

2.4 Health determinants

“Most of the burden of disease affecting children and young people and culminating in health problems in later life is the result of complex interactions between individuals and socio-economic and environmental determinants of their health. Health policy, programs and services which address the determinants of health are necessary to prevent the occurrence, and reduce the burden of ill-health.”

Strategic Policy Framework for Children’s and Young People’s Health 2002-2007⁴

The factors that lead to someone developing disease or a mental disorder are likely to have their beginnings years earlier, through a complex chain of events and interactions among the individual, the environment and broader social and economic factors.⁹ Determinants of health is the term used for those factors that have either a positive or negative influence on physical and mental health at the individual or population level.

The aim of this section is to answer the following questions:

- Are the factors that determine good health for children in Queensland changing for the better?
- Is it the same for everyone?
- Where and for whom are these factors changing?

Health determinants can be broadly divided into ‘upstream’ determinants (education, employment, income, living and working conditions), ‘midstream’ (health behaviours and psychosocial factors) and ‘downstream’ (physiological and biological factors).²¹ In this section, the upstream determinants are addressed in sections on environmental factors and socioeconomic factors, and midstream determinants in community capacity and health behaviour sections. Environmental, socioeconomic and community capacity dimensions impact on physical and mental health within the spheres of societal or community, household and individual determinants of health.

As this report focuses on modifiable determinants of health, the person-related factors dimension of the National Health Performance Framework is not included. All determinants of health indicators are reported in the domain where there is the greatest opportunity for health gains. Thus, physiological and biological factors which may be partially addressed through behaviour change, have been included in the health behaviour section of this report.

Actions to address these health determinants are described in section 2.5.

2.4.1 Environmental factors

Queenslanders enjoy a relatively healthy physical environment. We have one of the safest food supplies in the world, the overall quality of our air and drinking water is good, and the built environment is generally clean and healthy. The quality of the physical environment cannot be taken for granted however, because there are regional differences.

Population health status is influenced by the interaction of social, economic and environmental health determinants.⁹⁰ The biological, physical and chemical environments have the potential to impact on health. The extent of this impact is modified by the scale and nature of human activities. Human activities include agricultural, industrial and energy production; the use and management of water and wastes; urbanisation; the quality of health services; and the extent of the protection of the living, working, and natural environment.

The impact of environmental factors on population health outcomes is difficult to assess due to the multi-factorial nature of many of the outcomes of importance. Thus, indicators relating exposure to environmental determinants and processes to manage such exposures are commonly used to measure the influence of the environment on health, rather than health outcomes indicators. The need for environmental health indicators was highlighted by the *National Environmental Health Strategy* (1999).⁹⁰ Development of a national set of environmental health indicators is occurring. In future, indicators to monitor environmental health and quality data to support these indicators should be more readily available and more clearly defined.

For information on some key environmental factors that influence health, such as air quality, water quality, water fluoridation, food safety and security, healthy food access, physical activity environment, housing,

household safety devices and homelessness, please refer to the *Whole of population* chapter. Specific environmental factors relating to Indigenous health are described in the *Indigenous peoples* chapter.

There are other less well characterised environmental factors that have the potential to impact on health. Many of these factors have evolved from changes in our society and present new potential health risks. These include the changes in the way we manage our waste, changes in construction materials for our housing, issues relating to securing adequate and safe water supplies, increased urbanisation and urban densities, and global climate change resulting from increased greenhouse gas emissions. The extent to which these emerging issues impact on the environment and population health is not well characterised.

Household safety devices

Children are particularly vulnerable to a range of injuries associated with the home, including drowning, fire, burns and scalds, and accidental poisoning. In 2001 in Queensland, one quarter (25.6%) of households reported having one usual resident aged four years or less or having at least one young child visit at least once a week.⁹¹ Households with young children reported a greater prevalence of smoke alarms/detectors installed (74.1%) than households without children (67.3%).⁹¹ Of Queensland households with young children, 53.0% had an adjustable hot water thermostat compared to 47.2% of households with no young children. Nearly one in four households with young children did not know whether the hot water system had an adjustable thermostat.⁹¹

Nearly a quarter of households with young children (24.2%) had a swimming pool or outdoor spa compared to 19.4% of households with no young children.⁹¹ The most common safety precaution was child resistant fencing/self-locking gates (82.0%). However, households with young children were less likely to use this precaution (71.1%) than households with no young children (86.6%).⁹¹

Drugs and poisons storage

In Queensland in 2003, over half (53.3%) of households with children aged 12 years or younger reported that laundry, kitchen and household cleaners, insecticides and poisons were all locked away or stored out of the reach of children.⁹² With regard to paracetamol products, 88.4% of eligible respondents reported that such products were kept locked away or out of the reach of children.⁹² Similarly, 84.5% of households reported that other medicines and vitamins were kept locked away or out of reach of children.⁹²

Exposure to environmental tobacco smoke

In Queensland in 1995, 40.0% of children aged 0-14 years lived in a household with at least one smoker, similar to Australia (39.2%).⁹³ Passive smoking in children causes lower respiratory illnesses (croup, bronchitis, bronchiolitis and pneumonia), onset of asthma and worsening of asthma, respiratory symptoms, reduced lung function, middle ear disease, eye and nasal irritation, low birth weight and SIDS.⁹³⁻⁹⁶ There has also been an association identified between exposure to tobacco smoke and invasive meningococcal disease in children.⁹⁷

Exposure to tobacco smoke during infancy and early childhood is a significant public health problem. Relative to adults, infants are particularly susceptible to the effects of tobacco smoke, due to their immature immune and pulmonary systems and their increased respiratory rate.⁹⁸