in the Sydenham area of east Belfast and in parks across Belfast by older people with various mobility levels. The tool was designed to look at the impact of the built environment on the levels of physical activity of older people. Using the WHO Checklist of Essential Features of Age-friendly Cities and existing walkability assessment tools as a guide, a questionnaire was developed which enabled older people to perform self-assessments of their local area. The results identified many positive aspects, as well as common barriers in the built environment that may prevent older people engaging in physical activity in their local area. Key findings for developing a more walkable environment for older people include consistent provision of maintained pavements and dropped kerbs, public seating, street lighting and pedestrian crossings. The project also highlighted the importance of the personal safety of older people.

Photo credit: Garry Knight.

Sanitation: water and waste

Globally, some 1.1 billion people lack access to safe water and 2.6 billion lack access to adequate sanitation.[72] Public health interventions such as changes in sanitation infrastructure can substantially improve health outcomes.

Rapid urbanisation in developing countries results in a lack of basic infrastructure

The lack of an effective planning framework can have negative consequences for health, particularly when it is coupled with poor or non-existent basic infrastructure services, such as paved streets, housing and public transport. In most low-income, and many middle-income countries, local governments do not have the human and financial resources to fulfil these responsibilities, which are done by central government agencies or not at all.[73] For this reason, many new developments take place spontaneously and informally, through individual households or private developers. Well-planned public infrastructure is also important to build resilience to climate change.

It is estimated that 2.6 billion people worldwide do not have adequate access to sanitation, the largest proportion in south Asia, eastern Asia and sub-Saharan Africa. This puts a great number of people in urban areas at risk of developing diseases related to poor water and hygiene, including gastrointestinal infections and diarrhoeal diseases. Most disease transmission occurs at the neighbourhood-scale, although city authorities often see on-site toilet facilities as the responsibility of individuals.[74] Improving access to sanitation in informal settlements remains an ongoing long-term challenge, including for planning.

Untreated wastewater presents a health challenge for many cities and in particular in lower income countries, as it can contain high concentrations of organic material, pathogens, and toxic compounds which can be very detrimental for health. In Asia, an average of only 35 per cent of total wastewater is treated, with the proportion decreasing to 14 per cent in some parts of Latin America and the Caribbean and to zero in some parts of Sub-Saharan Africa.[75] It is also a missed opportunity for water reuse – wastewater can be treated and then used for horticulture, providing nutritious food for city dwellers. For example, in Adelaide waste water is treated and delivered to the nearby Virginia horticultural region where vegetables are grown.

Photo Credit: Rodrigo Levy.

Rio das Pedras (pictured) is the third largest informal settlement in Rio de Janeiro. Home to approximately 63,500 individuals, Rio das Pedras is a vibrant settlement, however residents of this favela face seasonal flooding, vehicle traffic, improvised construction methods, and limited waste disposal. These factors, coupled with limited access to municipal services and transportation likely predispose residents to injury and poor health. Little reliable data exists that can accurately characterise the health of residents of Rio das Pedras.[76]

Open space and green infrastructure

Introducing new green spaces to towns and cities can provide long-term and sustained health benefits for local communities.[77] Green infrastructure (green spaces and water features) also has an important role to play to minimise the heat island effect, which has negative health effects. A ten per cent increase in green space in our cities could help to keep temperatures at present levels into the 2050s, despite climate change.[78]

Inequities in access to green spaces

Inequities in access to green spaces can then lead to health inequalities. The most affluent 20 per cent of wards in England have five times the amount of parks or green space than the most deprived 10 per cent of wards.[79] Thirty-five per cent of people in the lowest socio-economic grade visit green spaces infrequently (less than once a month), likely due to the low availability and poor quality of green space in deprived areas.[80] Meanwhile, a UK study showed significantly smaller health differences between highest and lowest income groups in areas with more green space than between these groups in similar areas with less green space.[81] Providing good quality local green space is an effective way to tackle inequality and improve health.[82]

Photo credit: Steven Vance.

Case study: Urban heat islands in Chicago

Chicago has enacted legislation that requires landscaping around parking lots and more energy-efficient building practices. The City Council encourages residents to use light-coloured, reflective materials for roofs, to plant trees on properties to increase the shading of buildings and parking lots, and to increase the amount of vegetation overall.

Projects include a rooftop garden on City Hall (pictured) which has set the precedent for green roofs in the city, a permeable and reflective alley on the North Side, miles of median planters and many campus parks that transform asphalt parking lots around public schools into parks. Chicago also uses green building technologies and practices in all of its public building projects.

Availability of green space is positively associated with physical and mental health

The availability of walkable green space is associated with a lower cardiovascular risk and reductions in mortality and morbidity from circulatory disease and higher levels of physical activity in adults and children. Levels of physical activity are not just dictated by the proximity of residents to green spaces however; other influences include the quality of the surrounding environment, the density of residences, the mix of land uses and the degree to which streets are connected and the ability to walk from place to place. Cities need to provide access to local public facilities and spaces for play, sport and recreation, so as to allow children and adults to be physically active.

Access to outdoor environments and nature is beneficial for mental wellbeing. It makes people more active and encourages people to connect: research by the UNESCO UK Man and Biosphere (MAB) Urban Forum has shown that colourful and interesting urban green spaces help build a sense of pride, stimulates community spirit and promotes civil society.[84] Open and green spaces provide opportunities for formal and informal social interactions.

Mental health benefits that have been attributed to interactions with green spaces and natural environments include reduced anxiety, increased self-esteem and psychological wellbeing, improved mood, improved academic performance and improved cognitive functions.[85] Parks positively influence stress levels and mental well-being.[86]

Photo credit: Rina Pitucci.

Case study: Green spaces regeneration in Sheffield

Green space can be used to encourage active lifestyles. In Sheffield, the Darnall Green Spaces regeneration project aimed to facilitate the regeneration of a number of parks in Darnall, including High Darnall Community Park. Walls of shrubs with grass and trees have been replaced, making the parks safer and more welcoming. Derelict surfacing and unsafe equipment were replaced by new landscape features and equipment for young people such as new climbing boulder. Equipment for play was added including seats, swings, a climbing frame and a roundabout. The project worked together with community members and stakeholders including local primary schools.

Urban agriculture and urban food

Poor access to healthy food and the cost of fresh food is an important issue to consider in order to promote healthy cities. Nutrition and food consumption play an important role in the health of populations but access to healthy, nutritious food is increasingly challenged.

In developed countries, malnutrition is a growing public health concern, which like obesity is more prevalent among the socially and economically disadvantaged section of the urban population. Food poverty, the inability to afford or have reasonable access to a nutritionally adequate diet, still exists even in economically successful societies. 'Food deserts' are impoverished urban neighbourhoods that lack supermarkets and grocery stores, but boast dozens of fast food and snack shops.

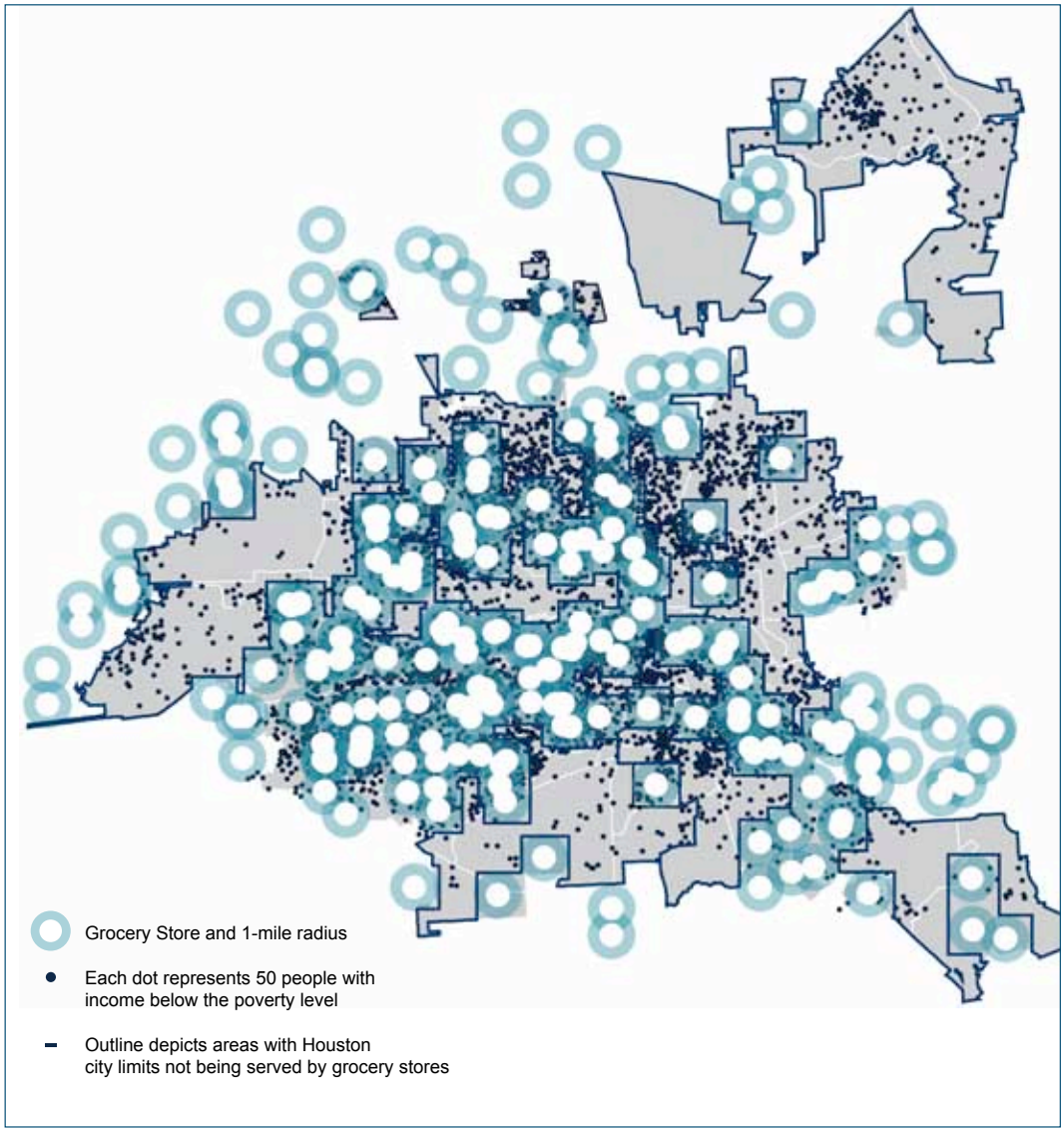
Food poverty and access to healthy food

Food poverty is a growing concern and financial and physical access to healthy food can vary widely. Financially, healthy eating is not feasible among certain groups as it would absorb high proportions of weekly income for those on low incomes. For instance, research in Ireland has shown that low-income one parent households with one child would have to spend 80 per cent of their weekly disposable income to purchase a healthy food basket. Physically, in many cases healthy food is not accessible within walking distance or by public transport.[87] Studies on access to unhealthy food in the UK have shown that food poverty may disproportionately affect those in the most deprived areas.[88] Consequently, food poverty cannot be considered merely within the realm or personal consumer choice but within the wider context of physical and financial access to healthy food stuffs.[89] In the West Midlands in the UK, this issue has been recognised by developing a physical accessibility standard for healthy food across the region, which is the percentage of households within 20 minutes, by walking, cycling or using public transport, of a place where fruit and vegetables are sold. This accessibility standard was incorporated as policy in the Black Country Core Strategy.

Food production in cities and their surrounding regions

In addition the rapid urbanisation of peri-urban arable land is likely to lead to an overall drop in agricultural production of 20-40 per cent, depending on the assumed severity and length of global natural disasters. For example, in Melbourne, sprawl has led to a substantial portion of Australia's most fertile farmland coming within Melbourne's expanded urban growth boundary. In response to such issues, Metropolitan Chicago's 2040 plan calls to look at food systems at the regional scale and how more of the food consumed can be produced in Illinois.

Although urban agriculture is an important source of nutrition in some low-income countries, it has often been sidelined in urban planning policies in high-income countries, despite the fact that access to food in poor neighbourhoods is an important concern.[90] In the UK, Brighton and Hove has released a Planning Advice note which provides some information on how food growing can be incorporated into proposals for new developments. Urban agriculture can be an opportunity to transform derelict land and build community assets, as well as healthy food production; in Sandwell the Community Agriculture Strategy revealed a pathway for integrated work between public health, planning, economic regeneration and anti poverty strategies. However, research on fast food outlets has suggested that the introduction of national government legislation is necessary for whole system problems such as obesogenic environments. Local policy-making is necessary but not sufficient, and planning on its own cannot address the whole issue.[91]



Source: Community Design Resource Center, University of Houston, Texas.

This map of Houston, Texas illustrates the issue of physical access to healthy food in cities. Blue and white dots represent a one mile radius from a grocery store location; each small dot represents 50 people with income below poverty level; the dark blue outline depicts areas within Houston limits not served by grocery stores. It is clear from this map that many poor households in Houston would need a car to get access to food.

Healthy placemaking for all

Copenhagen, a WHO Healthy City, has a long-standing commitment to public health. In Copenhagen, public health is a shared responsibility for the whole city and all city administrations have to work to support health and reduce health inequalities. This involves urban planning but also contacts with residents in daycare institutions, after school programmes, and social and employment areas. Local but also national policies and plans (including education, employment and housing) are recognised as important for promoting health. Photo credit: Justin Swan.

On current trends we face an urban health crisis, especially given the rise of chronic non-communicable diseases and increasing rates of obesity. As the costs linked to health conditions are increasingly unsustainable and are expected to increase in the years to come, we need to take a long-term, preventive and proactive view to promote healthy cities.

Health interventions tend to focus on the role of individual behaviours in health outcomes and on biomedical approaches. Most often, we think of 'health' in terms of hospitals and clinics. However, as these issues demonstrate, the environment in which we live, work and spend leisure time has an enormous impact on our health.

Most health issues have a strong preventable component. The key to responding effectively to this crisis is to recognise how urbanisation affects health, especially the full range of environmental factors – both physical and social – that can promote or harm health and wellbeing.

Planning in the broadest sense – from development management and infrastructure to the location of health and community services – can play a central role in creating environments that enhance people's health and wellbeing. In the twenty-first century, we need to develop a new urban agenda focused on healthy placemaking for all.

Promoting healthy cities

All cities have environmental characteristics that can both promote and harm health. If planned well, cities can improve people's access to work, education, healthcare, housing and other services. We need to understand these characteristics and gather better intelligence in order to plan for healthier cities for all.

This means we need a new, wide-ranging urban health agenda. While planners and public health specialists will be central to this, the formal health sector and other policy areas will also need to be integrated into this agenda. The social determinants of health include not only neighbourhoods and the built environment, healthcare and public health, but also education, economic development and transport infrastructure. Further, in both developed and developing countries, in many cases policies can encourage location decisions which result in sprawling communities with poor connections and inadequate access to services, exacerbating inequality, social exclusion and poor health. The possibility of a wider and more integrated urban health agenda is not only undermined by the institutional division between planning and public health, but fragmented further between formal healthcare, social services, housing, education and regeneration as well as the private sector.

'Health' in this wider sense needs to be better understood and included in policy decisions and by professionals outside of formal healthcare and public health. We need to develop more integrated strategies for healthy placemaking, gather greater intelligence on the social and economic determinants of urban health to guide decisions and investments, reform and strengthen institutions to develop systems of governance that urban populations need, and involve more professions and communities to promote healthy cities.

This urban health agenda needs to be part of a broader agenda for sustainable urbanisation. In July 2014, a specific urban goal was included in the proposed Sustainable Development Goals, which will replace the current Millennium Development Goals from 2015. This aims to "make cities and human settlement inclusive, safe, resilient and sustainable", supported by targets such as eliminating slum-like conditions, reducing urban sprawl and ensuring universal access to safe and sustainable urban transit.

Intelligence

We need good data to make good decisions, especially data with a more spatial dimension (as argued in the *Planning Horizons* paper on *Thinking Spatially*, June 2014). This applies to health and wellbeing. As argued by WHO, urban planners and policy-makers need a clear picture of social and economic health determinants to guide effective health decisions.[92] Growing inequalities means we need to disaggregate data at city level and below to understand outcomes better. In informal settlements, there is often a lack of basic data on populations.

Health Impact Assessment (HIA) is a tool that can be used to assess the health impact of local plans or development, which can support planners and public health professionals. The WHO HEAT (Health Economic Assessment Tool) is focused on transport and provides an economic assessment of the health benefits of walking or cycling by estimating the value of reduced mortality that results from specified amounts of walking or cycling.

Currently, there are some significant limitations and gaps in the evidence that prevents health issues from being effectively and cost-effectively incorporated within planning decisions (though within different planning systems there may be limits to what evidence planners are able to use). Evidence can raise awareness of health issues among policy-makers and help to legitimise pro-health policy decisions. In particular, we need to understand and quantify the long-term health costs of poor development, and the health benefits from health-supportive development. As part of this, planners and researchers need to work together more closely to build up the evidence from urban health interventions and properly evaluate the benefits of healthy environments.

A good initiative in this regard is the GoWell research and learning programme in Scotland, which investigates the impacts of investment in housing and neighbourhood regeneration in Glasgow on the health and wellbeing of individuals, families and communities. It was launched in 2005 as a ten-year programme. The study design, which includes a community survey and longitudinal cohorts, examines a range of neighbourhood, housing and health-related factors before, during and after changes in the local environment. It includes an economic evaluation strand which aims to assess whether interventions provide 'value for money' and to inform future policies.

At the same time, we need to acknowledge that the reality of health in urban environments is complex. No simple solutions exist for the multidimensional health problems facing cities today.[93] A comprehensive methodology for analysis of the associations between aspects of the urban environment and residents' health is not available, given the complex nature of urban systems in which many factors affect social and health outcomes.[94]

Geographical Information Systems (GIS) have already been integrated into some areas of health research, such as epidemiology. The Spatial Design Network Analysis (sDNa) tool developed by Cardiff University's School of Planning and Geography and Sustainable Places Research Institute goes further. It is aimed at practitioners and uses spatial design analysis to look at multi-scale associations between individual-level health outcomes and built environment features such as density, land-use mix and road network configuration.

Institutions

It is not urbanisation that necessarily produces ill health and premature death but the failure to develop the systems of government and governance that urban populations need. The association between better health and higher levels of urbanisation depends to a great degree on the quality, competence and accountability of urban governments, and their access to resources. Governance and the integration of health policies are crucial issues as cities become an important scale at which to tackle health issues. National and to a lesser extent regional governments often design health policies, and cities typically lack many powers in terms of health.

In some ways, the main obstacles to improving urban health are necessarily not technical or even financial, but rather are related to governance and the need for policy and planning frameworks in which healthy cities can be promoted.[95] In England, the National Planning Policy Framework (NPPF) and National Planning Policy Guidance (NPPG) have acknowledged the links between health and planning, and the transfer of public health teams into local authorities in 2013 aimed to support the reuniting of public health and planning. Similarly, the National Planning Framework 3 in Scotland recognises the relationship between planning in the broadest sense and wellbeing, as does *Creating Places*, the policy statement on architecture and place for Scotland. Such statements and frameworks to some extent provide a foundation for planners and others to promote healthy cities, but more needs to be done.

A 2013 publication by the World Economic Forum[96] noted that "much of the current debate on the future of health is characterised by short-term and siloed thinking and entrenched positions. A short-term view encourages solutions that deliver immediate results and discourages conversations about more fundamental changes that might only bear fruit in the long term. A lack of cross-stakeholder dialogue constrains the finding of solutions outside the traditional approaches to healthcare".

The new public health agenda is not only split between planning and public health disciplines but is fragmented further between other government departments and the private sector. Sectoral activities are driven by a need to respond to a particular agenda, and not necessarily a health agenda. Health and wellbeing are not always considered when planning the design and delivery of other services. Professional boundaries and responsibilities contribute this, for example in the UK the separation between planners and highway engineers which can inhibit the promotion of non-car forms of transport. Urban governance structures need to support partnerships with diverse stakeholders from local, regional and national governments, local communities, civil society and the private sector. Activities are driven by a need to respond to a particular agenda, and not necessarily a health agenda. Health and wellbeing are not always considered when planning the design and delivery of these services.

Governance is further considered in the *Planning Horizons* paper on *Making Better Decisions for Places* (November 2014).

Photo credit: Glasgow Centre for Population Health.

Case study: Equally Well Glasgow City test site

The Equally Well Glasgow City test site is a collective initiative between Glasgow City Council, the Glasgow Centre for Population Health and NHS Greater Glasgow and Clyde. The project partners have been developing new approaches to community engagement and offered training and capacity building opportunities to further the integration of the planning and health professions. Evaluations have documented the exploratory work undertaken by the test site partners, in order to provide useful learning around possible ways of tackling health inequalities through the integration of planning and health practice.

Partnership working has improved the quality of decisions reached and outputs delivered, while being challenging due to different working cultures and practice. New community engagement techniques have been received positively, and local people report improved understanding of planning practice and increased willingness to engage with service providers. The development of toolkits and guides has the potential to raise awareness and promote action around neighbourhood issues but that these need to be actively promoted.

People

To promote healthy cities, policy- and decision-makers and practitioners need to understand health in this broader sense, including the wider determinants of health. This includes supporting planners and others to think of themselves as being responsible for public health and wellbeing, and ensuring they have the necessary skills so that the potential for both better health and more sustainable development can be realised. It also entails involving the community and using local people's knowledge.

In 2013, the Faculty of Public Health and the Royal Town Planning Institute, along with the Spatial Planning and Health Group, urged providers of education and training for planning and public health professionals to emphasise the importance of acquiring at least a basic mutual understanding of:

- the role of the built and natural environment as a determinant of health and its relationship with health inequalities;
- the spatial planning system and its role in promoting and creating healthy, sustainable communities;
- health-promoting design principles; and
- the assessment of the effects of spatial plans, projects and developments on human health and the implementation of mitigation and enhancement measures.

Other built environment actors such as builders, developers, designers, architects and engineers also need to be engaged early on regarding health issues, for example housing space standards, and the economic as well as social and individual benefits that can result from pro-health decisions.

The Health in All Policies (HiAP) concept is based on the idea that health starts where people live, work, learn, and play, and that a community's health is influenced by more than just individual choices. It shifts the science of cities to a more integrated, participatory and action-oriented 'science' where urban needs are identified by residents alongside professionals. The state of South Australia has undertaken a HiAP approach which directly influenced the development of the seven objectives underpinning its State Plan. One of the successes of the HiAP approach in South Australia was to define health broadly and bringing health into the policy frame early, which facilitated engagement of all sectors, a sense of shared ownership and implementation of intersectoral actions.[98]

To achieve healthy cities, community engagement needs to happen from an early stage. Health issues can be identified by local residents, and addressed effectively when people are engaged early in the design or development of their community. An important but often neglected contributor to health is sense of power and control[99] and the ability to influence one's environment; empowering communities to participate in health issues may result in better health outcomes. Residents' perceptions of neighbourhood conditions, including poor facilities and services, may be as important as the conditions themselves in determining both health outcomes and the efficacy of interventions.[100] Without community engagement, city authorities risk making investments in interventions that may have low resident uptake.[101] The Scottish Government in particular has recognised the importance of 'co-production' through an asset-based approach which encourages working with communities, rather than 'doing things to' communities.

Urban health planning should be based on dialogue, deliberation, and discussion rather than just on a technical exercise of external experts and professionals.

Local knowledge can be combined with professional techniques to achieve better solutions for environmental health problems.[102] WHO proposes that local governments should establish platforms and structures that enable community organisations and citizens to engage with all phases of urban health planning and programmes.[103] If health equity concerns are to be addressed, the inclusion of the full range of community representatives in such deliberation and debate will be critical.

Photo credit: Glasgow Centre for Population Health.

Case study: Equally Well Govanhill test site

The Equally Well Govanhill test site is a localised partnership approach (involving the public and third sectors as well as community members) which aims to improve all aspects of life and conditions in this area of Glasgow. The Govanhill Partnership takes a complete approach to tackle the complex issues in the area and to improve the health and wellbeing of residents, based on Dahlgren and Whitehead's determinants of health model. Established service structures have limitations when approaching complex and intractable issues such as health inequalities; the project has shown the importance of participation and empowerment, including participatory budgeting and 'community anchors' (existing community organisations which can help to promote health interventions).

Joensuu, Finland. Photo credit: Martin.

Case study: Community-based health prevention in North Karelia

The North Karelia project in Finland demonstrates that well-planned and determined community-based programmes can have a major impact on lifestyles and risk factors. Good understanding of the community and close collaboration with a range of organisations have been essential to the project's success, alongside the important role played by primary healthcare, voluntary organisations, the food industry and supermarkets, schools and local media.

The decline in heart disease mortality in Finland over the last few years has been one of the most rapid in the world, and the overall health of the adult population has improved significantly. Active international collaboration with WHO and other agencies initially helped the North Karelia project. Later on, WHO has helped to apply the approach and experiences of the North Karelia project elsewhere.

Case study: Shaping Healthier Neighbourhoods for Children in Belfast

The Shaping Healthier Neighbourhoods for Children programme aims to offer children aged 8-11 opportunities to explore and voice their views about their local environment, and can enhance the participants' own understanding of how places shapes people's lives, health and wellbeing. It is currently being delivered in north, south and east Belfast, working with schools, following a successful pilot in west Belfast.

Photo credit: Ajith Kumar.

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The *Planning Horizons* programme is managed by Michael Harris, RTPI.

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