3.2 Introduction

Young people living in Queensland enjoy a quality of life and health that is comparable to, or exceeds that found almost anywhere in the world. Good health is one of Queensland's greatest assets.[1] The health of Queenslanders generally continues to improve.[2,3] Despite this overall high standard, it is important to ensure that health is shared equally among all populations in Queensland and that the rate of improvement equals that of other states.

For the purposes of this report, young people are defined as aged 15 to 24 years. In Queensland in 2001, there were 510,031 young people, comprising 14% of the population. The health status of young people in Queensland is relatively high compared with other age groups and by international comparison.[4] However, some key issues remain, such as mental health problems, asthma, alcohol, tobacco and other drugs, injury, suicide, attempted suicide and self-harm, inappropriate nutrition and obesity, physical inactivity, diabetes, and the poorer health status of Indigenous young people.[4]

The factors that lead to someone developing disease are likely to have had their beginnings years earlier, through a complex chain of events fashioned by interactions of the individual, the environment, and broader social and economic factors. Determinants of health is the term used for those factors that have either a positive or negative influence on health at the individual or population level. 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).[5]

Health Determinants Queensland 2004 is the second in a series of Health Indicator reports produced by Queensland Health. This report compiles a consolidated set of indicators of the major behavioural, social, economic and environmental determinants of health and their recent trends in Queensland. Selected health outcome indicators are also reported. This report describes the relationship between the determinants and health outcomes, and recommends some evidence based interventions to improve the health of Queenslanders. More detailed statistics and information are provided in *Health Determinants Queensland 2004: Statistical report*.

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The sequence and scope of indicators in this report are structured following the *National Health Performance Framework*.[6] This framework has three tiers: Health status and outcomes; Determinants of health; and Health system performance. This framework was chosen for consistency with national and state directions; to help readers access and reference their particular areas of interest; and to better identify challenges and points of intervention. As the focus of this report is determinants of health, limited health outcome indicators are presented. Extensive health outcomes indicators were previously reported for Queensland in the first Health Indicators report, *Health Indicators for Queensland*.[7-9] The third tier of the framework, measurement of health system performance, is beyond the scope of this publication. The *National Health Performance Framework* is included in section 3.6 of this report. An explanation of the terms used in this report, as well as the data sources and limitations are also described in section 3.6.

Health Determinants Queensland 2004 is comprised of five population based chapters, reflecting the life course approach and the age specific nature of health determinants and outcomes. This *Young people* chapter reports the determinants of health which affect the age group 15-24 years, key health outcomes and interventions to address these determinants. The *Whole of population, Children, Older people* and *Indigenous peoples* chapters reflect the health determinants of specific relevance to those populations.

This report provides the burden of disease and injury data for Queensland to allow assessment of the relative impact of conditions and health behaviours on the health of the population. Populations within Queensland with excess mortality, morbidity and prevalence associated with conditions and determinants are also identified. This information is then related to the sociodemographic profile of each health service district to estimate those conditions and health determinants which warrant specific attention. Interventions to address these determinants in each population group are also included in each chapter.

Health Determinants Queensland 2004 provides epidemiological evidence for investment in population health both in the health sector and across government. This evidence will assist policy development

and decision making on balanced investment in line with national and state priorities. At a health service district level, these reports will complement District population and health status profiles to support decision makers at the local level to identify priority areas for primary prevention and practical interventions where investments can be made.

3.2.1 Life course approach

Health outcomes reflect the accumulation of exposures to both advantageous and disadvantageous experiences and environments over varying stages of life. In recent years, a life course approach to the study of health and illness has helped to explain the existence of wide socioeconomic differentials in adult mortality and morbidity. Evidence suggests that such exposures accumulate throughout life and increase the risk of illness and premature death.[10] Exposure to disadvantageous experiences and environments do not equally impact on all people, or all stages through the life cycle. Some determinants have an immediate impact on health, while other early life or continuous physical and psychosocial exposures have a lag time and manifest in compromised health status later in life.

The *Strategic Policy Framework for Children's and Young People's Health 2002-2007* reports there is growing evidence that maternal health and wellbeing in the antenatal period, effective nurturing in the early years, early brain development in infancy and early childhood, and the psychosocial transitions to young adulthood, have significant and lasting effects on health and wellbeing in later life.[4]

The transition to adulthood is also a vulnerable time... high risk behaviour places young people at risk of mental and physical health problems

Associations between environmental and social exposures and health status are bi-directional, with a stronger influence of social disadvantage on poor health. The underlying nature of these associations and interactions is not yet fully understood. Some hypotheses indicate that the duration and intensity of exposure to adverse social and environmental determinants and subsequent risk factors are important in selected health outcomes.[11] For example, the risk of adverse effects of smoking is believed to proportionally increase if exposure commences early in life and if duration of exposure reaches older age. Similarly, longer exposures to poor diet, poverty, alcohol and/or a lack of physical activity are all seen to be more strongly predictive of negative health outcomes than shorter exposures. However, removal of some exposures can dramatically alter the course of health outcomes. For example, the adverse health effects of smoking are reduced following cessation of smoking at any age.

The association between intrauterine and neonatal exposures and adverse health outcomes in adults, has been extensively explored. The Barker hypothesis attempts to explain these associations.[12] Some risks for adult health are predetermined at birth. Deficient maternal nutrition can impact on foetal growth and development, and lead to organ impairment and chronic disease later in life. Likewise, low birth weight babies, adjusted for gestational age, have an increased risk of early death and, if they survive, an increased risk of disability and chronic disease during childhood and adult life.[13]

Air pollution, urbanisation, residential proximity to mines and factories, occupational exposure to fumes, exposure to cigarette smoking, and inadequate nutrition during childhood and early adulthood have been identified as having potential for life time damaging effects and for generating and/or maintaining social class differentials in health.[14]

Chronic illness in childhood, more common in socially disadvantaged groups, can have long term consequences both for health and socioeconomic circumstances in later life. Exclusive breastfeeding to around six months has been identified as a protective factor for emotional wellbeing and chronic diseases such as diabetes and asthma.[15] Slow growth and short adult stature may be a reflection of nutritional status and adverse socioeconomic and psychosocial conditions in childhood.[16] Lifestyle factors such as a high fat diet and lack of physical activity are associated with the development of obesity and pathological cardiovascular lesions as early as four years of age, and certainly by young adulthood.[17] The presence of chronic disease in early life, such as infectious diseases or respiratory illness, can lead to both long term ill health and possible socioeconomic disadvantage later in life as a consequence of disability or unemployment.[18]

The health status of young people in Queensland is relatively high compared with other age groups and when compared with young people internationally.[4] However this age group is particularly vulnerable to the stressors of modern society because they are in transition from childhood to adulthood. Young people are especially vulnerable to homelessness, placing them at risk of physical and mental health problems.

High risk behaviour can also increase the risk of mental health problems such as alcohol, tobacco and drug misuse, and physical health problems such as injury.[19]

3.2.2 Social determinants of health

Most of the burden of disease affecting young people and resulting in health problems in later life is the result of complex interactions between individuals and socioeconomic and environmental determinants of their health.[4] Current epidemiological trends in the health of young people (such as mental health problems, asthma, drug misuse, injuries, suicide and self-harm, inappropriate nutrition, and diabetes) reflect the impact of extensive socio-cultural shifts experienced over recent decades. Issues around economic disadvantage, cultural diversity and tolerance, the changing nature of work and family structures, family violence and homelessness challenge the health system to meet increasingly complex health needs for young people in collaboration with other sectors.[4]

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The greatest burden of ill health is borne by those most disadvantaged in Australia. One of the dominant features affecting the health situation of all industrialised countries is the social gradient in health and disease.[20] This gradient in health and disease is prevalent in all socioeconomic strata of society. On every rung up the socioeconomic disadvantage ladder from least to most disadvantaged, people experience more sickness, shorter life expectancy and poorer health. People of greater socioeconomic disadvantage experience worse health than those of higher socioeconomic status for almost every major cause of mortality and morbidity.[21] Moreover, socioeconomic differences in health are evident for both females and males at every stage of the life course. Socioeconomic inequalities in health have been extensively reported for Queensland.[3] Social and economic disparities are one of the major public health challenges confronting Queensland.[5]

A safe environment, adequate income, meaningful social roles, secure housing, higher levels of education and social support are all associated with better health and wellbeing.[22-25] In addition to health behaviours, these social, cultural, economic and environmental factors comprise what we call population health determinants and are the focus of this report. While each of these influences is dealt with in a separate section of this report, the interaction of all these factors ultimately determines the health of individuals, families and communities.[26]

A wealth of evidence supports the strong association between poverty and ill health.[5,10,19] In Australia, children living in single-parent households and without both biological parents, or with parents with lower formal education and income, are more likely to experience behavioural and emotional problems as well as physical limitations, than their less disadvantaged counterparts.[27] Socioeconomically disadvantaged adults who are less formally educated or poorly educated experience the highest rates of illness such as cardiovascular disease and diabetes.[28] They also have the highest prevalence of risky behaviours such as smoking and hazardous use of alcohol.[28] In addition, income inequality has a significant impact on population health.[29] Specifically, these inequalities have been correlated with increased all-cause mortality.[30-32]

While our socioeconomic position connects us to the physical and social resources which can make our life better, the feelings of empowerment and status that go with the connection to these resources are also important. This second dimension is important because people who feel in control of their lives are also more likely to take control of their health.[33] A lack of control over work and home life has powerful effects on our health.[20] Like continuing anxiety, feelings of insecurity and social isolation, the psychosocial impact of a lack of control at home or at work accumulate during life and increase the chances of poor mental health, physiological wear and tear and premature death.

Psychosocial factors affect physical health through the stress response. Although the stresses of modern life rarely demand strenuous or even moderate physical responses, turning on the stress response diverts energy and resources away from many physiological processes important to long term health maintenance.[20] For brief periods, this stress response has minimal impact, however, if people feel tense too often or the tension goes on for too long, they become more vulnerable to a wide range of conditions including infections, diabetes, high blood pressure, heart attack, stroke, depression and aggression. The lower people are in the social hierarchy of industrialised countries such as Australia, the more common these problems become.[20]

While many population health interventions target lifestyle factors where health gains can be made, the social influences on health behaviours must be considered in both the design and implementation of these interventions.[19] The World Health Organisation identifies with the need to understand the interaction between material disadvantage and social meanings.[20] “It is not simply that poor material circumstances are harmful to health; the social meaning of being poor, unemployed, socially excluded, or otherwise stigmatised also matters.”

As well as income and education, other social factors are also known to affect the health of populations. For example, unmarried and divorced people,[34] and men, have consistently higher age adjusted death rates than married people and women. Additionally, social trends such as the increase in one-parent families, the ageing population and an increase in the age of people starting families are already influencing the economic environment and the health status of the population.[19]

Ethnicity can also influence health outcomes. This may be due to limited service knowledge of services, poor language skills, employment discrimination,[35] an associated low socioeconomic living environment, and the absence of social networks[36] within minority migrant communities and refugees. Genetic determinants may also play a role. For example, racial minorities in Britain experience interpersonal violence, institutional discrimination, or socioeconomic disadvantage, all of which have independent detrimental effects on health, regardless of the health indicator used.[37]

Social determinants of health are often beyond the control of the individual. Addressing them through multidisciplinary efforts at the population level can assist in preventing illness and improving the overall health of the community. While universal access to healthcare is one of the social determinants of health, more important to the health of the population are the social and economic conditions that make people ill and in need of healthcare in the first place.[20]