The way we live in our cities

Anthony G Capon

This year has been a milestone for the human species. According to the estimate of the United Nations, 2007 is the year in which, for the first time in history, we have reached the point when more people live in cities than in the countryside (Box 1).[1]

The proportion of the human population living in cities is forecast to continue to increase until the global population peaks at about 9 billion in the middle of this century. By that time, almost two-thirds of the population is likely to live in cities. Most of this population growth will occur in small cities (less than 500 000 inhabitants) and medium-sized cities (between 1 and 5 million inhabitants) in less developed regions.[2]

This urban transition is primarily a consequence of global economic changes. Many people are attracted to living in cities because of employment opportunities. Other reasons include education, social and cultural opportunities, and access to shops, food outlets, health care and other services.[3]

This year also marks 20 years since the publication of the report of the World Commission on Environment and Development.[4] This landmark commission, chaired by Gro Harlem Brundtland — Norwegian doctor, politician and diplomat — dared the world to move to a path of sustainable development. Much remains to be done to achieve this ambition.

Colleagues sometimes challenge me about why I argue for attention to health in cities. They note that aggregate health status is better in urban areas than in rural areas in Australia, and that health services are more accessible in cities, too. This is not in dispute. The rationale for action on health in cities is that health is not evenly distributed within and between cities.[5] As a director of public health with Sydney West Area Health Service, I was confronted daily with health inequity in a large city. Similarly, there is inequity in access to transport, education and jobs across cities. A better average health status in cities than in rural areas is not a reason for complacency.

Australian urban life

The Australian Bureau of Statistics defines an urban centre as a population cluster of 1000 or more people. In Australia, the term "city" is used as a synonym for urban, particularly when urban centres with larger populations are referred to.[6]

At the turn of the 20th century, the Australian population was about 4 million, and 60% of the population lived in inland and rural areas.[7] Now, the population of Australia is about 21 million, and 60% live in five large coastal cities (Sydney, Melbourne, Brisbane, Perth and Adelaide). Movement of people out of the cities to rural coastal areas, the so-called "sea-change" demographic transition — driven by retirement, lifestyle choices and the high cost of housing in the large cities — is creating a ribbon of urban development along the coastline. About 90% of the Australian population now live in urban settlements.

Since the advent of the affordable motor vehicle, Australian cities have changed. The car has allowed urban development to be uncoupled from mass transit. It has allowed people to live a long distance from employment, and retail activity to be concentrated in large regional shopping centres. Urban areas that were developed after cars and shopping centres became popular lack mass transit,

ABSTRACT

- During 2007, the human species became predominantly urban.

- Australia is highly urbanised, and health varies within Australian cities.

- Australian urban life is characterised by sedentariness, excess food intake, reliance on cars for transport, a high level of exposure to media and marketing messages, and a consumer culture.

- These characteristics are linked to obesity, diabetes, heart disease, some cancers, chronic respiratory disease, injury, depression and anxiety.

- The evolution of cities has been characterised as a four-stage process: poverty, industrial, consumption and eco-city. Each stage but the last has defining health disorders.

- Transition to healthy and sustainable cities requires infrastructure investment in new urban areas (including mass transit, education and health services), better conditions for walking and cycling, access to healthy food and encouragement of suburban economic development.

- There is a role for everyone in the transition to healthy and sustainable cities.

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local shopping outlets and other services. Many outer urban areas lack these basic requirements for a healthy city. This has created a "structural" inequity across our urban areas.

What are some of the characteristics of life in a contemporary Australian city?

- On average, people are less physically active than previous generations. They are less likely to walk or cycle and more likely to use a car. Most paid jobs require less physical exertion, as does unpaid housework. Recreation is also more sedentary (watching television has replaced the cricket match in the backyard or the street).

1 Urban and rural populations of the world: 1950–2030*
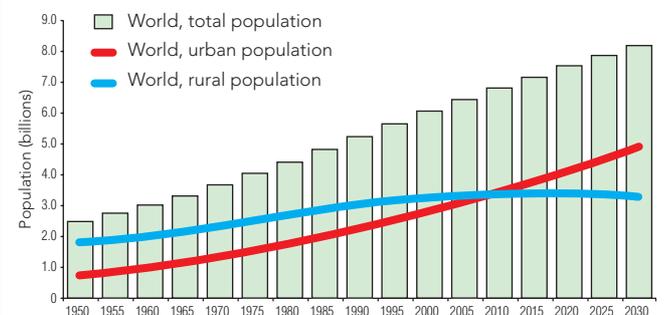
* Estimates, after 2005.[1]

> **2 Common medical conditions and associated characteristics of urban life in Australia**
>
> | Characteristics of urban life | Medical conditions |
> | --- | --- |
> | Sedentariness, unhealthy food choices | Obesity, diabetes, heart disease, cancers |
> | Motor vehicle use, slips, falls | Injuries |
> | Air pollution | Asthma, heart disease |
> | Sedentariness, consumer culture, social isolation, use of alcohol and other drugs | Depression, anxiety |

- Many people consume more food than they need. Food that used to be considered a special treat (chocolate, lollies, soft drink, potato chips) is part of the daily diet for many people.

- Many people no longer have a day of rest, or a low-activity day, every week. Insomnia, associated with a 24-hour-a-day office culture enabled by mobile phones and palmtop computers, is increasingly common (Dr Ron Grunstein, University of Sydney, personal communication, November 2007).[8]

- Our high-consumption society can be stressful. Popular philosophers speak of modern maladies, such as "status anxiety".[9] Long commuting times can add stresses, too.

- People can drink alcohol in pubs and other venues until late at night. Recreational drug use seems to be part of life for many younger people. Both have been associated with violence and crime.

- There are concerns about increasing social isolation, especially among older people. The "social glue" in our cities is changing and, in some cases, weakening. This is associated with fear of strangers.

- Some people are exposed to high levels of air and noise pollution.

- Some people have limited contact with nature.

- For everyone, there is constant exposure to media and marketing images.

Some characteristics of our urban way of life are associated with common diseases and other maladies (Box 2). These health problems may be considered signs of maladjustment to living in cities. There have not been sufficient generations of people living in cities to produce humans better adapted genetically than our hunter–gatherer ancestors to urban life.[10]

Our modern urban lifestyle is also associated with a large ecological footprint, by international standards. This is causing environmental change and degradation (including climate change), further affecting our health.[11]

How might we move to healthy urban living in Australia?

Garden cities were a sensible response to the public health problems of the 19th century, at a time when the population of Australia was much lower than it is now. The garden city model, with its large lot sizes, is no longer an appropriate model for urban development. To ensure that Australian urban environments are healthy and sustainable into the future, we all need to leave a smaller footprint. This requires us to take up less physical space, on average (smaller average lot sizes, and fewer square metres of housing per person), to live in housing that is more energy- and water-efficient, and to transport ourselves via walking, cycling and more energy-efficient motorised transport (mass transit, energy-efficient cars and motorcycles).

The Healthy Cities initiative of the World Health Organization advocates healthy urban planning.[12] It is essential that those respon-

sible for the development and management of Australian cities consider population health as a key outcome. There is a pressing need for an integrative perspective on cities, sustainability and health, bringing a human health focus to policy and planning for sustainable cities.[3] The approach should ensure that healthy choices are easy choices, removing barriers to good health.

There are three priorities for action:[13]
- improved opportunities for incidental physical activity;
- planning for healthy food choices and sustainable food production; and
- suburban economic development and a return to localism.

Before these can be dealt with, it is essential that mass transit services are improved (Box 3). I use the term "mass transit" rather than "public transport" because the primary issue is the movement of people in groups. Mass transit is good for people, good for the environment and good for business. Quite simply, it is good public policy. Improved mass transit will enable people to be more active, reduce transport-related greenhouse emissions and reduce the costs of congestion to business.

Mass transit has particular value for older people and the young, who may not have access to a car. Medical practitioners have a role in certifying whether older people remain fit to drive. With the current demographic transition to an older population, this has the potential to become a problem in medical practice.

Actions necessary for transition to healthy and sustainable cities are summarised in Box 4.

The international context

Australia is part of the rapidly urbanising Asia–Pacific region. In many Asian countries, rapid urbanisation is associated with disgraceful pollution (fouling air, water and land) and ecosystem disruption. It is essential that governance is improved. Good governance requires strong public health and environmental regulation and policy. It also requires industry and government to take a longer-term view, beyond annual financial reports and individual parliamentary terms.

> **3 Mass transit on the east coast of Australia is central to improving health**
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> About 40% of the Australian population lives in the urban ribbon along the east coast of Australia between Nowra and Noosa, bounded to the east by the Pacific Ocean and to the west by the Great Dividing Range. Most of these people live in the growing metropolitan areas of Sydney and Brisbane. However, other urban areas along this coastal strip are growing rapidly (the Gold Coast and Sunshine Coast in Queensland, and the Far North Coast, Mid North Coast and Central Coast in New South Wales).
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> There is a pressing need for significant infrastructure investment along this corridor — in particular, mass transit, education and health services — to promote economic development and ensure beneficial health, social and environmental outcomes.
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> There seems a good case for a fast rail service from Nowra (150 km south of Sydney) to Noosa (a similar distance north of Brisbane), with a stop every 100 km. From these new transport hubs, there could be a network of bus and tram services. This would take pressure off the road network. It would be especially beneficial for the ageing population in these coastal communities. It would promote economic development in regional areas, and would help get people active — walking and cycling to bus, tram and rail stops. ◆

There are some examples of good governance for health and sustainability in Asia. The mass transit systems that have been built in Singapore and Hong Kong in recent decades are examples. China has recently embarked on the development of several eco-cities. Australia should learn from these initiatives.

An increasing reliance on the private car for transport is an important challenge internationally. Economic development in middle- and low-income countries has been accompanied by rising motor vehicle use.[14] This will have consequences for the health of people and the health of the environment. Approaches to overcoming dependence on the car for transport in cities have been well documented.[15]

Change in cities and their environs can be conceptualised as an evolutionary process, with four distinctive stages (I to IV: poverty, industrial, consumption, sustainable eco-city).[16] Cities do not fit neatly into a single stage: they usually exhibit characteristics of more than one stage at any one time. The principal health concerns are

5 Stages of urban environmental evolution and characteristic health issues[16]

Urban evolutionary stage	Characteristic environmental conditions	Characteristic health issues
I: Poverty	Contaminated water, poor sanitation	Infectious diseases, undernutrition, injury
II: Industrial	Air pollution and land pollution by chemicals and solid waste	Chronic respiratory disease, heart disease, injury
III: Consumption	High-consumption lifestyles	Chronic diseases (obesity, diabetes, heart disease, depression), injury
IV: Sustainable eco-city	Conditions of life in balance with nature	Maximum health potential

different for each stage (Box 5), although this is not clear-cut: chronic diseases can be a major burden in low-income cities.[17] The typology is useful because it identifies typical transitions in the evolution of cities and includes an aspirational stage, IV, the sustainable eco-city. The key question is how might cities avoid the pitfalls of stages II and III, and move directly from stage I to eco-city?

Where to from here?

To effectively counter the obesity epidemic, and associated epidemics of chronic disease, we are likely to need very significant public health reforms in Australia and internationally. The reforms will need to be of a scale and size similar to the public health reforms that overcame epidemics of infectious disease, led by Edwin Chadwick in England, in the 19th century.[10] Instead of water supply and sanitation, the engineering and urban development interventions in the reforms are likely to be mass transit and safe walking and cycling paths to local shops and services.

Cities are products of history, culture, economics, geography, politics and aspiration. There are benefits to learning from the experience of other cities. Participative planning can deliver good outcomes.[18] There is a need to refresh professional relationships between urban planners, transport planners and public health workers.[19] Useful decision-support tools for healthy planning are widely available on the Internet.[20,21]

Health impact assessment is a systematic approach to identifying the differential effects on health (positive and negative) of proposed plans, projects and policies.[22] Health impact assessment is useful for assessing large-scale urban development projects; however, planners and developers should also consider the health impacts of everyday decision making. The cumulative effects of many small decisions can be at least as important as a single decision about a large project.[13]

To effectively address urban sustainability and population health in an integrated way, we will need to embrace new ways of thinking. Two essential approaches need further emphasis and development:

• Systems thinking. This is based on the premise that components of a system act differently if isolated from the whole system. Many human diseases can be seen as symptoms of system failure. Poor health arises as a consequence of problems in the system. To intervene to prevent disease, we must first understand the system dynamics leading to the disease.

• Adaptive management.[23] This is an ecological concept defining a way to optimise decision making in the face of uncertainty. When there is an intervention (perhaps a new development), there may be unintended consequences affecting health. Urban managers should watch and be ready to make adjustments.

The simple message is that urban planners, developers and managers (in fact, anyone who has a role in urban decision making) should consider the health of people, as well as the health of the environment, when making decisions.

A final word

Healthy people on a healthy planet is the splendid ambition of the Nature and Society Forum, a community organisation established by concerned citizens in Canberra in 1992.[24] To be healthy people, we need healthy places. We also need healthy places to have a healthy planet. Now that more than half of the human population live in cities, it is essential that our cities are healthy places in which to live. No matter what our vocation (policymaker, planner, community worker, doctor, teacher, researcher, business owner, unpaid

carer, elected official), we can all contribute to a collective ambition to be healthy people, living in healthy places, on a healthy planet.

Competing interests

None identified.

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