Chapter 5 Population groups

The burden of ill health and risk is not equally distributed throughout the population. Higher burden is carried by older people, males, socioeconomically disadvantaged populations, Indigenous Queenslanders and those in remote areas. For the first time in the Queensland Chief Health Officer report series, the health of regional Queenslanders is profiled and this shows that outcomes and risks vary by HHS, with earlier deaths in some areas, and higher rates of death, disease and risk factors.

This chapter brings together demographic data from Chapter 2, health outcome data from Chapter 3 and risk factor data from Chapter 4 to describe the health characteristics of selected population groups. The final section includes some important groups for which limited data is available. Nevertheless, the needs of these and other groups are very important. For example, overseas migration is a large source of population growth in Queensland and yet the data to understand the health needs and issues of culturally and linguistically diverse populations is limited. Prisoners represent a separate group and it is evident that reducing risk among this population will lead to better health outcomes and wellbeing.

Health issues for each of the HHSs are summarised in a suite of factsheets in the Appendix (electronic release only) based on data from each chapter in the report. This chapter collates the information to describe regional variation in health outcomes and risks, and specifically how the HHSs differ, in a twelve-page summary beginning on page 158.

The health of Queenslanders is very good and continues to improve. However, continued improvement depends on achieving better outcomes across the whole population. This chapter provides information to identify where gains can be made for specific population groups.

In this chapter:
- Maternal and infant
- Children
- Young people
- Older people
- Males
- Females
- Socioeconomic disadvantage
- Indigenous Queenslanders
- Regional Queenslanders
- Other population groups
Maternal and infant

Good health in the earliest years of a child’s life, actually beginning with the future mother’s health before she becomes pregnant, lays the groundwork for a lifetime of wellbeing. Early childhood is considered the most important development phase in life affecting the quality of health, wellbeing, learning and behaviour across the lifespan. In recognition of the importance of getting a healthy start, the Australian Government has set a long-term objective that ‘Australians are born healthy and remain healthy’.

There were on average 61,051 babies born to 60,452 mothers each year in Queensland in 2009–2011 (Table 32). The number of births increased by 3.3% per year over the previous decade. The crude birth rate was 41 births per 1000 Queensland residents in 2012. The total fertility rate is the number of births a woman is estimated to have during her reproductive life, and in 2012 it was 2.0 for Queensland women. That is, the average Queensland woman has two children in her lifetime—for Indigenous Queenslanders it was three. The net reproduction rate represents the average number of daughters that would be born to a group of females if they were subject to the fertility and mortality rates of a given year during their future life. It indicates the extent to which the population would reproduce itself. In 2012, the net reproductive rate for Queensland women was 0.95, which means that the Queensland population will not be maintained by reproduction alone. The crude birth rate, fertility rate and reproductive rate for Queensland were all slightly higher than national rates—about 3% higher for each.

In 2009–2011, 5.3% of infants were born to teenage mothers and 5.7% of infants were born to Indigenous Queenslanders (Table 32). Indigenous Queenslanders were 4.3 times more likely than non-Indigenous women to be a teenager at delivery (19.3% compared to 4.5%). The rate of teenage births in remote and very remote areas was about 3 times the major city rate and inner and outer regional areas about double the major city rate in 2007–2011 (Figure 59a).

In 2011, 1 in 5 Queensland mothers was aged 35 years or older (20%), with no difference by Indigenous status. Over the past 10 years, the proportion of older mothers has increased by 31% or 2.5% per year (Figure 59b). Older maternal age was associated with increased risk of a number of factors. In 2009–2010, Queensland mothers aged 35 years or older were 87% more likely to have some form of diabetes during their pregnancy, twice as likely to have placenta praevia, 9% more likely to have an antepartum haemorrhage, 20% more likely to have gestational hypertension, and about 50% more likely to have a caesarean section delivery. Infants born to older mothers were 14% more likely to be born preterm, 39% more likely to have fetal malpresentation, 6% more likely to have a congenital anomaly and 2.9 times more likely to have chromosomal anomalies. Fetal mortality was more commonly observed for older mothers but not neonatal mortality.

While the majority of women (94%) completed at least five antenatal visits, the prevalence was higher among non-Indigenous than Indigenous Queenslanders (95% compared with 80%) in 2009–2011 (Table 35, page 165).

In 2012, 15% of Queensland women smoked at some time during their pregnancy (about 9500) with 2.6% quitting before 20 weeks gestation and 13% smoking during the last 20 weeks of pregnancy (about 8000). Research suggests that women who quit smoking within the first three months of pregnancy reduce their risk of placental complications at birth, premature birth, infant illness and perinatal death. Smoking at some time during pregnancy was higher among Indigenous Queenslanders (48%) than non-Indigenous (13%) and quit rates were also higher among Indigenous women—more than double the non-Indigenous rate (5.3% compared with 2.4%). Despite the higher proportion quitting, the smoking rate among Indigenous Queenslanders during the last 20 weeks of pregnancy was 4 times the non-Indigenous rate (43% compared with 11% in 2012). Maternal smoking is also reported in Chapter 4, page 101.

There were 314 infant deaths per year on average in 2008–2010 in Queensland, and 12% were of Indigenous infants (38 deaths). The Indigenous infant mortality rate was nearly double the non-Indigenous rate (87% higher). There has been no change in the infant mortality rate in Queensland since 2002 for either Indigenous Queenslanders or non-Indigenous infants (Figure 59c). Queensland had the second highest infant mortality rate among the jurisdictions in 2008–2010 and was about 25% higher than the national rate on average (Figure 59d). There were fewer than five maternal deaths per year over the period 2008–2010.

Considering only the perinatal period, that is, stillborn infants and neonatal deaths (death in the first 28 days), in 2011 there were 400 still births and 200 neonatal deaths. The greater proportion of infant deaths occurs in the first 28 days of life. In 2010, 70% of deaths in the first year occurred in the neonatal period.

In 2011, 50% of mothers giving birth in Queensland were either overweight (28%) or obese (22%), based on self-report—typical of women of similar age in the general population. Adverse effects of maternal overweight and obesity include increased risk of gestational diabetes, hypertension, caesarean delivery, post-partum haemorrhage, induction of labour, shoulder dystocia and likelihood of delivering an infant who is large for gestational age. Most of these impacts and risks have
been demonstrated among obese mothers in Queensland in recent years with obese women at conception 30% more likely to have a post-partum haemorrhage than healthy weight women, 2.9 times more likely to develop gestational hypertension and 2.6 times more likely to have gestational diabetes in 2008.\textsuperscript{365} Rising rates of obesity are likely to impact on infant health outcomes in the future.

Alcohol exposure in utero can also cause a range of abnormalities in the unborn child which are broadly described as fetal alcohol spectrum disorders. Fetal alcohol syndrome is at the severe end of these disorders, which also include alcohol related birth defects and neurodevelopmental disorders. The prevalence of the spectrum of disorders is unknown in Australia, although there is preliminary evidence that the rate of fetal alcohol syndrome in Indigenous Australians is at least 100 times higher than non-Indigenous rates.\textsuperscript{366,367} The Australian Government, through the NHMRC, has set guidelines for safe consumption of alcohol and recommends not drinking alcohol during pregnancy or while breastfeeding. An Australian women’s longitudinal study found that only 20% of women fully abstained from alcohol during their pregnancy.\textsuperscript{399} The majority (60%) consumed between one and two drinks a day on average and the remaining 20% were consuming more. The proportion who abstained increased with each trimester of the pregnancy. Data for Queensland is unavailable.

There are other maternal factors which affect the health and wellbeing of both the mother and infant. Of Queensland women giving birth in 2012, 2% reported a depressive disorder.\textsuperscript{82} Of those Australian women who had given birth in the previous two years, 20% reported having been diagnosed with depression, where three-quarters of these (73%) had been diagnosed prior to the birth of the child and 19% in the first year of the child’s life.\textsuperscript{368} In addition, women in the childbearing age have been diagnosed with depression, where three-quarters of these (73%) had been diagnosed prior to the birth of the child and 19% in the first year of the child’s life.\textsuperscript{368} In 2009–2011, on average about 1 in 12 infants (8.7%) were preterm births, that is, born before 37 weeks gestation (Table 32). Indigenous infants were about 50% more likely to be born preterm than non-Indigenous infants (12.5% compared with 8.4%). Infants born preterm are often also low birth weight. In 2011, 53% of those born before 37 weeks weighed less than 2500gm. Similarly, of all low birth weight infants, 71% were preterm. The health impact of preterm birth is confounded by the higher likelihood of also being low birth weight.

The majority of infants were breastfed in hospital, with 79% exclusively breastfed in the 24 hours immediately prior to discharge in 2009–2011 (Table 32). In 2011, 21% of infants received both breast milk and infant formula and 6% received infant formula alone.\textsuperscript{282} Teenage mothers were more likely to have exclusively fed their infants on infant formula (11%) and less likely to have exclusively breastfed their infants (69%) than other mothers.\textsuperscript{282} Indigenous mothers were also less likely to have exclusively breastfed in the 24 hours prior to discharge (72%). While about 90% of Queensland mothers initiated breastfeeding at birth or prior to discharge from hospital, only 2% breastfed exclusively until the infant was at least six months of age.\textsuperscript{232} However, 96% of Queensland children aged 0–2 years had ever been breastfed, similar to national rates in 2010.

In the first months of life, an infant is protected from most infectious diseases by maternal antibodies, which are passively transferred during pregnancy. Immunisation in the first year of life provides protection from risk as passive immunity diminishes. In 2014, 92% of Queensland infants were fully immunised at one year of age (Table 31, page 131).

There are disparities in outcomes for infants in Queensland as seen in perinatal death rate differences. In 2009–2011, the perinatal death rate for Indigenous Queenslander infants was 83% higher than the non-Indigenous rate, where the stillbirth rate was 52% higher and the neonatal death rate more than double (2.4 times). Furthermore, the Queensland perinatal death rate has been consistently higher than the Australian rate. The risk of stillbirth or neonatal death in Queensland was associated with a number of clinical and other factors, but not with Indigenous status per se.\textsuperscript{373} In the five-year period, 2007–08 to 2011–12, of the neonatal deaths, 24% were exclusively due to prematurity, 5% to inadequate antenatal care and 3% to maternal obesity. Considering only deaths of infants of Indigenous Queenslander mothers, the main causes were similar, except maternal obesity was not a factor.
The strongest predictors of preterm birth were pre-eclampsia (4.6 times increased risk), antepartum haemorrhage (3.3 times), pre-existing diabetes (2.5 times) and insufficient antenatal care visits (2.1 times).\textsuperscript{373} Indigenous status was one of a number of other factors that also raised the risk of preterm birth, but all had minimal impact—Indigenous status increased risk by 20%. For Indigenous Queenslander women, smoking after 20 weeks gestation and not attending the recommended antenatal care visits accounted for 13% of preterm births. Modification of these risks is therefore important in reducing preterm births and consequently reducing the risk of perinatal death. These risks are higher among Indigenous Queenslander women as reported in this section (Table 32) and in previous reports of the Chief Health Officer. Variability in key risks is also evident across HHSs as described below, leading to risk of death and poorer outcomes.

There are disparities across regions in Queensland. In 2009–2011, 11 HHSs had higher smoking rates than the Queensland rate (at any time during pregnancy as well as during the last 20 weeks), one did not differ, and four were lower (Table 35, page 165). Smoking rates varied from about 3 times the state rate in Torres Strait–Northern Peninsula to about 10% higher in Mackay, while the rate in Metro North, Metro South and Gold Coast was about 28% lower. There was a clustering of perinatal risks in some HHSs including smoking during last 20 weeks and proportion of teenage mothers. Although the infant mortality rate did not differ between HHSs in 2008–2010, longer-term differences in health outcomes and poorer health for HHSs with greater perinatal risk is evident in this report.

<table>
<thead>
<tr>
<th>Table 32: Maternal and infant selected indicators by Indigenous status, Queensland, 2009–2011\textsuperscript{282}</th>
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<tbody>
<tr>
<td><strong>Total</strong></td>
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<tr>
<td>Number of live births (per year on average)</td>
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<td>Number of mothers (per year on average)</td>
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<td>Total fertility rate</td>
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<td>% of all births born to Indigenous mothers</td>
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<td>% of all births born to mothers &lt; 20 years</td>
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<td>% 5+ antenatal visits</td>
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<td>% smoking during pregnancy</td>
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<td>% quitting before 20 weeks</td>
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<td>% smoking during last 20 weeks pregnancy</td>
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<tr>
<td>% low birth weight (&lt;2,500 grams)</td>
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<tr>
<td>% high birth weight (4000+ grams)</td>
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<td>% preterm births</td>
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<td>% of live births discharged home who were exclusively breastfed in 24 hours prior to discharge</td>
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*Includes Indigenous status not stated. n/a Not available.
The health of mothers and babies in Queensland is generally very good and provides infants with a healthy start to life. This is important because the antenatal and neonatal environment is critical in the prevention of chronic disease and the promotion of wellbeing over the life course.\textsuperscript{374} For the individual, being born at full term, within the normal weight range, to a mother in good health and into a supportive social environment are essential protective factors for healthy childhood, adulthood and longevity.\textsuperscript{375}

The health of Queensland infants would improve if maternal smoking rates were reduced. About 1 in 8 or 8000 Queensland infants, were exposed to tobacco smoke throughout the whole of the pregnancy. This is a completely avoidable risk which is likely to compromise the long-term health of the individual.

There are other factors that are amenable to improvement. These include better nutrition of mothers during pregnancy and more sustained antenatal care to reduce the risk of low birth weight and preterm birth. Addressing maternal health and weight status, prior to conception as well as during pregnancy, will reduce potential risks at delivery and risk of fetal death. Increasing awareness of the need to abstain from alcohol while pregnant and breastfeeding, will improve the health of Queensland’s infants. Maternal age also carries risk for both the very young and older mothers.

The health of many Indigenous infants is compromised by harmful exposures during the fetal and neonatal period. Poorer perinatal outcomes for Indigenous infants are associated with risks such as smoking during pregnancy and insufficient antenatal care as well as social and clinical factors. Not all these risk factors can be completely avoided but smoking is avoidable. Achieving gains in Indigenous health in the long term depends on getting a healthy start to life and it is evident that improvement in Queensland is both necessary and achievable.

Summary

The health of mothers and babies in Queensland is generally very good and provides infants with a healthy start to life. This is important because the antenatal and neonatal environment is critical in the prevention of chronic disease and the promotion of wellbeing over the life course.\textsuperscript{374} For the individual, being born at full term, within the normal weight range, to a mother in good health and into a supportive social environment are essential protective factors for healthy childhood, adulthood and longevity.\textsuperscript{375}

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Children

Most Queensland children are healthy and doing well. A positive start in life helps children to reach their full potential, while a poor start increases the chances of adverse outcomes. A child’s health and wellbeing depends on what happens to them as individuals, as part of a family and as members of their community and society. Parental lifestyle factors greatly influence children’s health and behaviours. This section reports on health information mainly about children aged 0–14 years, although for some national reporting children are defined as 5–17 years. Infants are discussed on page 134 and young people on page 140.

Demography

- One Queenslander in 5 was aged 0–14 years in 2013—20% or 924,352 children, and 51% were males. Of these, 34% were aged 0–4 years, 34% aged 5–9 and 32% aged 10–14 years.
- HHSs with a higher proportion of children in 2012 were Torres Strait—Northern Peninsula (32%), Cape York and North West (24% each). Gold Coast had the lowest proportion of children (18%).

Burden of disease

- In 2007, 9% of the total burden of disease and injury was for children aged 0–14 years although this age group represented about 20% of the population. Three-quarters (75%) of the childhood burden was associated with disability (compared to about one-half for the total population).
- The leading causes of disease burden in 1–14 year old boys in 2006 were asthma, autism spectrum disorders, and anxiety and depression and for girls, anxiety and depression, asthma and autism spectrum disorders. These causes accounted for 50% of the burden for boys and 55% for girls.

Deaths

- There were 443 deaths of 0–14 year olds in 2010 and 61% were males (269 males, 174 females). The male rate was 46% higher than the female rate.
- Three-quarters of the deaths occurred within the first year of life (328 deaths).
- There were 115 deaths from all causes in 1–14 year olds in 2010 and 62% were males (71 males, 44 females). The major cause of death was cancer (15% of all deaths), followed by accidental drowning and submersion (10%).
- In 2009–2010, the all-cause death rate for 0–14 year olds was:
  - 36% higher in disadvantaged areas than advantaged areas
  - 2.1 times higher in remote and very remote areas than major cities
  - 83% higher for Indigenous Queenslanders than the non-Indigenous rate.
- There was no change in the death rate for 0–14 year olds between 2001 and 2010, and no change in the average number of deaths annually.

Hospitalisation

- There were 119,690 hospitalisations for 0–14 year olds in 2011–12 of which 57% were males. Of these, 16,079 (13%) were associated with the birth and perinatal period, that is, the first 28 days.
- Respiratory conditions were the major cause of hospitalisation (19%), followed by injury (14%) and perinatal conditions (10%).
- In 2011–12, dental conditions accounted for about 1 in 7 potentially preventable hospitalisations in 0–4 year olds and about 1 in 2 (45%) in children aged 5–9 years.
- In the two-year period 2010–11 to 2011–12, the hospitalisation rate was:
  - 15% higher in disadvantaged than advantaged areas
  - 50% higher in remote and very remote areas than major cities
  - 24% higher for Indigenous Queenslanders than non-Indigenous.
- For the three-year period 2009–10 to 2011–12, all-cause hospitalisation rates were higher for nine HHSs—71% to 5% higher than the state rate and between 2% and 12% lower for seven.
- There was no change in the hospitalisation rate between 2001–02 and 2011–12, although the number of cases increased by 19% or 1.6% per year.
Cancer incidence and death
- There were 137 new cases of cancer diagnosed in children aged 0–14 years in 2011 of which 58% were males (79 males, 58 females).
- Leukaemia was the leading cancer accounting for 34% of all cancers, followed by bone and soft tissue cancers (17%) and brain cancer (14%).
- There were about 20 childhood cancer deaths per year in 2008–2010, 58% were males. Brain cancer was responsible for 44% of all cancer deaths followed by leukaemia (27%).

Oral Health
- 50% of 5–10 year olds had decay experience in their primary teeth in 2010–12.
- 30% of 6–14 year olds had decay experience in their permanent teeth.
- 32% of children starting school (5–6 years of age) had never visited a dental provider.

Immunisation
- 92% of Queensland children aged one year were fully immunised in 2013. Similar rates were maintained for children aged two years and five years.
- Childhood immunisation rates in Queensland were slightly higher than national rates.

Risk and protective factors
For children aged 5–17 years in 2013:
- Overweight and obesity—18% were overweight and 11% were obese. The obesity rate in disadvantaged areas was 2.2 times the rate in advantaged areas.
- Physical activity and screen time—41% undertook sufficient physical activity, 46% travelled to or from school by any active transport including public transport, and 34% exceeded recommended screen time for entertainment.
- Nutrition—65% consumed adequate serves of fruit and the rate was 21% lower in disadvantaged areas than advantaged areas, 6% consumed adequate serves of vegetables, 8% consumed non-diet soft drink daily.
  In 2011–12 for children aged 4–13 years, 40% of energy was derived from energy-dense, low nutrition foods, described as discretionary foods. One in 2 children had consumed confectionary in the previous 24 hours, and about 70% had consumed discretionary cereal based products such as cakes, biscuits, pizza, and related foods. About 60% had consumed sugary drinks. The consumption of discretionary food among Queenslanders is discussed on page 87.

Summary
There is sound evidence that prevention initiatives early in life are highly effective. Prevention, early detection and early intervention can improve outcomes for children and build the foundation for a healthy and productive life.

Not all Queensland children have a healthy start. The overall disease burden is greater for boys than girls. Children living in disadvantaged and remote areas incurred a higher burden than those in advantaged areas and in cities. They are also more likely to be obese and eat less fruit. Indigenous children have higher disease burden than non-Indigenous children.

Key health challenges for children, with short term and longer term implications, include:
- high intake of energy-dense food, even in very young children, excess screen time and other factors leading to weight gain during childhood and the teenage years
- asthma management
- maintenance of high immunisation rates
- dental decay and oral health behaviours.

The disparity in disease burden in Queensland begins in childhood and flows through to marked health inequalities in adulthood. Minimising the disparity in health risk factors and promoting the protective factors in childhood will minimise the disparity among adults and reduce the disease burden in society.
Young people

Youth is a critical time for the development of health behaviours, as the patterns that develop when people are young often continue into adulthood. Health behaviours are an important determinant of both current and future health status of the population. This is especially true of young people. This section includes key health facts about young people broadly defined as 15–29 years old, although for some indicators the age groups vary depending on data availability.

Young people experience health risk factors and risk-taking behaviour differently from other age groups. Youth is a time of heightened risk taking sometimes undertaken under the influence of alcohol and illicit drugs. Prevention of risk-taking behaviours will have broad impact on the health and wellbeing of young people now and as they age. Young people are especially concerned with body image. In a 2007 survey of over 5000 selected Queenslanders aged 11–24 years, body image was the top issue of concern with about one-third identifying it as a significant issue, ahead of coping with stress and family conflict.

Demography

- 1 in 5 Queenslanders was aged 15–29 years in 2013—982,000 young people and 51% of these were males. One-third (31%) were aged 15–19 years, 34% aged 20–24 and 35% aged 25–29 years.
- Over the past 30 years the proportion of 15–29 year olds in the population decreased from 26% to 21% and over the next 20 years is projected to decrease to 19%.
- HHSS with a higher proportion of 15–29 year olds in 2011 were Mount Isa (25%), Torres Strait–Northern Peninsula (24%), Townsville (23%), Metro North (23%) and Metro South (22%).

Burden of disease (15–24 years)

- In 2007, 8% of the total burden of disease and injury was incurred by young people aged 15–24 years although this age group represented about 14% of population.
- The burden (DALY) rate for young people was second lowest after children.
- About one-fifth of the total burden was associated with premature mortality (compared to about one-half for the total population).
- Anxiety and depression, substance use disorders and road traffic injury were the leading causes of total burden for young males. For females, the leading cause was anxiety and depression, followed by asthma and migraine.

Deaths (15–29 years)

- There were 450 deaths of 15–29 year olds in 2010 and 70% were males.
- The major cause of death in 2009–2010, was suicide (28% of all deaths), followed by road transport injury (21%).
- The death rate decreased by 31% (4% per year) between 2001 and 2010, where this change was associated with male rate decline (5% per year), with no change in the female rate. The number of male deaths decreased by 2% per year, with no change in females deaths per year.

Hospitalisation (15–29 years)

- There were about 211,000 hospitalisations of 15–29 year olds in 2011–12, where 68% were for females. About 58,000 hospitalisations were for pregnancy and maternal conditions.
- The major causes of hospitalisation for males were injuries (24%) followed by digestive system diseases (16%) and for females, pregnancy (40%) followed by digestive system diseases (11%).
- Higher rates of hospitalisation for young people (both male and female) were evident in many HHSSs with the exception of Metro North, Metro South and Gold Coast. If the rates in all HHSSs were the same as the state average, there would have been about 13,000 fewer hospitalisations. If they were the same as the lowest (Gold Coast), there would have been about 43,000 fewer hospitalisations.
- There was no change in the hospitalisation rate over the past decade, although the number of cases increased by 30%.

Cancer incidence

- There were 484 new cases of cancer diagnosed in persons aged 15–29 years in 2011, 2% of all new cases.
- The leading cause was melanoma, accounting for 29% of all new cases followed by haematological cancers (19%).
- The incidence rate among those aged 15–29 years is decreasing, largely due to the 3.3% per year decrease in melanoma incidence rates between 2002 and 2011.

Long-term conditions (0–24 years)

- About 1 in 4 (23%) reported a respiratory condition of at least six months duration in 2011–12 with asthma, hay fever and chronic sinusitis the leading causes.
- About 1 in 6 (18%) reported a disease of the eye with short sightedness and long sightedness the most common causes.
- One in 8 (12%) reported a mental or behavioural problem with alcohol and drug related problems, and mood and anxiety problems the most common.
Risk and protective factors

In 2014 the risk factor profile for young people aged 18–24 years was as follows199:

- Smoking: 11% smoked daily and 3.7% non-daily, and in 2010, 7% of 14–19 year olds smoked daily, down from 9% in 2007297
- Weight (self report): 6% were underweight, 63% healthy weight, 21% overweight, 10% obese
- Weight (measured in 2011–12)75: 62% were underweight/healthy weight, 22% overweight, 17% obese
- Physical activity: 73% undertook sufficient physical activity and 13% of 18–34 year olds were sedentary every day in 2011251
- Alcohol: 18% drank at riskiest level (lifetime and single occasion) and 24% were drinking at single occasion risk (monthly)
- Nutrition: 56% consumed the recommended serves of fruit daily and 6% the recommended serves of vegetables, 17% consumed non-diet soft drink daily and 48% consumed takeaway food weekly. In 2011–12, 45% of daily energy intake was from energy-dense, nutrient-poor foods for 14–18 year olds.209
- Food insecurity in 2011: 11% of 18–34 year olds reported food insecurity229
- Sunburn and sun protection: 72% were sunburnt in the previous 12 months and 37% practised three of five sun protection behaviours in summer in 2012107
- Illicit drug use: 17% of 14–19 year olds reported Illicit drug use in the previous 12 months, 25% of 18–19 year olds and 31% of 20–29 year olds in 2010297
- Psychological distress: 14% were at high or very high risk in 2011–12.101

The immediate key health issues for young people in Queensland are:

- substance use particularly risky alcohol consumption, where recent gains have been made
- mental health problems including suicide
- injuries including transport related.

It is likely that these factors are interrelated. The overall burden is greater in males than females—evident in the higher number of deaths for males.

In the long term, preventing rapid weight gain as young people move from their teen years to their twenties and thirties, particularly for males, will protect against chronic disease and improve wellbeing. The very high consumption of energy-dense, nutrient-poor foods among young people is particularly concerning—45% of total daily energy intake of the average young person was derived from sugary drinks, alcoholic drinks, cakes, snacks, confectionery and other discretionary foods in 2011–12. Body image, however, is a key concern for young people and therefore it is important that public messages about weight gain are sensitive to this issue. For many young people, maintaining their current high levels of physical activity will protect them along with improved nutrition.

Many young people in Queensland have relatively poor sun protection behaviours and consequently are getting sunburned and exposing themselves to long-term skin damage, although improvement is evident. Gains for their lifetime can be achieved by addressing these issues in youth.

Summary
Older people

People are living longer, and where health is maintained, those years are more likely to be lived with greater satisfaction and enjoyment. There has been a 50% increase in the life expectancy of 70 year olds in the last century. In 2010–2012, 42% of Queensland males and 58% of females could expect to live to age 85 years. For those who reach the age of 85 years, they could expect to live another 6–7 years, similar to national. This section generally refers to the age group 65 years and older as ‘older people’ and includes age groups within this range as data allows.

Demography

- 1 in 7 Queenslanders (14%) was aged 65 years and older—634,000 persons in 2013. One in 8 was aged 65–84 years (12%) and 1 in 50 aged 85 years and older (1.6%).
- Over the past 22 years, there has been a doubling in the population aged 65 years and older and it is projected to double again over the next 20 years (Figure 4b, page 11), while for the age group 85 years and older, the population is projected to double in about 15 years.
- Of the HHSs, Wide Bay and Sunshine Coast had the highest proportion of older people in 2012 and Cape York and Torres Strait–Northern Peninsula the lowest (Figure 4c, page 11).
- Metro South and Metro North had the largest number of older people (more than 100,000) and Cape York and Torres Strait–Northern Peninsula the smallest (less than 1000).

Burden of disease

- In 2006, although older adults made up 12% of the population they experienced 39% of the total burden of disease and injury in Queensland where the burden rate was about 6 times that for children and young people.
- 62% of the total burden was associated with premature mortality (YLL).
- In 2010, the leading causes for older Australians were coronary heart disease, stroke, Alzheimer’s disease, COPD, low back pain and falls. Queensland data is not available.

Deaths

- There were 21,044 deaths of older people in 2010, 78% of all deaths.
- Coronary heart disease was the largest cause, followed by stroke, cancers of the digestive system (including colorectal), respiratory system cancers (including lung) and COPD.
- The predominance of the cardiovascular diseases increases with age and accounted for 45% of deaths in those aged 85 years and older.
- The death rate for older people decreased by 13% between 2001 and 2010, while the number of deaths increased by 22%.
- The death rate was higher than the state for five HHSs in 2008–2010 and varied from 31% higher in North West to 4% higher in Darling Downs, and was about 16% lower in Gold Coast.

Hospitalisations

- There were about 690,000 hospitalisations of older people in 2011–12, 40% of all hospitalisations, excluding those due to pregnancy, the perinatal period and congenital anomalies. Of these, 108,000 were for people aged 85 years and older (6% of total).
- The leading cause of hospitalisation was contact with the health service for specific procedures, examinations and investigations and related issues (34% of total), followed by circulatory conditions (9%), digestive diseases (8%) and cancers (7%).
- The hospitalisation rate increased by 29% between 2001–02 and 2011–12, while the number of hospitalisations increased by 76%.
- The hospitalisation rate for older people was higher than the state for four HHSs in the three years, 2009–10 to 2011–12 and varied from 8% higher in Gold Coast to 2% higher in Sunshine Coast. For 11 HHSs the rate was lower than the state, varying from 3% lower in West Moreton to 34% lower in Torres Strait–Northern Peninsula.
Cancer incidence

- There were 13,292 new cases of cancer diagnosed in older people in 2011, 54% of all cancers. About three-quarters of cancer deaths occurred in this age group in 2010 (74%).
- The top five cancers diagnosed in 2009–2011 were prostate cancer (18%), colorectal cancer (15%), lung cancer (11%), melanoma and haematological cancers (both 10%).
- There was no change in the all cancer incidence rate between 1990 and 2008, although the rate for males aged 80 years and older decreased by 0.4% per year.

Long-term conditions

- About 60% of older people reported a musculoskeletal condition of at least six months duration in 2011–12, with arthritis (43% of all older people), back pain (20%) and osteoporosis (14%) the leading causes.
- Over half (56%) reported a circulatory condition with hypertensive disease the most common followed by heart and vascular conditions such as heart attack, heart failure and angina.
- In addition, disease of the eye was reported by 97% of older people, deafness by 31%, high cholesterol by 22%, type 2 diabetes by 11%, asthma, hayfever and chronic sinusitis by about 10% each, and mood disorders by 9%.

Risk and protective factors

Three of the major risks for cardiovascular disease increase markedly with age: in 2011–12 about 80% of older people were dyslipidaemic, 70 to 80% were hypertensive and up to a quarter had high blood sugar. Furthermore, among those adults aged 75 years and older with dyslipidaemia only 40% were effectively treated, with about 40% not taking medication and about 20% ineffectively treated. Similarly, 19% of adults had untreated or inadequately treated high blood pressure.

For other factors, older people generally have a better profile than younger people (Chapter 4):
- Obesity declines in older age groups.
- Less than 10% are daily smokers.
- Lifetime and single occasion risky alcohol consumption declines and single occasion risky drinking is low.
- They are less likely to be sunburnt and more likely to be sun safe all year round.
- Fruit and vegetable consumption is generally higher.

Summary

Ageing is typified by an increasing number of ailments and illnesses, and increasing contact with the health system. Quality of life and satisfaction with health diminishes as illness and disabilities increase. Longer life has been achieved, but the years lived in good health have not kept pace—of the four-year gain in life expectancy in the past 20 years in Australia, only two of these were years of healthy life.

Although age may bring illness and frailty, and recognising such outcomes can be the consequence of earlier life choices and exposures, at all stages of life there is opportunity to reduce the risk of disease and the impact of illness and injury by careful management and protective and preventive measures.

Cardiovascular disease is the greatest killer in older people and results in substantial costs and disability. The main risk factors for cardiovascular disease, high blood pressure and cholesterol can be treated, so monitoring and assessment are a priority for all adults but particularly in older age groups. Improving the nutrition and exercise of older people and managing weight will also help to reduce the risk of disease. The impact of long-term smoking is evident in the development of lung cancer and COPD in older people, both of which have poor outcomes. Colorectal cancer is one of the more common cancers among older people and participation in the national screening program targeting older people has the potential to reduce cancer. Falls are very common in older people—one-quarter of Queenslanders aged 65 years and older had at least one fall in the previous year and of these, one-third required medical attention and about 10% were admitted to hospital. Preventing falls from occurring by regular strengthening exercises and continued physical activity as well as enhancing safety in the home will prolong the years of independent healthy life and reduce health system costs.

Good health across the life course is a priority. While it is never too early to make healthy choices, it is also never too late—healthy choices in later years can improve the health of older and elderly adults. WHO’s vision is that ‘if ageing is to be a positive experience, longer life must be accompanied by continuing opportunities for health, participation and security’.
Males

Detailed health data for males is included in every section of this report. This profile includes selected health statistics to highlight the key health issues for Queensland males and to contrast with females. The data refers to the whole population unless otherwise stated.

In 2010–12, the life expectancy of male infants in Queensland was 79.5 years, and 42% could expect to live to 85 years. Male life expectancy was 4.5 years less than for females and 0.4 years less than for Australian males. The life expectancy of males aged 65 years was 18.9 years. Australian males were ranked fifth highest life expectancy among 187 countries in 2010.

Demography
- In 2013, there were 2.322 million males in Queensland, 49.9% of the population.
- The age profile was very similar to the female profile except there were relatively more males aged 0–24 years (34% compared with 33%), and relatively fewer aged 75 years and older (5% compared with 6%).
- The male population doubled between 1980 and 2013, and, similar to females, is projected to increase by about 44% over the next 20 years.
- North West, Mackay and Cape York HHSs had the highest proportion of males in 2011 (54%, 53% and 52% respectively) and Sunshine Coast the lowest (49%).

Burden of disease
- The burden rate of Australian males in 2010 was about 15% higher than the female rate, with the premature death burden rate about 40% higher and the disability rate about 8% lower. Data for Queensland is not available.
- The leading causes of total male disease burden (DALYs) were coronary heart disease, low back pain and road injury. The leading causes of:
  - premature death (YLL) were coronary heart disease, lung cancer and suicide.
  - disability (YLD) were low back pain, drug use disorders and falls.

Deaths
- There were 14,138 male deaths in 2010 and 46% (6448 deaths) were premature. Two-thirds of the premature deaths were avoidable: 3007 were preventable and 1440 treatable.
- Considering all male deaths in 2010, 3 in 10 could have been avoided; 2 through prevention (21%) and 1 through treatment (10%).

Hospitalisations
- There were 872,557 hospitalisations for males in 2011–12, 47% of all hospitalisations.
- The male hospitalisation rate was 6% lower than the female rate. However, the rates were similar when hospitalisations for pregnancy and childbirth were excluded.
- The largest cause of hospitalisation was admissions for examinations, investigations and other contact with health services (28% of total). These hospitalisations were for admissions not specifically defined by a principal disease diagnosis. Digestive system diseases and injuries were the next largest causes (10% and 8% respectively).
- Potentially preventable hospitalisations accounted for 8% of all hospitalisations; the male rate was 5% higher than the female rate.
- The hospitalisation rate for selected chronic conditions was 11% higher than the female rate and for coronary heart disease alone it was about double.

Cancer incidence
- There were 14,039 new cases of cancer diagnosed in males in 2010. The male incidence rate was 45% higher than the female rate.
- The leading cause of new cases diagnosed was prostate cancer (28%), followed by melanoma (14%), colorectal cancer (12%) and lung cancer (9%). Excluding prostate cancer, male incidence rates were respectively 48%, 46% and 85% higher than female rates.
Long-term conditions

- About 1 in 2 (48%) of all males reported a disease of the eye of at least six months duration in 2011–12, with long sightedness and short sightedness the most common causes (Figure 61b). Males were 17% less likely to report an eye condition than females.
- About 1 in 4 (26%) of all males reported a respiratory condition with hay fever, asthma and chronic sinusitis the leading causes. Males were 8% less likely to report a respiratory condition than females.
- About 1 in 4 (26%) of all males reported a musculoskeletal condition with arthritis and back pain the leading causes. Males were 7% less likely to report a musculoskeletal condition than females.
- One in 8 males reported deafness, 27% higher than female prevalence.

Risk and protective factors

The origins of adult health often begin in childhood as described on page 138. Adult males generally have higher prevalence of risk factors than females and lower prevalence of protective factors (Table 33). The two most important risks for chronic disease burden are smoking and overweight and obesity—and the male adult prevalence is about 40% and 20% higher respectively than female. Fewer males consume the recommended serves of fruit and vegetables and they are more likely than females to consume soft drink daily and eat takeaway food weekly. They were more likely than females to be consuming energy-dense, nutrient-poor foods and drinks, particularly sugary drinks and alcohol, with males aged 19 years and older consuming about two cans of such drinks a day (730gms), compared with one for females. Males were about 4 times as likely as females to be drinking alcohol at the riskiest levels, that is, lifetime and single occasion risk combined. Conversely, males were 15% more likely to be physically active than females.

The health issues for males (relative to females) are:

- They have higher death rates.
- They die at younger ages.
- They have higher rates of preventable deaths.

And during their life they have poorer health outcomes with:

- higher hospitalisation rates for chronic disease
- higher cancer incidence rates including melanoma, colorectal and lung cancer.

Some of this is due to their poorer risk profile. One positive is that they have a lower disability burden. Male death rates are higher than female rates, and this is particularly evident in the largest cause of death, cardiovascular disease and, as a result, males have lower life expectancy than females. Males have higher rates of preventable death—2 in 10 deaths were preventable compared with 1 in 10 for females. However, despite the higher death burden compared to Queensland females, males compare very well internationally. In 2010, Australian males had the fifth highest life expectancy among 187 countries, with Queensland males not far behind.

Burden of disease studies show that males have a lower disability burden than females, and this is evident in the lower prevalence of many long-term conditions, including musculoskeletal, respiratory and mental health conditions. However, males are more likely to report deafness than females.

The key to the relatively poorer death outcomes for males is their risk factor profile. Males have higher rates than females for the two leading causes of disease burden—smoking and overweight and obesity. These risks will explain higher rates of cardiovascular disease and cancer. Risky alcohol consumption for males is 3 times the female prevalence and this will result in a higher injury burden as well as greater social and economic impacts. Young males have the highest rates of risky alcohol consumption. Furthermore, the eating patterns of males are less healthy than females—they consume less fruit and vegetables, more takeaway food, and more sugary drinks. In contrast, males are more physically active than females and this helps to mitigate the higher rates of obesity. Males are less sun safe than females and as a result have higher rates of melanoma. There is great potential to improve the health of males by improved lifestyle choices. Maintaining the pressure on smoking cessation, and increasing the focus on preventing weight gain, healthy eating, drinking within guidelines and being sun-safe, will help Queensland males live a longer and healthier life.
Figure 60: Selected indicators, by sex

a. Population by age and sex, Queensland, 2012

b. Top 5 specific causes of death, Queensland, 2010

c. Top 5 causes of disease burden by sex, Australia, 2010

d. Median age of death, selected specific conditions, Queensland, 2010

e. Broad causes of death, premature death rate ratio and median age difference, Queensland, 2010

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Table 33: Prevalence of selected risk factors by sex, adults, Queensland, 2014

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Prevalence (%)</th>
<th>Relative difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoke daily</td>
<td>16</td>
<td>37% higher</td>
</tr>
<tr>
<td>Overweight – measured</td>
<td>41</td>
<td>46% higher</td>
</tr>
<tr>
<td>Overweight – self report</td>
<td>39</td>
<td>31% higher</td>
</tr>
<tr>
<td>Obese – measured</td>
<td>31</td>
<td>similar</td>
</tr>
<tr>
<td>Obese – self report</td>
<td>24</td>
<td>similar</td>
</tr>
<tr>
<td>Overweight or obese – measured</td>
<td>73</td>
<td>27% higher</td>
</tr>
<tr>
<td>Sufficient physical activity</td>
<td>61</td>
<td>similar</td>
</tr>
<tr>
<td>Sedentary every day</td>
<td>14</td>
<td>similar</td>
</tr>
<tr>
<td>Riskiest drinking (lifetime and single occasion)</td>
<td>27</td>
<td>3.3 times</td>
</tr>
<tr>
<td>Single occasion risky drinking (monthly)</td>
<td>14</td>
<td>48% higher</td>
</tr>
<tr>
<td>Recommended fruit consumption</td>
<td>54</td>
<td>14% lower</td>
</tr>
<tr>
<td>Recommended vegetable consumption</td>
<td>3</td>
<td>78% lower</td>
</tr>
<tr>
<td>Full cream milk consumption usually</td>
<td>52</td>
<td>38% higher</td>
</tr>
<tr>
<td>Non-diet soft drink daily</td>
<td>18</td>
<td>81% higher</td>
</tr>
<tr>
<td>Takeaway food weekly</td>
<td>40</td>
<td>45% higher</td>
</tr>
<tr>
<td>Hypertension</td>
<td>33</td>
<td>20% higher</td>
</tr>
<tr>
<td>Dyslipidaemia</td>
<td>66</td>
<td>similar</td>
</tr>
<tr>
<td>Sunburnt in the previous 12 months</td>
<td>57</td>
<td>13% higher</td>
</tr>
<tr>
<td>Sun protection (3 of 5 behaviours in summer)</td>
<td>53</td>
<td>similar</td>
</tr>
<tr>
<td>I illicit drug use, recent (12+ years)</td>
<td>17</td>
<td>36% higher</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>13</td>
<td>similar</td>
</tr>
<tr>
<td>BreastScreen Queensland (50–69 years)</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Cervical screening (20–69 years)</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Figure 61: Selected indicators, by sex, Queensland

- Top six broad cause of hospitalisation, 2011–12
- Top 12 most prevalent conditions, 2011–12

Table 33: Prevalence of selected risk factors by sex, adults, Queensland, 2014

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Prevalence (%)</th>
<th>Relative difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long sighted/hyperopia</td>
<td>27.1</td>
<td>1.17</td>
</tr>
<tr>
<td>Short sighted/myopia</td>
<td>18.3</td>
<td>1.43</td>
</tr>
<tr>
<td>Total arthritis</td>
<td>11.5</td>
<td>1.37</td>
</tr>
<tr>
<td>Back pain/problems etc.</td>
<td>13.5</td>
<td>0.89</td>
</tr>
<tr>
<td>Hayfever and allergic rhinitis</td>
<td>11.2</td>
<td>1.21</td>
</tr>
<tr>
<td>Deafness</td>
<td>11.9</td>
<td>0.79</td>
</tr>
<tr>
<td>Asthma</td>
<td>9.5</td>
<td>1.15</td>
</tr>
<tr>
<td>Mood (affective) problems</td>
<td>7.6</td>
<td>1.62</td>
</tr>
<tr>
<td>Hypertensive disease</td>
<td>9.7</td>
<td>1.02</td>
</tr>
<tr>
<td>Chronic sinusitis</td>
<td>8.4</td>
<td>1.27</td>
</tr>
<tr>
<td>Migraine</td>
<td>3.7</td>
<td>2.30</td>
</tr>
<tr>
<td>Anxiety related problems</td>
<td>3.2</td>
<td>1.72</td>
</tr>
</tbody>
</table>
Detailed health data for females is included in every section of this report. This profile includes selected health statistics to highlight the key health issues for Queensland females and to contrast with males. The data refers to the whole population unless otherwise stated.

In 2010–12, the life expectancy of female infants in Queensland was 84.0 years, and 58% could expect to live to 85 years. Female life expectancy was 4.5 years more than for males and 0.3 years less than for Australian females. The life expectancy of females aged 65 years in 2010–12 was 21.9 years. Australian females were ranked ninth highest life expectancy among 187 countries.

Demography
- In 2013, there were 2.335 million females in Queensland, 50.1% of the population.
- The age profile was very similar to the male profile except there were relatively fewer females aged 0–24 years (33% compared with 34%), and relatively more aged 75 years and older (6% compared with 5%) (Figure 60a).
- The female population doubled between 1981 and 2013, and, similar to males, over the next 20 years is projected to increase by about 46%.
- Sunshine Coast, Metro North and Wide Bay HHSs had the highest proportion of females (51%) in 2011, and Mount Isa, North West and Cape York the lowest (46%, 47% and 48% respectively).

Burden of disease
- The burden rate in Australian females in 2010 was about 15% lower than the male rate. Data for Queensland is not available.
- The leading causes of total female disease burden (DALYs) were low back pain, coronary heart disease, and other musculoskeletal disorders (Figure 60c).
- The leading causes of:
  - premature death (YLL) were coronary heart disease, stroke and breast cancer
  - disability (YLD) were low back pain, other musculoskeletal disorders and major depressive disorders.

Deaths
- There were 12,784 female deaths in 2010 and 30% (3854 deaths) were premature. Two-thirds of the premature deaths were avoidable: 1391 were preventable and 1210 treatable.
- Considering all female deaths in 2010, 2 in 10 could have been avoided, 1 through prevention (11%) and 1 through treatment (9%) (Figure 12a, page 31).
- The leading causes of death were coronary heart disease, stroke, dementia, lung cancer and COPD (Figure 60b).
- Females had lower death rates than males for many conditions as described in Chapter 3. The female all-cause premature death rate was 40% lower than for males, and this was evident for all the major disease groups (Figure 60e).
- The median age of death was 83 years, six years older than males (Figure 60d). Older age of death was evident for all major causes, with a 20-year difference for injuries largely because falls in older people are a larger component of the injury burden in females. For selected specific conditions, the greatest difference in median age of death was for coronary heart disease (seven years) and road transport injury (five years). However, for melanoma, females were on average, four years younger than males at death.

Hospitalisation
- There were 971,389 hospitalisations for females in 2011–12, with 11% (106,274 hospitalisations) for pregnancy or childbirth.
- The largest cause of hospitalisation was admissions for examinations, investigations and other contact with health services (25% of total) (Figure 61a). These hospitalisations were for admissions not specifically defined by a principal disease diagnosis. As well as pregnancy and childbirth, digestive system diseases and admissions for signs and symptoms (another group not defined by a disease diagnosis) were the next largest causes (11% and 10% respectively).
- Potentially preventable hospitalisations accounted for 7% of all hospitalisations and the female rate was 5% lower than the male rate.
- The hospitalisation rate for other major causes was higher than the male rate; genitourinary diseases were 73% higher, mental disorders were 25% higher and endocrine diseases 24% higher.

Cancer incidence
- There were 10,422 new cases of cancer diagnosed in females in 2011. The female incidence rate was 31% lower than the male rate.
- The leading cause of new cases diagnosed was breast cancer (28%) followed by melanoma (13%), colorectal cancer (12%), and lung cancer (8%). Excluding breast cancer, female incidence rates were respectively 33%, 32% and 46% lower than male rates.
Long-term conditions

• More than 1 in 2 (57%) of all females reported a disease of the eye of at least six months duration with short sightedness and long sightedness the most common causes in 2011–12 (Figure 61b). Females were 20% more likely to report an eye condition than males.101

• About 1 in 4 (28%) of all females reported a respiratory condition with hay-fever, asthma and chronic sinusitis the leading causes. Females were 9% more likely to report a respiratory condition than males.

• About 1 in 4 (28%) of all females reported a musculoskeletal condition with arthritis and back pain the leading causes. Females were 8% more likely to report a musculoskeletal condition than males.

• In addition, 1 in 8 females reported a mood disorder, 1 in 12 reported migraine and 1 in 20 an anxiety disorder with prevalence of each higher than male prevalence (about 60%, 130% and 70% higher respectively).

Risk and protective factors

Females have lower prevalence of many risk factors than males including the two with the greatest impact on the development of chronic disease—smoking and obesity (Table 33). Smoking rates in females are relatively low but obesity rates are high—28% of adult females were measured as overweight in 2011–12 and 29% obese. Furthermore, the rate of overweight and obesity is increasing. The origins of these and other health risk in adults often begin in childhood as described on page 138.

Although females have a better nutrition profile than males, only about half eat sufficient fruit each day and about 1 in 8 sufficient vegetables. While risky alcohol consumption is a problem for males, the prevalence in females is much lower, about one-third the male prevalence. However, females are less active than males, with 53% meeting the recommendations compared with 61% of males. Women of childbearing age have specific nutrient needs. In 2011–12, 63% of Australian women aged 16–44 years had levels of blood iodine below WHO recommendations, while folate and vitamin B12 levels were at or above recommendations for the vast majority.225 Participation in cancer screening programs in Queensland women in the target age groups is consistent with national participation (56% for cervical screening and 57% for BreastScreen Queensland).

Females enjoy a longer life than males. Their life expectancy at birth is higher, they have lower premature death rates and they are less likely to die of preventable causes. However, still 1 in every 10 deaths of Queensland females in 2010 could have been avoided through treatment and 1 in 10 through prevention. Considering only premature deaths, 1 in 3 female deaths was preventable and 1 in 3 treatable.

Females, however, carry a higher burden of disability. This is evident in a number of disabling conditions that often do not require hospitalisation and rarely lead to death. These include mood and anxiety disorders, migraine, musculoskeletal conditions and some respiratory conditions.

The origin of longer life for females is seen in their less risky lifestyle behaviours. While they are more inactive than males, they are less likely to smoke, be overweight, consume alcohol to excess, consume takeaway food and drink soft drink, get sunburnt or use drugs illicitly. While gains have been achieved for females through better lifestyle choices, there are challenges ahead. Rising rates of obesity are affecting the whole population so females and males need to prevent weight gain, particularly women in the childbearing years as excess weight adds risk to pregnancy and birth outcomes.

Women have lower rates of smoking than men. However, about 1 in 7 women are smoking during pregnancy. The health of Queensland’s children will improve if a reduction in this rate can be achieved. A number of factors related to pregnancy will also improve outcomes—avoiding alcohol while pregnant and breastfeeding, better nutrition and regular antenatal care.

Breast cancer is an important but diminishing cause of death for females, in part due to improved screening. While further gains can be made, if the current good level of participation in the cancer screening programs is maintained, Queensland women will continue to benefit.

Overall, the health of Queensland women is good and improving. They have life expectancies as good as women in the top 5% countries worldwide. Maintaining and improving healthy lifestyles will be a key to further improvement. However, there is a need to also focus on health issues associated with disability to ensure good health throughout life.
Socioeconomically disadvantaged

Socioeconomic disadvantage is prevalent throughout Queensland and is the major cause of health inequality. The association between socioeconomic status and life expectancy, mortality, and risk factors has been well established and demonstrated within Queensland as well as nationally and internationally. There are many factors which influence the health and wellbeing of populations, with socioeconomic factors the major influence. These were described in the 2012 Queensland Chief Health Officer report (Chapter 2). Within this report, the ABS Index of Relative Socioeconomic Advantage and Disadvantage was used to report socioeconomic disadvantage as described on page 8.

Demography
Socioeconomic disadvantage is widespread across the state and is particularly prevalent among Indigenous Queenslanders and in areas outside cities (Figure 4i, page 12). In 2011, the prevalence of disadvantage (proportion of the population in the most disadvantaged areas), was as follows:

- all Queenslanders: about 1 in 5 (19%)
- major cities: about 1 in 8 (12%)
- inner regional areas: about 1 in 3 (33%)
- outer regional and remote areas: about 1 in 4 (26–27%)
- very remote areas: about 1 in 2 (55%)
- Indigenous Queenslanders: about 1 in 2 (44%).

The socioeconomic profiles of the HHSs vary considerably, with many displaying greater disadvantage compared to the state and some areas of relative advantage (Figure 63). The profile has a large bearing on the health outcomes, risk of disease and wellbeing of individuals and populations.

Burden of disease

- The burden rate in disadvantaged areas in 2006 was 42% higher than in advantaged areas.
- Assuming the burden rate in the most advantaged areas prevailed across the whole population, 25% of total burden in 2006 was estimated to be due to socioeconomic disadvantage.

Deaths

The death rate for the majority of key conditions was higher in disadvantaged areas than advantaged in 2009–2010. People in disadvantaged areas often die at younger ages, particularly for those conditions with a high level of risk attribution such as cardiovascular disease, diabetes and injuries (Figure 62a,b). This is evident in the following:

- The all-cause death rate was 31% higher in disadvantaged areas than advantaged, and for premature deaths it was 74% higher. This equated to about 2500 premature deaths per year due to socioeconomic disadvantage in Queensland, 25% of all premature deaths.
- The socioeconomic differential in death rates was greatest among those aged 15–44 years, (the rate in disadvantaged areas was more than double that of advantaged areas in 2008–2010) and diminishing to 30% higher for children 0–14 years with no difference for those aged 85 years and older. A similar pattern was evident nationally.
- Socioeconomic differences for selected conditions were greater, particularly for premature deaths. The premature death rate for road transport injury in disadvantaged areas was 4.4 times the advantaged rate, for COPD and diabetes it was about 3.1 times, for suicide and coronary heart disease it was about double with lower differentials for stroke and lung cancer. If there were no socioeconomic differences and the avoidable death rate in all areas was the same as in advantaged areas, there would have been about 2000 fewer avoidable deaths per year on average in 2009–2010, about 30% fewer avoidable deaths.
- People die at a younger age in disadvantaged areas. There was a four-year difference in median age of death in 2009–2010, 78 years in disadvantaged areas and 82 years in advantaged areas.
- The difference in median age of death between disadvantaged and advantaged areas varied with condition and by sex. People in disadvantaged areas died earlier than those in advantaged areas: four years earlier for diabetes and road transport injury, and two years earlier for coronary heart disease, stroke and lung cancer. For some conditions there was a marked difference between socioeconomic groups for males and females: for injuries (excluding suicide) there was a two-year difference in the median age of death between disadvantaged and advantaged populations for males while for females the difference was 20 years.
Hospitalisations
While hospitalisation rates may reflect underlying levels of disease in the population, they are also dependent on the availability of ambulatory care services, access to hospital care and hospital admission practices. As these vary across areas in Queensland, caution is required when interpreting rates between areas as a measure of health status. Recognising these caveats, hospitalisation rates were higher in disadvantaged than advantaged areas for many conditions, while median age of admission varied:

- The all-cause hospitalisation rate was 10% higher in disadvantaged areas than advantaged areas in the two years 2010–11 to 2011–12 (Figure 62c).
- The rate of potentially preventable hospitalisations (PPHs) increased with increasing socioeconomic disadvantage. The PPH rate in disadvantaged areas was 69% higher than advantaged areas (Figure 13d, page 33). Socioeconomic disadvantage represented about 29,000 excess hospitalisations per year in Queensland (22% of all PPHs).
- The average age of people admitted to hospital in disadvantaged areas was about three years older than advantaged areas (Figure 62d). However, when considering individual causes there were marked differences—for road transport injury, people in disadvantaged areas were five years younger at admission (32 and 37 years respectively). In contrast, for asthma the median age of hospitalisation in disadvantaged areas was 20 years, compared with nine years in advantaged areas—a difference of 11 years. This difference may be due to the higher use of hospital services for those living in disadvantaged areas162, and lower use of asthma management plans.

Cancer incidence and death
The all cancer incidence rate in disadvantaged areas was similar to that in advantaged areas in 2010–2011, while the death rate was 24% higher. Specific differences are:

- For lung cancer and colorectal cancer, incidence rates were higher in disadvantaged areas, about 70% to double for lung cancer and 26% to 94% higher for colorectal cancer. Female breast cancer and melanoma incidence rates were 17% and 22% lower respectively in disadvantaged areas.
- For deaths, the lung cancer rate was 48% higher in disadvantaged than advantaged areas.

Risk and protective factors
The prevalence of selected risk factors in adults was higher in disadvantaged areas than advantaged in 2014199:

- Smoke daily: 87% higher
- Ever smoked: 29% higher
- Obese: 80% higher
- Insufficient daily fruit: 33% higher
- Full cream milk: 60% higher in 2011.229

For a number of risk and protective factors, there was no difference between the prevalence in advantaged and disadvantaged populations as reported in Chapter 4. The socioeconomic disparity in health risk in adults, often begins in childhood. Of particular note, the prevalence of childhood obesity in disadvantaged areas was double that in advantaged areas in 2013.

For the key risk factors of obesity and smoking, the trend in prevalence in advantaged and disadvantaged populations over the past decade was assessed.200 These risks are significant in reducing health inequalities. Since 2004, the socioeconomic difference in prevalence of daily smoking has remained steady at about double (Figure 62e). Similarly, the socioeconomic gradient in obesity prevalence has continued with a difference of about 60% maintained over the past 10 years (Figure 62f). It is evident that while gains in smoking reduction have been achieved, the inequality gap remains. Similarly, the epidemic of obesity is affecting both advantaged and disadvantaged populations equally. In contrast, for physical activity, the gap between advantaged and disadvantaged populations has diminished over the past decade (Figure 1e, page 3).
Health disparity has many causes with socioeconomic factors the major influence. Socioeconomic disadvantage is prevalent across Queensland and is evident in urban areas, regional and remote communities and among Indigenous Queenslanders. It is a concept which is described and measured in relative terms—1 in 5 Queenslanders experienced relative disadvantage in 2011.

Communities and populations with higher levels of disadvantage experience higher rates of death for many conditions. These include the major causes of death such as cardiovascular disease, cancers and respiratory conditions. Disadvantaged people die at younger ages, with some stark sex related socioeconomic differences, for example, a 20-year gap in median age of death for injury for females in disadvantaged areas compared to advantaged, while the male gap was only two years.

Those diseases and conditions which show the most marked socioeconomic differences are often the most preventable. These include coronary heart disease, stroke, diabetes, lung cancer, melanoma, COPD and injuries such as road transport, falls and suicide.

The causes of poorer health are evident in higher rates of the two most disabling risk factors, obesity and smoking. The large differential in prevalence of smoking that has been evident in the past decade has not changed, with the smoking rate in disadvantaged populations about double the advantaged rate. Obesity has a similar socioeconomic difference which has not changed. Reducing health inequalities will require a focus on reducing the risk factor gap.

Looking beyond the immediate causes of disease outcomes, that is, to the causes of the causes, underlying levels of social deprivation, and lack of opportunity, access, knowledge and capacity to change, are ongoing issues for a number of individuals and communities. These causes are defined as the social determinants of health and have been widely described and reported in Queensland and internationally. Closing the gap on health disadvantage will be achieved through a concerted approach to lift the health behaviours, opportunities and resources of those most in need.
How to interpret a ‘difference to Queensland’ graph:
The ABS index of socioeconomic advantage and disadvantage measures the relative difference in socioeconomic characteristics between an area and a known benchmark (page 8). It is not an absolute measure of socioeconomic status. The profiles displayed in this figure show how the socioeconomic characteristics of the HHSs differ from Queensland. For example, the population of Wide Bay has a greater proportion of people living in areas of most disadvantage than the Queensland average and relatively fewer living in all other areas including most advantaged areas. It contrasts most markedly with Metro North, which has a profile of greater advantage and less disadvantage than Queensland. Sunshine Coast shows a very different profile, with relatively fewer people living in more extreme advantaged or disadvantaged areas than Queensland while a majority have a middle position, that is neither advantaged nor disadvantaged.

It is important to note that the index used to generate these profiles may not fully capture the socioeconomic characteristics of all population groups. For example while it includes income, it does not include assets, and these may be a feature of the economic resources of some populations such as older people and those on rural land holdings.
Indigenous Queenslanders carry a greater burden of ill health and early death than non-Indigenous Queenslanders, and the disparity is greater than any other population group. This is evident in the life expectancy gap—a 10.8 year difference between Indigenous Queenslanders and all non-Indigenous males in 2010–2012 and for females an 8.6 year gap. Compared to Indigenous Australians, Indigenous Queenslanders are doing slightly better with a life expectancy gap in their favour of 1.3 years for males and 2.1 years for females.

This section includes a selection of health indicators for Indigenous Queenslanders and a map of population density (Figure 64). In all sections of this report, further detail is presented where available and where Queensland data is unavailable, Australian data is included.

**Demography**
- In 2011, there were 188,954 Indigenous Queenslanders, 4.2% of the total population and a similar proportion for males and females (Figure 65a).
- Indigenous Queenslanders had a younger age profile than the non-Indigenous population—46% were aged 0–19 years compared with 24% (Figure 4f, page 12).
- They were less likely to be older than the non-Indigenous population—3% were aged 65 years and older compared with 13%.
- They were about twice as likely to live in areas of greatest disadvantage compared with all Queenslanders (44% compared with 19%).
- They were more likely to live in remote or very remote areas than non-Indigenous Queenslanders (19% compared with 2%) and less likely to live in major cities (31% compared with 63%).
- About half (47%) of Indigenous Queenslanders lived in four HHSs in 2011: Cairns and Hinterland, Metro South, Townsville and Metro North (Figure 4j, page 12).
- The HHSs with the highest proportion of Indigenous Queenslanders were Torres Strait–Northern Peninsula (83%), Cape York (53%) and North West (25%) (Figure 4k, page 12).

**Burden of disease**
- In 2007, the per capita burden of disease and injury for Indigenous Queenslanders was double that of non-Indigenous Queenslanders (2.1 times).
- The leading causes of burden for Indigenous Queenslanders were mental disorders (17% of total), cardiovascular disease (15%), diabetes (10%) and chronic respiratory disease (9%).
- Relative to the non-Indigenous population the burden rate for Indigenous Queenslanders was at least triple for three of these four major causes and 50% higher for mental disorders.
- Over one-third (36%) of the total disease burden was due to the joint effect of 11 modifiable risk factors with high body mass the largest cause followed by tobacco use and physical inactivity.

**Maternal and infant**
- There were on average 3468 infants per year born to 3461 Indigenous Queenslanders mothers in 2009–2011, 5.7% of all infants (Table 32, page 136).
- The infant mortality rate was 87% higher than the non-Indigenous rate with no change since 2002 (Figure 59c, page 136).
- 12% of infants were low birth weight (less than 2500gm) and 8.9% were high birth weight (4000gm or more), compared to 6.6% and 13% respectively for all Queensland infants.
- Indigenous Queenslanders infants were 1.7 times more likely to be born preterm than non-Indigenous infants, leading to greater risk of perinatal death. About 13% of preterm births were associated with smoking after 20 weeks gestation and not completing the recommended antenatal care visits.
- Compared to non-Indigenous mothers, Indigenous Queenslanders mothers were:
  - more likely to be aged under 20 years at the birth (19% compared to 4.5%).
  - less likely to have made five or more antenatal visits during their pregnancy (80% compared to 95%).
  - less likely to have exclusively breastfed their infants at some time in the 24 hours prior to discharge (72% compared 79%).
– more likely to have smoked at some time during pregnancy (48% compared to 13%).
– more likely to have quit before 20 weeks gestation (5.3% compared with 2.4%). However, this had little effect on the proportion who smoked during the second half of pregnancy, 43% of Indigenous Queensland women and 11% of non-Indigenous women.

Deaths
• There were 614 deaths of Indigenous Queenslanders in 2010—the death rate was 55% higher than the non-Indigenous rate.
• Two-thirds (65%) of Indigenous Queenslanders deaths were in the 0–64 year age group compared with 20% of non-Indigenous deaths.
• If the Indigenous death rate were the same as the non-Indigenous rate, there would have been 300 fewer deaths per year of Indigenous Queenslanders in 2009–2010, reducing the number of Indigenous Queenslanders deaths by about half (49%).
• The major causes of death were cardiovascular disease (25% of all deaths), cancers (21%), injuries (12%), endocrine diseases including diabetes (10%) and respiratory conditions (8%) (Figure 65c).
• The median age of death of Indigenous Queenslanders in 2009–2010 was 57 years, compared with 80 years for the non-Indigenous population—a 23-year age difference (Figure 6, page 15) and varied by 15 years across HHSs from 67 years to 52 years in 2008–2010.
• For Indigenous Queenslanders males, the median age of death in 2009–2010 was 54 years, compared to 77 years for non-Indigenous males, and for females, 60 years and 83 years respectively, a 23-year difference for both.
• Compared to non-Indigenous Queenslanders, the greatest difference in death rates was among those aged 30–44 years, (the Indigenous Queensland death rate was more than 3 times the non-Indigenous rate in this age group in 2008–2010), diminishing to 80% higher for children 0–14 years and 26% higher for those aged 65 years and older.
• In 2009–2010, there were an average of 370 avoidable deaths of Indigenous Queenslanders per year—217 that were avoidable through prevention and 154 through treatment. The avoidable death rate for Indigenous Queenslanders was 2.9 times the non-Indigenous rate. The greater difference was for treatable conditions than preventable, 3.2 times the non-Indigenous rate compared with 2.8 times (Figure 12f, page 31). If the rate of avoidable deaths were the same as the non-Indigenous rate, there would have been far fewer deaths—about 240 fewer deaths per year, which would reduce the number of deaths by two-thirds.

In all HHSs the median age of death was lower for Indigenous Queenslanders than for non-Indigenous except Torres Strait—Northern Peninsula (Figure 68). Metro North had the greatest median age of death difference between Indigenous and non-Indigenous Queenslanders (29-year difference) and the lowest median age of death of Indigenous Queenslanders in the state in 2008–2010.
• Between 2001 and 2010 the Indigenous Queenslanders death rate decreased by 25%, double the death rate decline of the non-Indigenous population (Figure 1a, page 2). There was greater death rate reduction for Indigenous Queenslanders aged 0–64 years, 36% over the 10 years, than for the whole population (17% decline for similar aged non-Indigenous Queenslanders).
• Of the 2620 deaths of Indigenous Australians in 2012, 26% occurred in Queensland. In contrast, 19% of the 143,309 non-Indigenous deaths occurred in Queensland.

Hospitalisations
• There were 83,884 hospitalisations per year of Indigenous Queenslanders in the two-year period 2010–11 to 2011–12, representing 4.6% of all hospitalisations.
• The Indigenous Queenslanders hospitalisation rate was 2.1 times the non-Indigenous rate (Figure 65b). If the Indigenous Queenslanders rate was the same as the non-Indigenous rate there would have been about 42,000 fewer hospitalisations per year, about half the current number.
• The Indigenous Queenslanders hospitalisation rate was higher than the non-Indigenous rate across all age groups with peak difference in the age range 45 to 64 years (Figure 65b).
• The median age of hospitalisation for Indigenous Queenslanders was 44 years, compared with 58 years for non-Indigenous, a 14-year difference and was greater for males (15 years) than females (12 years).

Cancer incidence and death
• The all cancer incidence rate for Indigenous Queenslanders was 11% higher than the non-Indigenous rate in 2010–2011, while the all cancer mortality rate was 30% higher in 2008–2010 (page 37).
Long-term conditions

- The most commonly reported long-term problems reported by Indigenous Australians were eye diseases and sight problems (33%), respiratory problems (31%) and musculoskeletal conditions (20%) in 2012–13.119
- Prevalence of some long-term conditions was substantially higher for Indigenous Australians than non-Indigenous—complete or partial blindness was 7 times higher, kidney disease was 4 times higher, diabetes was more than 3 times higher, asthma and COPD were about double as was otitis media.
- The available data for Indigenous Queenslanders showed that the prevalence of long-term conditions was similar to Indigenous Australians.

Risk and protective factors

In 2012–13, Indigenous Queenslanders had a higher prevalence of selected risk factors than non-Indigenous Queenslanders (Figure 65d).201 They were:

- more likely to be obese (prevalence was 39% higher), or overweight or obese (12% higher) and consequently less likely to be a healthy weight (prevalence was 25% lower)
- more likely to smoke daily—2.5 times more likely
- less likely to consume recommended serves of fruit daily (prevalence was 12% lower)
- likely to have the same rates of alcohol consumption, vegetable consumption and in non-remote areas, prevalence of sedentary or low exercise.

The risk factor profile for Indigenous Queenslanders and Indigenous Australians did not differ based on the selected lifestyle risks (Table 34).

Indigenous Australian adults had higher rates of key risk factors for cardiovascular disease than non-Indigenous adults (after adjusting for age): the prevalence of high blood pressure was 18% higher, dyslipidaemia was 13% higher, measured obesity was 39% higher and fasting plasma glucose levels were 3.3 times.310,392 Among Indigenous Australian adults living in remote areas, 79% were dyslipidaemic and the majority were not using lipid lowering medication—two-thirds had untreated high cholesterol (data not age standardised). Combined with high smoking rates (2.5 times non-Indigenous rates), these risks highlight critical opportunities to reduce the causes of premature death among Indigenous Queenslanders.

Selected risk factors for Indigenous Queensland children (5–17 years) in 2012–13201:

- 30% were measured as overweight or obese, 17% overweight and 13% obese. The prevalence did not differ from non-Indigenous Queensland children or Indigenous Australian children.
- 68% consumed the recommended serves of fruit daily and 9% the recommended serves of vegetables. The prevalence did not differ from non-Indigenous Queensland children or Indigenous Australian children.

Encouraging trends and behaviours include:

- more rapid decrease in the all-cause death rate—about double the non-Indigenous rate
- no difference in risky alcohol consumption
- stillbirth and neonatal deaths due to social context, rather than to Indigenous status.

The origins of Indigenous disadvantage are complex and difficult to address, going well beyond the activity of the health system. However, a continued focus on decreasing smoking during pregnancy, reducing risk in the population and improving the delivery of treatment services will go some way towards improving outcomes for Indigenous Queenslanders.361

Summary

The health disadvantage of Indigenous Queenslanders is evident across many domains:

- 10-year difference in life expectancy
- 23-year gap in median age of death
- death rates 55% higher than non-Indigenous rates
- hospitalisation rates double the non-Indigenous rates
- earlier age of hospitalisation—14 years earlier
- higher rates of avoidable deaths for preventable conditions (2.8 times higher)
- higher rates of avoidable deaths for treatable conditions (3.2 times higher)
- relatively poorer cancer outcomes—slightly higher incidence rates and markedly higher death rates
- higher prevalence of disabling long-term conditions—blindness, kidney disease, diabetes, asthma, COPD and otitis media
- higher prevalence of selected risk factors, particularly the two most important causes of disease burden—obesity and smoking
- riskier maternal behaviours, and poorer infant outcomes.

Encouraging trends and behaviours include:

- more rapid decrease in the all-cause death rate—about double the non-Indigenous rate
- no difference in risky alcohol consumption
- stillbirth and neonatal deaths due to social context, rather than to Indigenous status.

The origins of Indigenous disadvantage are complex and difficult to address, going well beyond the activity of the health system. However, a continued focus on decreasing smoking during pregnancy, reducing risk in the population and improving the delivery of treatment services will go some way towards improving outcomes for Indigenous Queenslanders.361
### Figure 65: Selected indicators for Indigenous Queenslanders

#### a. Indigenous Queenslanders, percentage of total population by age and sex, 2011

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Indigenous</th>
<th>Non-Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>6.5</td>
<td>5.9</td>
</tr>
<tr>
<td>5-17 years</td>
<td>7.0</td>
<td>7.1</td>
</tr>
<tr>
<td>18-29 years</td>
<td>6.5</td>
<td>6.6</td>
</tr>
<tr>
<td>30-64 years</td>
<td>4.5</td>
<td>4.8</td>
</tr>
<tr>
<td>65+ years</td>
<td>2.6</td>
<td>2.7</td>
</tr>
</tbody>
</table>

#### b. Hospitalisations by age and Indigenous status, 2010–11 to 2011–12

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Indigenous</th>
<th>Non-Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>6.5</td>
<td>5.9</td>
</tr>
<tr>
<td>5-17 years</td>
<td>7.0</td>
<td>7.1</td>
</tr>
<tr>
<td>18-29 years</td>
<td>6.5</td>
<td>6.6</td>
</tr>
<tr>
<td>30-64 years</td>
<td>4.5</td>
<td>4.8</td>
</tr>
<tr>
<td>65+ years</td>
<td>2.6</td>
<td>2.7</td>
</tr>
</tbody>
</table>

### Table 34: Prevalence of selected risk factors for Indigenous adults, Queensland and Australia 2012–13

#### Measured BMI

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Indigenous</th>
<th>Non-Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight</td>
<td>30.7 (27.6–33.8)</td>
<td>29.9 (28.4–31.4)</td>
</tr>
<tr>
<td>Obese</td>
<td>41.7 (38.5–44.9)</td>
<td>42.5 (40.8–44.2)</td>
</tr>
<tr>
<td>Overweight/obese</td>
<td>72.4 (69.4–75.4)</td>
<td>72.4 (70.9–73.9)</td>
</tr>
</tbody>
</table>

#### Alcohol consumption: 2009 NHMRC guidelines

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Indigenous</th>
<th>Non-Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeded lifetime risk guidelines</td>
<td>18.2 (14.5–21.9)</td>
<td>19.2 (17.6–20.8)</td>
</tr>
<tr>
<td>Exceeded single occasion risk guidelines</td>
<td>18.2 (13.9–22.5)</td>
<td>51.9 (50.0–53.8)</td>
</tr>
</tbody>
</table>

#### Fruit and vegetable consumption: 2013 NHMRC guidelines

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Indigenous</th>
<th>Non-Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate daily fruit consumption</td>
<td>42.7 (39.4–46.0)</td>
<td>42.6 (41.0–44.2)</td>
</tr>
<tr>
<td>Adequate daily vegetables consumption</td>
<td>4.7 (3.4–6.0)</td>
<td>5.5 (4.7–6.3)</td>
</tr>
<tr>
<td>Sedentary/low exercise (non-remote areas)</td>
<td>63.1 (58.4–67.8)</td>
<td>63.3 (61.0–65.6)</td>
</tr>
</tbody>
</table>

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**Notes:**
- Percentage (age standardised)
- Non-Indigenous
- *Lower than non-Indigenous
- **Higher than non-Indigenous
Regional Queenslanders

Health status varies across regions within Queensland. Regional data is presented throughout this report where available, from demography to health outcomes and risks. This section brings this information together, focusing on the remoteness categories (major cities, inner and outer regional areas, and remote and very remote areas) and the HHSs (Figure 66). In addition, the Appendix includes a factsheet for each of the HHSs. It is important to recognise that regional variation in health outcomes is due to complex and diverse reasons, including exposure to environmental factors, socioeconomic status, access to health services such as screening and, importantly, chance.

Information on health issues for Medicare Locals can be gathered from the integration of HHS profiles. Risk factor profiles for Queensland Medicare Locals and local governments have been released. For comparison of health status across areas, rates are age standardised to eliminate differences due to differing age structures and this is the most sound epidemiological approach. However, this method is likely to overestimate the actual burden in areas with a younger age profile (such as Torres Strait–Northern Peninsula and Cape York HHSs) and underestimate the burden in areas with an older age profile (such as Wide Bay HHS).

Demography

The population of Queensland is clustered along the coast and in major regional areas (Figure 2, page 7). In 2011:
- 12 in 20 Queenslanders lived in major cities (62%)
- 4 in 20 lived in inner regional areas (20%)
- 3 in 20 lived in outer regional areas (15%)
- 1 in 20 lived in remote or very remote areas (3%).

The Indigenous Queensland population is, however, more widely dispersed across the state—in 2011 they were 6 times more likely to live in remote and very remote areas than all Queenslanders and less than half as likely to live in major cities (Figure 4h, page 12).

The HHS populations differ in size with over half of the population living in three HHSs in south-east Queensland: Metro South (22%), Metro North (19%) and Gold Coast (12%) (Figure 67a). The Queensland population is projected to increase by about 10% every five years up to 2031 although a slowing in the rate of change during this period is expected (Figure 67b). Some HHSs are projected to reverse this trend with sustained and increasing growth (West Moreton and Darling Downs), while others such as the western HHSs are projected to change very little.

Maternal and infant

Maternal and infant data for Queensland is described more fully on page 134 and other sections of this report including infant nutrition on page 88. This section uses selected indicators to compare HHSs (Table 35):
- On average in 2009–2011, there were 61,051 babies born to 60,452 mothers per year in Queensland and over 50% of births were in three HHSs: Metro South (about 25%), Metro North (about 20%) and Gold Coast (about 10%).
- The crude birth rate was highest in Torres Strait–Northern Peninsula (77 births per 1000 persons) and North West (60 births per 1000) and lowest in Sunshine Coast and Wide Bay (both 32 births per 1000). The fertility rate showed a similar pattern.

There is a clustering of perinatal risk in some HHSs relative to Queensland and this is evident for all infants and mothers, for non-Indigenous and Indigenous mothers and infants (Table 35):
- For non-Indigenous infants and mothers, Wide Bay, West Moreton, Darling Downs and Central Queensland have a greater number of risks relative to Queensland than other HHSs, with Gold Coast and Metro North having a less risky profile. The indicators that featured most frequently as risks for non-Indigenous infants and mothers across multiple HHSs were smoking during pregnancy and higher rates of teenage pregnancy.
• For Indigenous Queenslanders, there is less clustering of risk, however, Darling Downs, North West and South West carry a greater number of risks relative to Queensland. Gold Coast had the lowest risk profile relative to Queensland. The indicators that featured most frequently as risks for Indigenous infants and mothers across multiple HHSs were lower rates of breastfeeding in the 24 hours prior to discharge and smoking during pregnancy.

Burden of disease
• The burden rate in remote areas of Queensland was 50% higher than the major city rate in 2006. The main causes that contributed to this difference were cardiovascular diseases, diabetes and unintentional injuries.
• For Indigenous Queenslanders in 2007, the burden rate in remote areas was about 50% higher than in major cities and in regional areas it was 30% higher. While the excess burden in regional and remote areas of the state was similar for most broad causes, the burden rate due to intentional injury in remote areas was 4 times that of major cities and in regional areas, it was double. The unintentional injury burden and the diabetes burden, were each at least twice as high in remote areas as major cities.

Deaths
The death rate due to all causes:
• was 55% higher in remote and very remote areas than in major cities in 2009–2010 (Figure 10b, page 26)
• varied by HHS, from about 50% higher than the state in North West to 4% higher in Darling Downs, and from 4% lower than the state in Metro North to 16% lower in Gold Coast in 2008–2010 (Figure 10c, page 26).
• The number of deaths of Indigenous Queenslanders in HHSs reflects the population and the death rate, with Cairns and Hinterland reporting the highest number of Indigenous Queenslanders deaths per year in 2008–2010. (Figure 67d).

There was a similar pattern for selected conditions when compared across remoteness categories or by HHS as discussed in Chapter 3.

The proportion of deaths that were premature and, of those that were premature, the proportion that were avoidable varied between HHSs (Figure 69a,b). In 2008–2010:
• The premature death rates were higher than the state in nine HHSs and varied from 2.1 times the state in North West to 9% higher in West Moreton. Four HHSs had lower rates, from 4% lower in Metro South to 20% lower in Gold Coast (Table 36b).
• 1 in 2 premature deaths in Torres Strait–Northern Peninsula, Cape York and North West were potentially avoidable, whereas for Metro North, Metro South, Sunshine Coast and Gold Coast about 1 in 4 were.
• Furthermore, the three HHSs with the highest proportion of avoidable deaths had the highest proportion of preventable deaths.
• Torres Strait–Northern Peninsula had the highest proportion of treatable deaths of all HHSs.
• In all HHSs except Torres Strait–Northern Peninsula, there were more preventable deaths than treatable deaths.

The median age of death varies markedly by population group and by region. Sex, socioeconomic and Indigenous status are major causes of difference as discussed in preceding sections of this chapter. However, regional differences are also evident:
• The median age of death in major cities was 81 years in 2009–2010 while for remote and very remote areas it was 69 years, a 12-year difference (Figure 6, page 15).
• For Indigenous Queenslanders, there was little difference in median age of death by remoteness with the lowest median age of death in remote and very remote areas (54 years), followed by major cities (57 years) and the highest (60 years) in inner regional areas (Figure 67c).
• There was a 21-year difference in median age of death between HHSs in 2008–2010, from 60 years in Torres Strait–Northern Peninsula and 62 years in Cape York to 81 years in Sunshine Coast, Gold Coast, Metro South and Metro North (Figure 7, page 15).
• There was marked variation among the HHSs in the median age of death difference between Indigenous Queenslanders and non-Indigenous (Figure 68). The largest gap was in Metro North with a 29-year difference while for Torres Strait–Northern Peninsula non-Indigenous Queenslanders had a younger median age of death, resulting in a 3.5-year gap in favour of Indigenous Queenslanders.
• Relative to Queensland, Indigenous Queenslanders in Metro North died at younger ages than the state, while non-Indigenous people died at older ages than the state. This implies substantially poorer health outcomes for Indigenous Queenslanders in Metro North than the state while non-Indigenous Queenslanders have better health.
• In contrast, in Sunshine Coast, Indigenous Queenslanders died at an older age than the state as did non-Indigenous Queenslanders, both with better outcomes than the state.
• In Torres Strait–Northern Peninsula, non-Indigenous Queenslanders died 22.5 years earlier than the state while Indigenous Queenslanders died 4 years later than the state.
Death rates differed markedly across HHSs with a clustering of poorer death rate outcomes in some HHSs relative to Queensland in 2008–2010:

- Considering the broad causes of death (Table 36a), four HHSs had a greater number of disease groups with higher death rates than Queensland: Cairns and Hinterland, North West, Central Queensland and Townsville. In contrast, Gold Coast had the greatest number of disease groups with lower death rates than Queensland, followed by Sunshine Coast. The disease groups that featured most frequently for poorer death outcomes across multiple HHSs were circulatory conditions, endocrine disorders including diabetes, and injury.

- Considering potentially avoidable deaths (Table 36b), about two-thirds of the HHSs had higher rates of death than Queensland with Gold Coast, Sunshine Coast, Metro South and Metro North having lower rates. Preventable conditions were the major cause of avoidable death across HHSs.

- Considering selected specific conditions (Table 36b), two HHSs have a greater number of conditions with higher death rates than Queensland: North West and Darling Downs. In contrast, Gold Coast had the greatest number of conditions with lower death rates than Queensland, followed by Sunshine Coast. The conditions that featured most frequently with poorer death outcomes across multiple HHSs were coronary heart disease and road transport injury.

### Hospitalisations

While hospitalisation rates may reflect underlying levels of disease in the population, they are also dependent on availability of ambulatory care services, access to hospital care and hospital admission practices and as these vary across the state, caution is required when interpreting rates between areas. Recognising these caveats, the all-cause hospitalisation rate in the two-year period 2010–11 to 2011–12 was:

- 17% higher in remote and very remote areas than major cities.
- higher for IndigenousQueenslanders than for non-Indigenous Queenslanders across all remoteness categories with a threefold difference in outer regional areas.
- higher than Queensland for eight HHSs and lower for six HHSs (2009–10 to 2011–12) (Table 37).

There is a clustering of higher hospitalisation rates among HHSs:

- There was substantial clustering of hospital burden associated with potentially preventable hospitalisations, with acute and chronic conditions the major cause (Table 37).
- Higher hospitalisation rates for selected specific conditions were evident in a number of HHSs. In the three years, 2009–10 to 2011–12 (Table 37), North West, West Moreton, South West and Central West had higher hospitalisation rates than Queensland for at least six key selected conditions. However, many HHSs carried hospital burdens greater than expected based on the state rate. Gold Coast had lower hospitalisation rates for each of these conditions.

### Cancer incidence and death

In 2010–2011, the all-cancer incidence rate for major cities and inner regional areas was 14% higher than remote and very remote areas.

- For melanoma and colorectal cancer, the incidence rate in remote and very remote areas was lower than in major cities, 53% lower for melanoma and 27% lower for colorectal cancer. The breast cancer incidence rate was 12% lower in outer regional areas than major cities. However, lung cancer rates were 46% higher in remote and very remote areas.

- All-cancer incidence rates in HHSs generally did not differ from the Queensland rate in 2009–2011, with few exceptions—the Gold Coast rate was 5% lower, Torres Strait–Northern Peninsula was 29% lower and Wide Bay was 5% higher. Incidence rates for selected cancers by HHS are reported on page 37.

- The all-cancer death rate was 31% higher in remote and very remote areas than for major cities in 2009–2010 with lung cancer the major cause—rates were 42% higher in remote and very remote areas.

- Cancer death rates vary little by HHS. However, in 2008–2010 compared to the state, the lung cancer death rate was higher in North West, Central Queensland and Wide Bay, the melanoma death rate was higher in South West and the prostate cancer death rate was higher in Wide Bay.
Risk and protective factors

The prevalence of risk factors across all areas of Queensland indicates there is potential to improve health outcomes. Selected information on adult self reported prevalence in the regions relative to Queensland includes:

- Risk prevalence by remoteness is reported within Chapter 4 for each of the risk and protective factors.
- Most HHSs have some excess exposure to risk, relative to Queensland, based on selected key self reported prevalence in 2011–12. Four HHSs had higher prevalence for a greater number of risk factors: Cape York, Central Queensland, Townsville and Darling Downs, although other HHSs have substantial exposure (Table 38). The risk factors that featured most frequently across multiple HHSs were obesity and daily smoking. These two risks have the greatest impact on health outcomes and pose significant challenges to these HHSs and across Queensland.
- A relatively better risk profile is evident for Gold Coast and Sunshine Coast with lower rates of obesity for both.
- Excess risky alcohol consumption is evident in selected HHSs, including Cairns and Hinterland, Cape York and Mackay.
- A number of HHSs in northern and western Queensland are more sun safe, that is, adults are more likely to protect themselves from the sun in summer and winter, and less likely to get sun burnt. This contrasts with Gold Coast and Sunshine Coast where adults have lower prevalence of sun protection in summer.
- For several indicators there is little variation across Queensland including fruit and vegetable consumption and physical activity. There was no variation between the HHSs for prevalence of overweight and self reported high cholesterol.
- Considering five selected chronic disease risks, five HHSs had greater exposure to at least three risks in 2012, from 60% higher prevalence in Torres Strait–Northern Peninsula to 26% higher in North West (Figure 67e).

Risk factor data for children by HHS will be released in 2015.
The majority of Queenslanders live in major cities and inner regional areas including coastal towns in Queensland. These more urbanised populations generally enjoy better health. They have:

- lower death rates
- lower premature death rates and die at older ages
- lower hospitalisation rates
- better cancer outcomes with similar incidence rates and lower death rates for many selected cancers.

Some of this is due to having a healthier risk factor profile with lower rates of obesity, smoking, risky alcohol consumption and physical inactivity.

There are gains to be made particularly by addressing chronic disease risk and its causes and this applies to regional and remote populations as well as urban Queenslanders. Obesity rates are rising across the whole population and smoking rates while generally decreasing can be further reduced. Improved nutrition and food choices will bring benefit as will increased physical activity. Replacing car travel with public transport and other forms of active transport is much more achievable for urban populations than those in remote areas. Enabling workplaces to support healthy lifestyles is achievable, and will result in better productivity and wellbeing.

Remote and outer regional populations carry a higher health burden based on death rates, hospitalisation rates and risk profiles. However, there are areas where remote populations are more health conscious, such as sun protection. As a result, melanoma rates are lower outside major cities. Similarly, higher screening rates have improved breast cancer outcomes. Many Queenslanders need to improve their diet by reducing their consumption of sugary drinks, snacks and confectionary while increasing their consumption of fruit and vegetables. Access to affordable healthy food is a barrier for many regional and remote communities and there have been multiple strategies supporting access in the past decade.
The health status and risk factor profile for the population of each HHS is included in this report series for the first time. Variation in health status is due to diverse and complex influences, including demography, socioeconomic status, exposure to environmental factors, access to health services including screening services and, importantly, chance.

Key modifiable drivers of difference are increased risk associated with poorer lifestyle behaviours and physiological risk among some populations, principally, socioeconomically disadvantaged communities, Indigenous Queenslanders and remote populations. For males, about half the mortality difference across Australia between those living in cities compared to those in outer regional and remote areas was due to the combined effect of smoking, high cholesterol and high blood pressure. For females these three risks accounted for about one-third of the difference. Obesity was not included in this study but would contribute substantially to health burden across regions.

This analysis shows marked variations among the HHSs:

- Demographic differences which help to explain difference in mortality outcomes and health burden: some HHSs have higher proportion of Indigenous Queenslanders, such as Torres Strait–Northern Peninsula and Cape York, or a large Indigenous Queensland population such as Cairns and Hinterland. Socioeconomic disadvantage is very prevalent in Torres Strait–Northern Peninsula, Wide Bay and Cape York and this will drive poorer outcomes, earlier deaths and greater service needs. Some HHSs have a higher proportion of older people, for example, Wide Bay at 21% has the highest of the HHSs and, while this does not affect age-standardised health outcomes, it will affect the health service burden within the HHS particularly when combined with a poorer risk factor profile.

- Maternal and infant outcome differences and risks: the most common risks affecting infants across many HHSs were smoking during pregnancy, low maternal age and fewer antenatal visits.

- Death outcomes differ markedly: the premature death rate in North West was double the state rate, with similar differences evident for other HHSs for various specific causes. The median age of death varied from 60 years in Torres Strait–Northern Peninsula to 81 years in HHSs in the south-east.

- Indigenous Queenslander and non-Indigenous differences: The non-Indigenous population of Torres Strait–Northern Peninsula die on average about three years earlier than Indigenous Queenslanders in the HHS; a unique situation not seen in other HHSs where Indigenous Queenslanders die on average 10 to 30 years earlier than their respective non-Indigenous populations. The largest difference in median age of death is in Metro North where Indigenous Queenslanders have the earliest age of death among the HHSs and non-Indigenous Queenslanders the oldest age of death—resulting in a 29-year difference.

- Hospitalisation rates and burden vary: Cape York and North West HHS had the highest hospitalisation rate for all causes, but for many selected conditions a number of HHSs were higher than the state. There are many opportunities to reduce the hospital burden by addressing preventable conditions including those that could have been treated in a primary healthcare setting—the potentially preventable hospitalisation rate was higher than the state for 12 of the HHSs and lower for the remainder, indicating the scale of gains to be achieved in primary healthcare.

- Risk factor burden varies: HHSs with greater risk factor burden have an increased likelihood of disease development, disability and premature death. The origins of poorer health outcomes including earlier deaths in some HHSs are evident in high rates of obesity and smoking—Torres Strait–Northern Peninsula, Cape York, Central West and Wide Bay particularly.

This profile of population health in the HHSs of Queensland provides insight into the distribution of better and poorer outcomes, where the disease burden is greatest and some of the possible causes. Although the context is Queensland, comparison with national and international rankings are included in the Appendix factsheets where possible. This will assist in planning across Queensland regions including HHS specific initiatives, to decrease the burden of early death and disability, reduce health system costs and improve the wellbeing and longevity of all Queenslanders.
Figure 67: Selected indicators by region, Queensland

a. Percentage of Queensland population by HHS, 2011

- Metro North: 17.4%
- Metro South: 19.3%
- Gold Coast: 19.3%
- Sunshine Coast: 8.4%
- Darling Downs: 6.1%
- Cairns and Hinterland: 5.5%
- West Moreton: 5.6%
- Townsville: 5.5%
- Central Queensland: 4.8%
- Wide Bay: 4.8%
- Mackay: 3.9%
- North West: 0.7%
- South West: 0.6%
- Cape York: 0.3%
- Central West: 0.2%
- Torres Strait-Northern Peninsula: 0.2%

b. Five year projected population growth 2006 to 2031 by HHS, 2011

- Percentage changes from 2011 to 2031:
  - Metro South: 22.4%
  - Cairns and Hinterland: 19.2%
  - Central West: 12.1%
  - South West: 8.4%
  - North West: 6.1%
  - Metro North: 5.5%
  - Wide Bay: 5.4%
  - Mackay: 5.3%
  - Townsville: 4.8%
  - Central Queensland: 4.8%
  - Metro South: 3.9%
  - Sunshine Coast: 0.7%
  - Gold Coast: 0.6%
  - Darling Downs: 0.3%
  - Metro North: 0.2%

Figure 68: Median age of death differences for all causes by Indigenous status and HHS, Queensland, 2008–2010

a. Indigenous Queenslanders compared to non-Indigenous

- Differences in median age of death (years):
  - Torres Strait-Northern Peninsula: -10
  - Cape York: -5
  - Central West: 0
  - Sunshine Coast: 5
  - Gold Coast: 10
  - Wide Bay: 15
  - Mackay: 20
  - Central Queensland: 25
  - Queensland: 30
  - Greater than QLD: 35

b. Non-Indigenous compared to Queensland non-Indigenous

- Differences in median age of death (years):
  - Torres Strait-Northern Peninsula: -25
  - Cape York: -20
  - Central West: -15
  - Sunshine Coast: -10
  - Gold Coast: -5
  - Wide Bay: 0
  - Mackay: 5
  - Central Queensland: 10
  - Queensland: 15
  - Greater than QLD: 20

c. Indigenous compared to Queensland Indigenous

- Differences in median age of death (years):
  - Torres Strait-Northern Peninsula: -25
  - Central West: -20
  - Sunshine Coast: -15
  - Gold Coast: -10
  - Wide Bay: -5
  - Mackay: 0
  - Central Queensland: 5
  - Queensland: 10
  - Greater than QLD: 15
### Table 35: Maternal and infant indicators by Indigenous status, HHS and Queensland, 2009–2011

<table>
<thead>
<tr>
<th>Indigenous Queenslanders</th>
<th>Non-Indigenous Queenslanders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Smoking during pregnancy</td>
</tr>
<tr>
<td>Darling Downs</td>
<td>63 55 61 8 82 10 10 23 8</td>
</tr>
<tr>
<td>North West</td>
<td>62 46 51 6 71 15 15 20 7</td>
</tr>
<tr>
<td>South West</td>
<td>57 55 58 4 76 11 10 14 12</td>
</tr>
<tr>
<td>West Moreton</td>
<td>64 52 57 7 82 9 10 17 10</td>
</tr>
<tr>
<td>Townsville</td>
<td>72 45 50 10 78 14 15 22 8</td>
</tr>
<tr>
<td>Cape York</td>
<td>82 55 63 11 89 13 15 20 7</td>
</tr>
<tr>
<td>Central Queensland</td>
<td>64 44 52 13 76 11 13 22 10</td>
</tr>
<tr>
<td>Cairns and Hinterland</td>
<td>79 47 54 12 76 13 13 19 9</td>
</tr>
<tr>
<td>Torres Strait—Northern Peninsula</td>
<td>83 47 58 19 91 11 13 18 10</td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>83 40 42 4 81 11 11 11 11</td>
</tr>
<tr>
<td>Wide Bay</td>
<td>76 43 48 9 80 10 13 19 8</td>
</tr>
<tr>
<td>Mackay</td>
<td>77 44 52 14 92 10 9 19 9</td>
</tr>
<tr>
<td>Central West</td>
<td>61 38 41 8 90 9 11 20 8</td>
</tr>
<tr>
<td>Metro North</td>
<td>74 39 48 12 82 9 10 18 10</td>
</tr>
<tr>
<td>Metro South</td>
<td>69 36 43 12 78 11 12 17 10</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>68 30 36 17 87 11 12 17 10</td>
</tr>
<tr>
<td>Queensland</td>
<td>72 46 52 11 80 12 13 19 9</td>
</tr>
<tr>
<td>Relative to Queensland</td>
<td>worse same better</td>
</tr>
</tbody>
</table>
Table 36: Death rates by HHS and Queensland, 2008–2010

| Deaths rates (per 100,000) – ICD Chapter | All cause | Diseases of circulatory system | Endocrine, nutritional and metabolic disorders incl. diabetes | External causes of morbidity and mortality | Diseases of the digestive system | Malignant neoplasms | Mental and behavioural disorders | Nervous system and sense organ disorders | Symptoms, signs and abnormal findings | Benign and other neoplasms | infectious and parasitic diseases | Diseases of blood and blood forming organs etc | Diseases of respiratory system | Diseases of the genitourinary system | Diseases of musculoskeletal system and connective tissue | Congenital anomalies | Conditions originating in perinatal period | Diseases of skin and subcutaneous tissue |
|----------------------------------------|-----------|-------------------------------|------------------------------------------------|---------------------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Cairns and Hinterland                  | 620       | 189                           | 30                                           | 54                             | 24               | 174              | 25               | 28               | 4               | 7               | 8                  | n/a                              | 50                              | 12                             | 6                              | 3                              | 5                              | n/a                              |
| North West                             | 853       | 232                           | 83                                           | 66                             | n/a              | 272              | n/a              | n/a              | n/a              | n/a              | n/a                | n/a                              | 53                              | n/a                            | n/a                            | n/a                            | n/a                            |
| Central Queensland                     | 632       | 216                           | 24                                           | 43                             | 25               | 191              | 29               | 18               | n/a             | 5               | 4                  | n/a                              | 46                              | 13                             | 6                              | n/a                            | 3                              | n/a                              |
| Townsville                             | 611       | 195                           | 29                                           | 42                             | 25               | 181              | 27               | 18               | n/a             | 5               | 7                  | n/a                              | 52                              | 14                             | 5                              | 4                              | 3                              | n/a                              |
| Darling Downs                          | 599       | 208                           | 28                                           | 43                             | 20               | 170              | 25               | 19               | 2               | 4               | 5                  | 2                                | 48                              | 12                             | 6                              | 4                              | 3                              | n/a                              |
| Mackay                                 | 630       | 215                           | 27                                           | 41                             | 19               | 185              | 27               | 19               | 6               | 10              | n/a                | n/a                              | 53                              | 12                             | n/a                            | n/a                            | n/a                            |
| Wide Bay                               | 588       | 179                           | 27                                           | 47                             | 22               | 185              | 17               | 21               | 6               | 5               | 7                  | 3                                | 42                              | 12                             | 6                              | n/a                            | n/a                            | n/a                              |
| West Moreton                           | 613       | 217                           | 27                                           | 42                             | 23               | 178              | 17               | 17               | n/a             | 4               | 6                  | n/a                              | 47                              | 14                             | 4                              | 3                              | 3                              | n/a                              |
| Central West                           | 658       | 225                           | n/a                                          | 61                             | 196              | n/a              | n/a              | n/a              | n/a             | n/a              | n/a                | n/a                              | n/a                              | n/a                            | n/a                            | n/a                            | n/a                            |
| Metro South                            | 574       | 197                           | 22                                           | 34                             | 16               | 173              | 24               | 23               | 2               | 4               | 7                  | 1                                | 47                              | 11                             | 4                              | 4                              | 3                              | 1                                |
| Cape York                              | 675       | 140                           | n/a                                          | 74                             | n/a              | 220              | n/a              | n/a              | n/a             | n/a              | n/a                | n/a                              | n/a                              | n/a                            | n/a                            | n/a                            | n/a                            |
| South West                             | 619       | 206                           | 27                                           | 51                             | 29               | 178              | n/a              | n/a              | n/a             | n/a              | n/a                | n/a                              | n/a                              | n/a                            | n/a                            | n/a                            | n/a                            |
| Torres Strait–Northern Peninsula       | 589       | 111                           | n/a                                          | n/a                            | 181              | n/a              | n/a              | n/a              | n/a             | n/a              | n/a                | n/a                              | n/a                              | n/a                            | n/a                            | n/a                            | n/a                            |
| Metro North                            | 552       | 179                           | 21                                           | 31                             | 18               | 169              | 24               | 26               | 2               | 3               | 6                  | 1                                | 50                              | 12                             | 5                              | 3                              | 3                              | 1                                |
| Gold Coast                             | 481       | 155                           | 18                                           | 34                             | 16               | 153              | 15               | 21               | 4               | 3               | 6                  | n/a                              | 34                              | 11                             | 4                              | 2                              | 3                              | 1                                |
| Sunshine Coast                         | 504       | 150                           | 16                                           | 41                             | 17               | 163              | 20               | 26               | 3               | 3               | 5                  | n/a                              | 38                              | 10                             | 5                              | 2                              | 3                              | n/a                              |
| Queensland                             | 575       | 187                           | 23                                           | 39                             | 19               | 174              | 22               | 23               | 3               | 4               | 6                  | 2                                | 46                              | 12                             | 5                              | 3                              | 3                              | 1                                |

Compared to Queensland: higher, similar, lower, n/a Not reportable
Table 36: Death rates by HHS and Queensland, 2008–2010

b. Selected specific conditions including potentially avoidable deaths by sub-category

<table>
<thead>
<tr>
<th>Condition</th>
<th>North West</th>
<th>Darling Downs</th>
<th>Central Queensland</th>
<th>Townsville</th>
<th>Torres Strait–Northern Peninsula</th>
<th>Cairns and Hinterland</th>
<th>Central West</th>
<th>Mackay</th>
<th>Wide Bay</th>
<th>South West</th>
<th>Central West</th>
<th>Cape York</th>
<th>Metro North</th>
<th>Metro South</th>
<th>Sunshine Coast</th>
<th>Gold Coast</th>
<th>Queensland</th>
<th>Compared to Queensland</th>
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<tbody>
<tr>
<td>Premature deaths</td>
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<td>242</td>
<td>259</td>
<td>269</td>
<td>432</td>
<td>268</td>
<td>250</td>
<td>245</td>
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<td>296</td>
<td>397</td>
<td>207</td>
<td>220</td>
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<td>184</td>
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<tr>
<td>Total potentially avoidable deaths</td>
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<td>170</td>
<td>182</td>
<td>185</td>
<td>314</td>
<td>181</td>
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<td>175</td>
<td>168</td>
<td>194</td>
<td>223</td>
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<td>150</td>
<td>129</td>
<td>124</td>
<td>157</td>
<td>similar</td>
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<tr>
<td>Preventable</td>
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<td>106</td>
<td>112</td>
<td>113</td>
<td>152</td>
<td>115</td>
<td>109</td>
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<td>213</td>
<td>83</td>
<td>92</td>
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<td>70</td>
<td>72</td>
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<td>103</td>
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<td>Prostate cancer</td>
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<td>17</td>
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<td>17</td>
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<td>9</td>
<td>17</td>
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<td>15</td>
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<td>9</td>
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<td>15</td>
<td>17</td>
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<td>9</td>
<td>17</td>
<td>15</td>
<td>17</td>
<td>lower</td>
</tr>
</tbody>
</table>

Compared to Queensland: higher, similar, lower, n/a Not reportable.
### Table 37: Hospitalisation rates for selected conditions by HHS and Queensland, 2009–10 to 2011–12

<table>
<thead>
<tr>
<th>Hospitalisation rates (per 100,000)</th>
<th>All causes</th>
<th>Potentially preventable hospitalisations</th>
<th>Specific conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total PPHs</strong></td>
<td><strong>PPH – acute</strong></td>
<td><strong>PPH – chronic</strong></td>
<td><strong>PPH – vaccine preventable</strong></td>
</tr>
<tr>
<td>North West</td>
<td>51,768</td>
<td>6,217</td>
<td>3,174</td>
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**Compared to Queensland**
- higher
- similar
- lower

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*Figure 69: All deaths, premature and avoidable, by HHS, Queensland 2008–2010*

- a. Premature death rates
- b. Premature and avoidable deaths

*Not premature | Not avoidable | Treatable | Preventable*

| Percentage |
|------------|------------|-----------|-----------|
| 0          | 200        | 400       | 600       |
Table 38: Self reported risk factor prevalence by HHS and Queensland, 2011–2012

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<tr>
<th>Selected risk and protective factors (%)</th>
<th>Obese (BMI ≥30)</th>
<th>Overweight (BMI 25–29)</th>
<th>Daily smoking</th>
<th>Alcohol – lifetime risk</th>
<th>High blood pressure</th>
<th>Alcohol – single occasion risk (at least weekly)</th>
<th>Recommended fruit daily</th>
<th>Sunburnt previous year</th>
<th>Sun protection 3 or more—winter</th>
<th>Sun protection 3 or more—summer</th>
<th>Diabetes/high blood sugar</th>
<th>Sufficient activity for health benefit</th>
<th>Sun protection 3 or more—summer</th>
<th>Recommended vegetables daily</th>
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Compared to Queensland

- Higher risk
- Similar
- Lower risk

*RSE of 25–50% and should be used with caution
This section includes a brief overview of selected population groups using a selection of available data.

Culturally and linguistically diverse populations

Australia is a multicultural nation and in Queensland, 1 in 5 people were born overseas, with overseas migration making up about half the annual population growth. More information on cultural diversity is available on page 9. There are diverse cultural and language groups in Queensland and each has its own distinctive health needs and issues. The health characteristics of these populations may be influenced by their country of origin and by the process of migration itself. Data specific to each population group is limited and in some datasets, it is based solely on identifiers such as country of birth, which does not fully capture the ethnicity of these populations.

Consistent with Australia and other other jurisdictions, Queenslanders born overseas generally have lower all-cause, avoidable or potentially preventable, and chronic disease death and hospitalisation rates than the Australian born population in 2003–2007. However, there are some indicators of poorer health—for those Queenslanders born in non-English speaking countries, the diabetes death rate was 25% higher than for the Australian born population, and for vaccine preventable hospitalisations, it was 20% higher. In 2011–12, the prevalence of daily smoking, risky alcohol consumption, low exercise, overweight and obesity and inadequate fruit and vegetable consumption was similar in Australians born overseas to those born in Australia.

Considering country of origin differences, hospitalisation rates for a number of conditions for those born in Oceania, North Africa and the Middle East, were higher than for Australian born Queenslanders. Further analysis for Samoans, Tongans, Fijians and Australian South Sea Islanders showed higher rates for many conditions. While hospitalisation data is not considered an accurate indicator of health status alone, higher hospitalisation rates would suggest there is a significant burden of disease for these population groups that could be addressed, and that better primary prevention would be a key to achieving health benefits. While more detailed analysis may identify more regional and country differences, the relatively small number of cases in some country of birth populations limits reliable reporting of difference.

Overall, Queenslanders born overseas generally enjoy better health than those born in Australia. This is probably because of the ‘healthy migrant effect’—only those migrants in good health migrate to Australia. However, this effect diminishes over time as the duration of their living in Australia increases. Some migrants may face challenges, such as language barriers and cultural practices that make it difficult to access health services.

Refugees

In 2012–13, the Australian Humanitarian Program provided more than 20,000 visa places, approximately 12,000 (60.0%) to refugees, 500 (2.5%) humanitarian places and 7,500 (37.5%) ‘onshore’ places to illegal maritime arrivals. Of these, about 20% were settled in Queensland.

The health needs of refugees include preventive, acute and chronic health services. They present with multiple causes rather than single issues and with underlying mental and social health problems. Health checks and medical examinations are conducted before departure and on arrival in Australia. Treatment where required is commenced.
Refugees may present with a range of specific health issues including communicable and non-communicable diseases, nutritional deficiencies and skin disorders, reflecting their background and journey to Australia. Some common health issues are described below:

- **Mental health**—lack of family and cultural support, prolonged separation and potential trauma in the process of seeking asylum can exacerbate underlying mental health issues as well as create new tensions. Accessing mental health services can be a difficult.

- **Sexual and reproductive health**—many refugee young people arrive in Australia with limited information about sexual and reproductive health and potentially little support and opportunity to learn about this in the Australian context.

- **Food and nutrition**—prior to arrival in Australia, refugees may have lived for some time with only limited access to food, both in terms of amount and variety, leading to poor nutrition.

### Prisoners

More than 6000 adults were being detained in Queensland prisons in mid-2013. Most (91%) prisoners were male, half (52%) were aged 20–34 years and one-third (31%) were Indigenous Queenslanders. Two in three (65%) had been previously imprisoned. Nationally, prison entrants are 2.5 times more likely to have less than a Year 10 education, 10 times more likely to be unemployed, and at least 50 times more likely to be homeless.

Incarcerated populations experience poorer health than other Australians, and have higher prevalence of health conditions and risk factors for many diseases. One in three prison entrants (32%) had at least one chronic condition in 2012, with the asthma prevalence—the most common chronic condition at 24%—2.4 times the prevalence in the general population.

In 2007, GLBT Australians aged 16–85 years, compared to heterosexual people, were more than twice as likely to have anxiety disorders, higher rates of depression and mood disorders, and higher prevalence of suicidal thoughts, plans and attempts. Homosexual and bisexual Australians aged 14 years and older were twice as likely as heterosexual people to be current smokers, about 70% more likely to consume alcohol on a single occasion at least weekly, about 50% more likely to drink at levels of lifetime risk, and 2.6 times more likely to have reported illicit drug use in the previous 12 months.

Mental health problems are 2.5 times more common among prison detainees than the general population. In 2010, 31% of prison entrants nationally reported ever being told by a doctor, psychiatrist, psychologist or nurse that they had a mental health disorder (including drug and alcohol abuse), and in 2012, the prevalence increased from 38% on entry to 46% at discharge.

The prevalence of high or very high psychological distress among prisoners was about 3 times that of the general population in 2010 (31% compared to 11%) and higher for female prisoners (51%).

Time in prison can, however, provide the opportunity for offenders to access health services, to stabilise behaviours and to improve social and health outcomes.

On entry to Queensland prisons, all offenders receive a medical examination. Smoking by offenders, staff and visitors is no longer permitted in Queensland correctional facilities. A Drug and alcohol action plan and Food and nutrition policy and implementation plan have also been developed to improve the health of Queensland’s incarcerated populations.

### Gay, lesbian, bisexual and transgender

There is limited information on the health status of Queenslanders who identify as gay, lesbian, bisexual and transgender (GLBT), although known information suggests poorer health status than other Queenslanders for some indicators. Death and hospitalisations rates for this population are unknown, as individuals are not asked to identify their sexual orientation at the point of data collection.

Rates of HIV and syphilis of men who have sex with men are reported on page 71. Mental health disorders are more common in GLBT Australians and internationally.

In 2007, GLBT Australians aged 16–85 years, compared to heterosexual people, were more than twice as likely to have anxiety disorders, higher rates of depression and mood disorders, and higher prevalence of suicidal thoughts, plans and attempts.

Homosexual and bisexual Australians aged 14 years and older were twice as likely as heterosexual people to be current smokers, about 70% more likely to consume alcohol on a single occasion at least weekly, about 50% more likely to drink at levels of lifetime risk, and 2.6 times more likely to have reported illicit drug use in the previous 12 months.