

# Lifetime health



# 4

- Queenslanders are generally enjoying longer and mostly healthy lives, however 13% of those years of life are lost to ill health.
- The burden of illness and disability is widespread across the life course and has an increasing impact on health service delivery, particularly as people age.
- Most infants have a healthy start to life and childhood is a period largely marked by good health. Risk behaviours and mental health issues emerge in young adults progressing through back pain into the chronic conditions of ageing such as circulatory diseases, arthritis and cancers.
- Treatment and management of disease is increasing. Over the past decade:
  - presentations to GPs increased by about 700,000 per year on average
  - admissions to hospital increased by about 85,000 per year on average.
- Utilisation of services to meet health needs is increasing at a greater rate among older people than younger—half the annual increase in GP visits and hospital admissions was for the older cohort.
- Across all age cohorts there is substantial opportunity to improve health and wellbeing by a continuing focus on healthy lifestyles.
- Many adult Queenslanders perceive they have a healthy lifestyle, but population health data would suggest otherwise.
- International evidence shows that the burden of illness and disability in the population will increase as the population ages, carrying into future older years a burden of chronic disease, complicated by multimorbidity which develops relatively early in adult life for some. Promoting good health early, and throughout the life course, will help to constrain this future burden. It will be important to also focus on keeping older people active, eating well and enjoying life in the later years.
- Achieving good health for all and supporting people to adopt a healthier lifestyle is dependent not just on personal motivation and resources, it also requires supportive social and physical environments.
- The Queensland *Health and Wellbeing Strategic Framework 2017 to 2026*<sup>30</sup> focuses on empowering people to make healthy life choices and working across sectors and through legislation to build healthier environments. As a result, Queensland is increasingly becoming a healthy place to live both now and in the future.

## Living longer

In 2014–16, life expectancy at birth for Queensland males was 80.1 years and for females 84.5 years<sup>31</sup>, a small increase from the previous estimates of 79.9 and 84.2 respectively (Table 4). Although the annual increments in life expectancy are diminishing, overall there was a 2.3-year increase for males over the past decade and a 1.6-year increase for females.

Compared to other jurisdictions, Queensland’s life expectancy was fifth highest for males and females, but differed very little from that for Australia (Table 4).<sup>31</sup> The Australian Capital Territory had the highest life expectancy for males and females, and Northern Territory the lowest.

The life expectancy gap between Indigenous Queenslanders and non-Indigenous has diminished slightly and at the latest comparative assessment (2010–2012) was 10.8 years for males and 8.6 years for females (Table 4). Indigenous Queenslanders could expect to live longer than Indigenous Australians in 2010–2012, 1.3 more years for males and 2.1 years for females. Updated life expectancy estimates are due for release in late 2018.

Australia ranks highly among the 34 countries in the OECD (Organisation for Economic Co-operation and Development)

for life expectancy and was fifth highest for males and eighth highest for females in 2013 (Figure 1).

## Health adjusted life expectancy

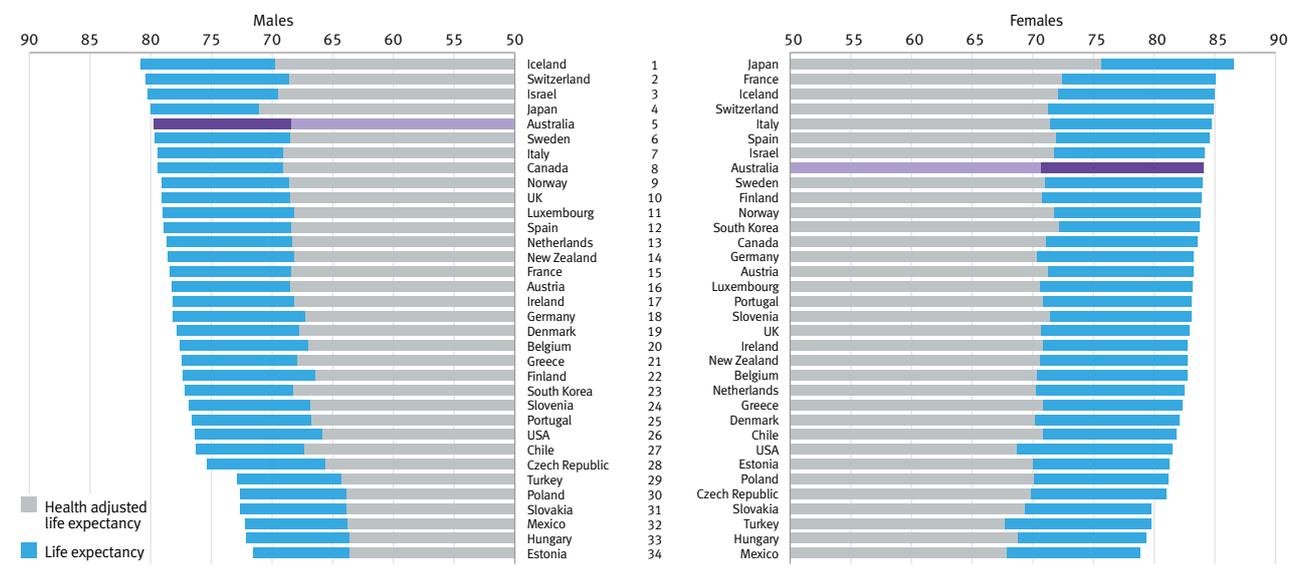
Health adjusted life expectancy (HALE) is the average number of years at birth that a person can expect to live in full health if the current patterns of mortality and disability continue throughout their life. In 2010–12 more than one-tenth of the average Queenslanders life was spent in ill health—for males a loss of 9.1 years and for females 9.8 years (Figure 1).<sup>25</sup> Of the extra years gained as life expectancy increased in Australia between 1990 and 2016, about 80% were in good health and 20% in poor health.

In 2015, in a global assessment, Australia was close to best of OECD countries for life expectancy (fifth best considering males and females combined), but was third worst for percentage of life lived in poor health, losing 13.2% of life due to ill health and disability.<sup>32</sup> United States and Turkey were the worst performing OECD countries, losing 13.8% and 13.4% respectively of healthy life to ill health.

Table 4: Life expectancy in years by age, sex and Indigenous status, Queensland and Australia<sup>31</sup>

2014–2016	Males	Females		Non-Indigenous		Indigenous		Difference	
				2005–2007	2010–2012	2005–2007	2010–2012	2005–2007	2010–2012
<b>At birth</b>			<b>Queensland</b>						
Queensland	80.1	84.5	Males	78.8	79.4	67.1	68.7	11.8	10.8
Australia	80.4	84.6	Females	82.7	83.0	72.7	74.4	10.0	8.6
<b>At 50 years of age</b>			<b>Australia</b>						
Queensland	82.4	85.9	Males	78.9	79.9	65.7	67.4	13.1	12.5
Australia	82.5	85.9	Females	82.7	83.2	71.7	72.3	11.0	10.9
<b>At 80 years of age</b>			<b>Queensland compared to Australia</b>						
Queensland	88.8	90.5	Males	-0.1	-0.5	1.4	1.3		
Australia	88.9	90.4	Females	0.0	-0.2	1.0	2.1		

Figure 1: Life expectancy at birth Australia and other OECD countries<sup>32</sup>



## Living with disability

Illness and injury are the most common major life events experienced by people.<sup>33</sup> These disabilities, whether short-term acute episodes such as hay fever, or long-term chronic problems like arthritis, have an impact on the wellbeing of the individual, increase demand for health services and medications, and constrain productivity with increased related costs. Burgeoning health budgets reflect the pressure of expanding treatment options for a growing and ageing population.

There are many kinds of disability, usually resulting from illness, accidents, age or genetic disorders. Disability may affect a person's mobility, communication or learning. It can also affect their income and participation in education, social activities and the labour force. In 2015, 18% of Queenslanders reported a disability where 6% had a profound or severe core limitation.<sup>17</sup>

The proportion of the population reporting a disability increases steadily with age although the number of people peaks in the middle-age range (Figure 2):

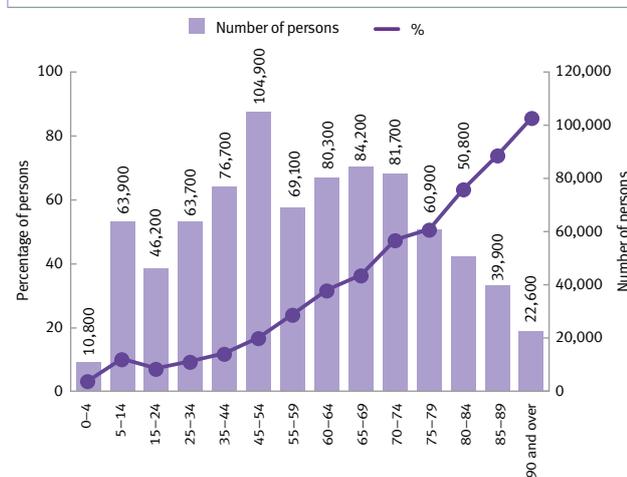
- 1 in 10 children aged 5–14 years reported a disability, as did more than half of those aged 70 years and older.
- About half (56%) of all those reporting a disability were aged between 35 and 74 years.

Disabilities are likely to be both a cause and a consequence of ill health, potentially impairing a person's capacity to take action to improve outcomes.

### Subjective measures of impaired health

In 2017, 15% of adult Queenslanders reported the loss of five or more days in a 30-day period from their usual work and family role due to physical or mental ill health.<sup>34</sup> This varied very little over the age range from 13% of those aged 18–29 years to 16% of those aged 65 years and older.

Figure 2: Prevalence of disability by age, Queensland, 2015<sup>17</sup>



Self-assessed health status reflects a person's perception of their health and also provides a measure of the overall health of the population. In 2017, more than half (52%) of adults considered themselves to be in excellent or very good health, while 16% rated their health as fair or poor.<sup>34</sup> People with chronic diseases such as diabetes or heart disease and those at higher risk due to unhealthy lifestyle choices are at least twice as likely as others to report fair or poor health.<sup>33</sup>

High levels of psychological distress are associated with underlying mental and other health problems. About 1 in 8 Queensland adults (12%) reported high or very high levels of psychological distress in 2014–15.<sup>33</sup> The highest prevalence was in 18–24 year olds (17%), decreasing with age to 10% in those aged 65 years and older. Two-thirds of adults who reported a mental health problem in 2014–15 also reported high levels of psychological distress as did one-third of people with back problems, and almost one-third of those with arthritis.

Many people experience bodily pain which can affect their role and function and impede their ability to take action to improve their health. In 2014–15, 1 in 12 Queensland adults (7.5%) reported experiencing severe or very severe bodily pain in the previous four weeks.<sup>33</sup> Adults who reported mental health problems were more likely to report bodily pain (about half did so). Prevalence was higher across a range of chronic conditions including asthma, hypertension, hay fever and heart and stroke conditions.

### The disability transition

The population health burden is changing, moving away from death outcomes and towards disabling conditions such as musculoskeletal disorders, nervous system disorders, mental disorders including dementia and substance use disorders, diabetes, vision loss and hearing loss.<sup>35</sup> The prevalence of these conditions often rises sharply with age, and as people survive into their eighties and beyond, the amount of time spent with these disorders increases, as does the treatment required.

The impact of a rising disability burden is evident in increased GP encounters for older people (doubling over a decade), an increase in health issues managed, and in tests requested (45%).<sup>36</sup> The hospitalisation rate is increasing with an additional 85,000 admissions per year, with greater growth for middle-aged adults to older people and in areas of better access.

## Getting a healthy start

Maternal health and wellbeing from pre-conception to pregnancy and inclusive of the first 1000 days have a major influence on long-term outcomes. Maternal nutrition and avoidance of toxic exposures during pregnancy provide the foundation for the child's development.<sup>37</sup> For the newborn infant, the first year of life is a significant period for appropriate feeding, including breastfeeding and care and the first 28 days are the most critical for prevention of harms or death. The maternal foundations for lifelong health persist into adulthood and influence the likelihood of future health problems.

The health and wellbeing of the father is especially important from pre-conception to pregnancy as the male contributes half of the biological foundation for the child's development, including placental function.<sup>37</sup> Families influence the resources available to provide for the feeding, care and home environment of the child, and to support the future health and wellbeing of the child.

### Births<sup>38</sup>

- In 2016, there were 62,779 babies born to 61,876 mothers in Queensland—4230 infants were born to 4178 Indigenous Queenslander mothers. The number of babies delivered in Queensland has increased by about 590 each year over the past decade.
- Three-quarters (46,163) of births in 2016 occurred in public facilities, 15,947 (25%) in private facilities, 166 were home births and 504 occurred before arrival at a facility.
- A little over half (56%) of the births in 2016 were vaginal deliveries, forceps were used in 3%, vacuum delivery in 7% and 34% were by caesarean section. The proportion of caesarean deliveries did not change over the decade up to 2016. Caesarean delivery was more common in private facilities (50% of deliveries) than in public (29%).
- Of the births that occurred in public facilities in 2016, 6130 were at the Mater Mothers' Hospital, 4569 at the Gold Coast University Hospital, 4423 at Royal Brisbane and Women's Hospital and 3374 at Logan Hospital. Eleven public facilities delivered between 1000 and 3000 infants, 23 delivered between 100 and 1000 infants and 39 delivered fewer than 100 (30 of these delivered fewer than 10 infants).

### Maternal factors<sup>38</sup>

- **Indigenous status:** 6.8% of mothers giving birth in 2016 were Indigenous Queenslander women (4178 women), with 3246 Aboriginal women, 473 Torres Strait Islander women and 459 women of Aboriginal and Torres Strait Islander origin. The number of mothers giving birth who identified as Indigenous Queenslanders increased by about 100 per year over the past decade.

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**62,779** babies were born in Queensland in 2016.

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- **Age:** 3.4% of Queensland mothers were aged under 20 years at the birth and 20% were aged 35 years or older in 2016. Older maternal age was associated with higher risk of congenital anomalies (2.5 times more likely than younger mothers in 2014–2015) and more complications including gestational diabetes (66% higher), placenta praevia (111% higher), antepartum haemorrhage (16%) and gestational hypertension (26%), but slightly lower risk of post-partum haemorrhage (6% lower).<sup>39</sup>
- **Weight status:** 19% of women were obese at the time of conception in 2016, a proportion typical of women in the child bearing age range.
- **Smoking status:** 12% of women smoked at some time during their pregnancy in 2016 (7403 women), 43% of Indigenous Queenslander women and 9.8% of non-Indigenous women. For teenagers, the smoking rate was 32%, compared to 11% for older mothers. Non-Indigenous teenagers were more likely to smoke than older non-Indigenous women (25% compared with 9.4%) while for Indigenous Queenslander women in 2016, the smoking rate in teenagers was lower than for older women (39% compared with 44%). Over the 10 years up to 2016, smoking during pregnancy by non-Indigenous women decreased by 48% and by 21% for Indigenous Queenslander women. (See pages 32 and 57)
- **Alcohol consumption during pregnancy:** In 2013, 15% of Australian women fully abstained from alcohol during their pregnancy.<sup>40</sup> There is limited data on this issue. (See page 86)
- **Gestational diabetes:** 12% of pregnant women were diagnosed with gestational diabetes in 2016.
- **Antenatal visits:** 81% of women made eight or more antenatal visits during their pregnancy in 2016, with Indigenous Queenslander women less likely to do so than non-Indigenous women (65% compared with 82%). A small number of women made one visit or none, 0.5% or 334 women and 28% of these were Indigenous Queenslanders. A further 4.2% made between two and four visits. Fewer antenatal visits increases the risk of preterm birth and poorer birth outcomes.<sup>41</sup>
- **Underlying medical conditions:** Depressive disorders and thyroid disorders were the most frequently reported underlying medical condition of mothers who gave birth in 2016 (3.8% and 3.7% respectively) followed by anaemia (2.3%), asthma (2.2%) and streptococcal infection (2.1%). A small number reported pre-existing hypertension (482 women, 0.8%) or diabetes (469 women, 0.8%).
- **Immunisation:** In 2017, 63% of pregnant women reported being immunised against whooping cough and 34% for influenza. Immunisation status was unknown for 8% and 10% respectively.

### Infant characteristics<sup>38</sup>

- **Gestation:** 9.3% (5821) of babies were premature in 2016, that is, born before 37 weeks, with 1% (599) born before 28 weeks. Indigenous Queensland infants (that is, infants born to Indigenous Queensland mothers) were more likely to be born prematurely than non-Indigenous (13% compared with 9%) and accounted for 1 in 10 premature births. The prevalence of premature births has increased by 5% over the past decade.
- **Birthweight:** 7.3% of babies weighed less than 2500g at birth and 11% weighed 4000g or more (2016). This includes all babies except those for whom no weight was recorded. This differs from the national definition of low birthweight (page 116).<sup>42</sup> Indigenous Queensland infants were more likely to be low birthweight than non-Indigenous (11% compared with 7.0%) and accounted for 1 in 10 low birthweight babies. The prevalence of low birthweight has not changed over the past decade but the proportion of high birthweight (4000g or more) decreased by 13%.
- **Breastfeeding:** At discharge in 2016, 77% of infants were receiving only breastmilk, 16% received breastmilk and infant formula and 7.1% were receiving only infant formula. Younger mothers (under 20 years of age) were less likely to breastfeed (65% exclusive breastfeeding at discharge) and more likely to use infant formula (11%) than other women (77% and 6.8% respectively). By four months of age the proportion exclusively breastfed had fallen to 29% in 2014, and to 5% by six months.<sup>43</sup>
- **Immunisation:** In 2017, 94% of infants were fully immunised at one year of age (see also page 108).

### Maternal and infant deaths

- **Maternal:** Over the three years from 2012 to 2014 (inclusive), there were 11 maternal deaths in Queensland of the 187,617 women giving birth.<sup>44</sup> The maternal mortality rate (5.9 deaths per 100,000 women) was slightly lower than the national rate (6.8). For Australian women, the leading causes of the death directly linked to pregnancy were thromboembolism and obstetric haemorrhage. The most common causes of indirect maternal deaths, that is, not directly linked to the pregnancy, were cardiovascular conditions and non-obstetric haemorrhage.
- **Infant:** There were 402 stillborn infants in 2016, and a further 191 who died in the first 28 days, a total of 593 perinatal deaths.<sup>38</sup> The

stillbirth rate for Indigenous Queensland women was 50% higher than the non-Indigenous rate when averaged over a five-year period (2009–2013). Over the longer term (1989–2013) there was a 2.2% per year decline in the stillbirth rate for Indigenous Queensland women, there being no change in the rate for non-Indigenous women.<sup>45</sup>

### Selected highlights from the regions<sup>38</sup>

- **Maternal smoking:** The highest rate of maternal smoking was in Torres and Cape HHS, largely associated with a high Indigenous Queensland population (Table 5). There was a nine-fold difference between Torres and Cape and Gold Coast which had the lowest prevalence.
- **Mothers obese at conception:** The highest prevalence of obesity at conception was in West Moreton and Torres and Cape HHSs while the lowest was in Gold Coast. The prevalence was at least 20% higher than the state average for West Moreton (29%), Torres and Cape (29%), Wide Bay (25%), Mackay (25%), North West (25%), Darling Downs (24%), South West (24%) and Central Queensland (22%).
- **Older mothers:** The highest proportion of mothers aged 35 years and older was in Metro North, Gold Coast and Metro South HHSs (24%, 23%, 22% respectively). The lowest was in South West (9%).
- **Premature birth:** Although the highest rates of premature birth were in North West (12%), Torres and Cape, South West and Townsville (all 11%), many of the babies born prematurely in Queensland were in Metro North and Metro South (about 2500 babies or 44% of the state total).
- **Birthweight:** Torres and Cape HHS had the highest proportion of low birthweight infants in 2016 and Mackay the lowest (Table 5). West Moreton had the highest proportion of larger babies (4000g or greater), about double that of North West which was lowest. North West and Central West had the highest proportion of infants in the weight range 2500 to less than 4000g (about 86% of infants) while Torres and Cape and West Moreton had the lowest (both 80%).

Table 5: Prevalence of selected perinatal risks by HHS, Queensland, 2016<sup>38</sup>

Smoking during pregnancy (%)	Birthweight: < 2500g (%)	Birthweight: 4000+g (%)			
Torres and Cape	45	Torres and Cape	11.7	West Moreton	12.5
North West	25	Wide Bay	8.1	Sunshine Coast	11.9
Wide Bay	22	North West	8.1	Central Queensland	11.9
South West	19	Cairns and Hinterland	8.1	Wide Bay	11.5
Cairns and Hinterland	18	Townsville	8.0	Cairns and Hinterland	11.4
West Moreton	17	West Moreton	7.7	Mackay	11.0
Central Queensland	17	Darling Downs	7.5	Townsville	10.9
Darling Downs	16	Metro North	7.3	South West	10.6
Townsville	14	Queensland	7.3	Queensland	10.5
Mackay	13	Metro South	7.2	Gold Coast	10.2
Central West	13	Central West	6.9	Metro North	10.1
Queensland	12	Gold Coast	6.6	Metro South	9.9
Sunshine Coast	12	Central Queensland	6.4	Darling Downs	9.6
Metro North	10	Sunshine Coast	6.3	Torres and Cape	9.4
Metro South	9	South West	6.3	Central West	8.4
Gold Coast	5	Mackay	5.4	North West	5.9

## Children (0–14 years)

### Burden of disease summary<sup>25</sup>

The first year of life, particularly the first 28 days, carries the highest burden of disease and injury for children, primarily due to fatal burden in the neonatal period. Following infancy, childhood is the period of least health loss. Childhood sets the foundation for a healthy lifestyle with lifelong benefits.

**Broad causes:** During childhood, health loss was dominated by infant and congenital conditions, accounting for 41% of disease burden in 2011. Mental disorders caused 17% and injury 10%.

**Specific causes:** Complications of preterm birth and low birthweight caused 11% of health loss in children in 2011, asthma caused 6% and sudden infant death syndrome 5%.

**Risk factors:** A very small proportion of the health loss in children (1% of total burden) could be explained by the joint effect of six risk factors in 2011 (page 10). The limited risk factor assessment in this age group is partly due to lack of exposure and lack of impact information for children.

### Population

In 2018, 1 in 5 Queenslanders was aged 0–14 years, an estimated 988,000 children and about 9% or 79,000 were Indigenous Queensland children.<sup>10</sup>

### Health conditions and development<sup>33</sup>

In 2014–15, for Australian\* children aged 0–14 years:

- 12% reported sight problems (4.8% long-sighted, 4.6% short-sighted, 1.6% astigmatism).
- 11% reported asthma.
- 11% reported hay fever and allergic rhinitis.
- 10% reported allergies (6.3% were food allergies).
- 5.3% reported anxiety related disorders, an additional 2.7% had problems of psychological development and 2.3% reported behavioural, cognitive and emotional problems.
- 1.5% reported deafness with an additional 1.1% having otitis media.

\* Queensland data for this age group are not currently available.

Queensland children (in first year of school) were more likely to be developmentally vulnerable than children nationally, based on five domains in 2015<sup>46</sup>:

- 12% vulnerable for physical development (10% nationally)
- 12% for social development (10% nationally)
- 10% for emotional development (8% nationally)
- 8% for language development (7% nationally)
- 11% for communication (9% nationally).

In 2017, for Queensland children, there were 20,479 notifications for communicable diseases and related conditions.<sup>47</sup> Two-thirds or 13,441 notifications were for laboratory-confirmed influenza, 1631 for salmonellosis, 1421 campylobacter, 1223 rotavirus and 983 varicella (chickenpox/shingles).

### Health service utilisation

Children aged 0–14 years:

- The average young child (0–4 years) made 4.8 visits to a GP in 2016–17 and 2.5 visits for 5–14 year olds.<sup>48</sup>
- 6.3% of the total increase in GP visits in Queensland over the past decade was for children, with per capita visits decreasing slightly for 0–4 year olds (-0.5 visits) and increasing slightly for 5–14 year olds (0.3 visits).<sup>48</sup>
- 11% of children had been admitted to a Queensland hospital in 2015–16 with the proportion increasing by 14% over the past decade.
- There were 145,000 hospitalisations of children in 2015–16, 6% of total. The hospitalisation rate increased by 16% over a decade with an annual average increase of about 4000 admissions per year.
- The hospital admission rate increase was higher for Indigenous Queensland children than non-Indigenous, 35% compared with 8%. This resulted in an average annual increase of 510 admissions per year for Indigenous Queensland children compared with 3360 for non-Indigenous children.
- Admission rates for asthma did not change over a decade for non-Indigenous or Indigenous Queensland children with about 3500 hospitalisations for asthma in 2015–16.
- The leading broad causes of admission to hospital for children were respiratory conditions (21% of all admissions), injuries (14%) and digestive system diseases (9%), mainly dental conditions particularly decay (Table 7, page 32).

**11%** of children have **asthma.**

### Adopting healthy habits

Queensland children aged 5–17 years\*:

- 7.2% were obese by measurement and 19% were overweight in 2014–15.<sup>33</sup> Two-thirds (66%) were in the healthy weight range and 8.0% underweight.
- The majority of children did not meet the Australian Dietary Guidelines recommendations for the five food groups in 2011–12<sup>49</sup> (see also page 65 and following). Equally concerning is the proportion of total energy derived from unhealthy or discretionary food sources (38% in young children aged 2–3 years, and 40% in those aged 4–13 years). The consumption of discretionary foods is making a large contribution to meeting the recommendations. For example, half the recommended vegetable consumption of Queensland children was derived from discretionary foods such as potato crisps and chips, noting that only 1% of children met the guidelines. Half the achievement of recommended consumption of lean meats, poultry, fish, eggs, tofu, nuts and seeds was from discretionary sources such as hamburgers and pies.
- 7% of 12–17 year olds had smoked in the previous week in 2017.<sup>50</sup>
- About 5% of Queensland teenagers aged 14–19 years smoked daily in 2016.<sup>51,52</sup>
- 27% of children aged 0–14 years lived in a household with a daily smoker in 2014–15.<sup>53</sup>
- Children were active for 10.9 hours a week on average in 2017 (independent of the number of days they were active), with 42% of their total activity achieved in free time, 33% at school, 16% in club sport and 10% in active transport, usually to and from school.<sup>54</sup>
- 41% met the recommendation to be active for at least an hour every day in 2018 while 6% were not active on any day.<sup>34</sup>
- 94% of one year-olds were fully immunised in 2017, 92% of two year-olds and 94% of five year-olds.<sup>55</sup>
- 68% of Year 7 students completed the three-dose course of human papillomavirus (HPV) vaccine in 2017.
- 79% of Year 7 students received a dose of diphtheria-tetanus-pertussis (dTpa) vaccine in 2017.

\* For consistency with Chapter 8, children were defined as 5–17 years for the risk factor section.

### Environments to support healthy lifestyles<sup>56</sup>

Childhood sets the foundation for lifelong health and wellbeing. It is a sensitive developmental stage, along with adolescence, when social and cognitive skills, habits, coping strategies, attitudes and values are more easily acquired.<sup>57</sup> These abilities and skills strongly influence life course trajectories with implications for health in later life.

The family and home environment are central to good health and wellbeing. Families can be supported as they navigate the challenges of modern life, juggle financial pressures, balance work and family priorities and maintain healthy life choices. Known contributors to health in later life are initiating and maintaining breastfeeding, avoiding children's exposure to tobacco smoke and role models who smoke, providing a balanced nutritious diet as recommended by the dietary guidelines, using adequate sun protection, engaging in regular physical activity and limiting sedentary and screen time.

Children achieve about 40% of their activity in free time so it is important that neighbourhood environments are family-friendly. This includes parks, trails and open spaces that provide opportunities, with shade protection, for sport and unstructured play. Networks of high quality walking and cycling paths help increase physical activity for children and their families while encouraging activity throughout life.

Schools play an important role in supporting healthy life foundations. A feature of school policy in Queensland over the past decade has been the improvement in healthy food and drink supply and limiting access to unhealthy foods in the whole-school environment. Given that more than one-third of energy intake is derived from unhealthy or discretionary food sources, sustained action is needed to maintain the focus on healthy eating. In addition, children depend on activity achieved at school to contribute to their overall level of physical activity. In 2017, more than one-third of the weekly activity of a typical Queensland child was achieved at school, and much of this through the school program or curricula.<sup>54</sup>

More broadly, there is much to be done in shaping the food supply environment in Queensland to favour the consumption of healthier food choices<sup>58</sup>, reduce junk food advertising to children, provide breastfeeding facilities and, through kilojoule information on menus, assist families to make informed choices when dining out.

## Young people (15–29 years)

### Burden of disease summary<sup>25</sup>

Health loss in adolescence and early adulthood (15–29 years) was characterised by the consequences of risk taking, and mental illness. This is a period of cognitive and social change and is generally prior to the onset of many of the lifestyle related conditions and signs of bodily wear and tear. Young people as well as children have an opportunity to prevent and delay the onset of chronic conditions by adopting healthy behaviours and limiting the development of unhealthy habits. Preventing injury deaths and treating and preventing mental illness will have the greatest impact on total disease burden in young people.

An underlying risk factor for young people is risky alcohol consumption.

**Broad causes:** Mental illness was the leading broad cause of health loss in 15–29 year olds in 2011 (30% of total disease burden) and was almost totally associated with disability. Injury caused a further 26% and most of this (91%) was associated with fatal burden. Respiratory diseases caused a further 8% of health loss.

**Specific causes:** Suicide and self-inflicted injury caused 11% of the health loss in 15–29 year olds in 2011, and the majority (74%) was for males. Anxiety disorders caused 7% and alcohol use disorders 6%.

**Risk factors:** One-fifth (20%) of the burden of disease and injury in young people could be attributed to the joint effect of 29 modifiable risk factors in 2011 (page 9). Alcohol use caused the greatest loss (13% of burden in this age group), followed by occupational exposures and hazards (3%) and illicit drug use (2%).

### Population

In 2018, 1 in 5 Queenslanders was aged 15–29 years, an estimated 988,000 young people, and about 6% or 60,000 were Indigenous Queenslanders.<sup>10</sup>

### Perception of health and assessment of risk

In 2017, for young people aged 18–29 years<sup>34</sup>:

- 1 in 10 (10%) reported poor or fair health.
- 1 in 8 (13%) reported reduced capacity to fulfil their usual role on five or more days in a 30-day period, due to ill health.
- 1 in 3 (36%) considered their lifestyle to be very healthy.

### Leading conditions

In 2014–15, for young Australians\* aged 15–34<sup>33</sup>:

- 38% reported a sight problem (23% short-sighted, 11% long-sighted, 6% astigmatism).
- 23% reported hay fever and allergic rhinitis.
- 14% reported allergies.
- 13% reported a back problem.
- 13% reported an anxiety condition and 9% a depressive/mood disorder.
- 11% reported asthma.
- 8% reported migraine.

\* Queensland data for 18–29 year olds are not currently available.

In 2017, for young people in Queensland, there were 34,111 notifications for communicable diseases and related conditions.<sup>47</sup> The leading cause was the sexually transmitted infection (STI) chlamydia which accounted for 53% or 17,969 notifications, followed by laboratory-confirmed influenza (8545 notifications), gonorrhoea (STI) (2971), campylobacter (1361), and varicella (chickenpox/shingles) (1211).

### Health service utilisation

For young people aged 15–29 years:

- The average young Queenslanders made about 3.5 visits to a GP in 2016–17 (3.2 for 15–24 year olds and 3.7 for 25–34 year olds).<sup>48</sup>
- Of the total increase in GP visits in Queensland over the past decade, about 12% was due to more frequent visits of young people (a per capita increase of 0.3 visits).<sup>48</sup>
- 15% of young people in Queensland had been admitted to a hospital in 2015–16 and unlike other age groups, the proportion did not change over the previous decade.
- There were 249,000 hospitalisations of young people in 2015–16, 11% of total. The rate increased by 13% over a decade with an annual average increase of about 7000 admissions per year.
- The leading broad cause of admission to hospital for young females in this age group was pregnancy and childbirth (37% of female admissions), and injuries for males (23% of male admissions).
- Less than 2% of the 27,463 new cancer cases diagnosed in Queensland in 2014, were for young people (about 460 new cases in young people aged 15–29 years) and melanoma accounted for 25%.<sup>59</sup>

### Achieving a healthy lifestyle

Only about one-third of young people consider their lifestyle to be very healthy and it is evident there is substantial opportunity for improvement. For 18–29 year olds\* in Queensland:

- 12% smoked daily while 70% had never smoked and 7% were ex-smokers (2018).<sup>34</sup>
- 23% were obese by measurement, 17% were overweight and 59% were in the healthy/underweight range (2014–15).<sup>33</sup>
- Many young people did not meet the Australian Dietary Guidelines for the five food groups in 2011–12<sup>49</sup> (see also page 65). Of concern is the high proportion of total energy derived from unhealthy or discretionary food sources (45% in teenagers aged 14–18 years and 38% in those aged 19–30 years). The consumption of alcohol and sugary drinks is high in the 19–30 years age group, particularly for males who consumed up to 2000g of these beverages daily in 2011–12—equivalent to about three cans per day. For young females (19–30 years), consumption was lower at 1000g daily.
- 24% were risky drinkers (lifetime risk), 36% of young males, 13% of young females (2018).<sup>34</sup>
- 5% had not been active in the past week while 68% were active on most days of the week (2018).<sup>34</sup>
- 29% had undertaken strength and toning exercise on at least two days a week (2014–15).<sup>33</sup>
- Less than 10% had high blood pressure (>140/100 mmHg when measured) (2014–15).<sup>33</sup>
- 64% of Year 10 students received a dose of meningococcal ACWY vaccine in 2017.

\* Age group restricted to 18–29 years due to data limitations.

**45%** of energy intake of teenagers is from unhealthy foods.

### Environments to support healthy lifestyles<sup>56</sup>

The transition from childhood to adult maturity is a challenging time for young people. The direct influence of parents and schools diminishes as young people progress through the teenage years and into their twenties. The influence of peers and social environments increases along with a growing sense of personal autonomy.

Navigating this period of transition and finding a place in society is stressful for many young people and can lead to mental health issues. Peer support, positive social environments and pathways to employment can help. Ease of access to professional support is important. Online social environments may undermine the growing independent identity of young people. It is important that the positive and negative impact of such factors is assessed and managed within families, schools and communities. Importantly, the voice and capability of young people need to be valued so they can build the skills and knowledge they need to make informed decisions and contribute to their community.

The environment can be shaped to help young people make positive choices for health and wellbeing. For example, attractive, visible, safe public spaces can provide positive opportunities for socialising while discouraging risky behaviours. Over the past 12 months, all the public universities in Queensland have adopted a smoke-free campus policy.

High consumption of unhealthy foods during the teenage years contributes to weight gain, often the first step into overweight and obesity that becomes hard to reverse. Improving the availability of healthy food options, access to drinking water and information such as kilojoule information on menus in fast food outlets may assist young people to make better choices.

Affordable transport systems and inclusive urban planning design that emphasises connectivity and active transport, assist with a sense of autonomy and belonging and help young people actively access services, education, jobs and recreational activities.

Creating complete communities with quality education and training, accessible employment opportunities, good jobs, affordable housing, retail shops and a range of accessible services, health facilities and recreational opportunities is critical to empowering people of all ages, including young people, with a sense of belonging, resilience and the basic elements for economic opportunity as well as health and wellbeing.

## Younger adults (30–44 years)

### Burden of disease summary<sup>25</sup>

By the fourth decade, as a result of wear and tear on the body, the burden due to musculoskeletal conditions increases while the health conditions of youth remain high.

**Broad causes:** The leading causes of disease burden in 2011 were mental disorders (23% of DALYs), injury (20%) and musculoskeletal conditions (16%).

**Specific causes:** Suicide and self-inflicted injury caused the greatest health loss among younger adults aged 30–44 years (8% of burden) in 2011. Back pain and problems was the second leading cause (6%) followed by anxiety disorders (6%).

**Risk factors:** About a quarter (26%) of the total burden of disease in the 30–44 year age group could be attributed to the joint effect of 29 modifiable risk factors in 2011 (page 9). Alcohol use caused the most health loss (10% of burden), followed by high body mass (4%), dietary risks (3%) and occupational exposures and hazards (3%).

### Population

In 2018, 1 in 5 Queenslanders was aged 30–44 years, an estimated 1,014,000 people and about 4% or 38,000 were Indigenous Queenslanders.<sup>10</sup>

### Perception of health and assessment of risk

In 2017, for younger Queensland adults aged 30–44 years<sup>34</sup>:

- 1 in 10 (11%) reported poor or fair health.
- 1 in 8 (13%) reported reduced capacity to fulfil their usual role on five or more days in a 30-day period, due to ill health.
- 1 in 3 (39%) considered their lifestyle to be very healthy.

### Leading conditions and comorbidities

In 2014–15, for Australian\* adults aged 35–44<sup>33</sup>:

- 47% reported a sight problem (27% short-sighted, 15% long-sighted, 8% astigmatism).
- 23% reported hay fever and allergic rhinitis.
- 19% reported a back problem.
- 13% reported an anxiety condition and 12% a depressive/mood disorder.
- 11% reported allergies.
- 11% reported ear disorders including 7% reporting deafness.
- 10% reported asthma.
- 9% reported migraine.

\* Queensland data for 30–44 year olds are not currently available.

Multimorbidity was evident in younger Queensland adults. For the age group 15–44 years in 2014–15<sup>49</sup>:

- One-third (31%) reported one chronic condition, one-eighth (13%) reported two or more chronic conditions with 56% reporting no chronic conditions.
- The three most prevalent chronic conditions in this age group were mental and behavioural problems, back problems and asthma and these were frequently reported together.
- Of the 401,000 younger adults who reported mental and behavioural disorders, 58% reported only these conditions while 43% reported a comorbid condition, usually back problems or asthma.
- Of the 286,000 younger adults who reported back pain, about 44% reported at least one other chronic condition, usually mental health and behavioural problems.
- Of the 213,000 younger adults who reported asthma, about 50% reported at least one other chronic condition, usually mental health problems.
- Of the 28,000 younger adults with diabetes, three-quarters (75%) reported at least one other chronic condition. The most common comorbid conditions of younger adults with diabetes were circulatory conditions or mental health and behavioural problems.

In 2017, for younger adults aged 30–44 years in Queensland, there were 19,812 notifications for communicable diseases and related conditions.<sup>47</sup> Laboratory-confirmed influenza accounted for nearly half (46%, 9013 notifications). Other major causes were chlamydia (STI) (3951 notifications), gonorrhoea (STI) (1472), varicella (chickenpox/shingles) (1423), and campylobacter (1298).

### Health service utilisation

For adults aged 30–44 years:

- The average Queensland adult aged 35–44 years made 4.2 visits to a GP in 2016–17.<sup>48</sup>
- Of the total increase in GP visits in Queensland over the previous decade, 16% was due to more frequent visits in this age group (over the decade, a per capita increase of 0.7 visits).<sup>48</sup>
- 19% of this age group had been admitted to a hospital in 2015–16 with the proportion increasing by 12% over the past decade.
- There were 340,000 hospitalisations for this age group in 2015–16, 15% of total. The rate increased by 22% over a decade with an annual average increase of about 10,000 admissions per year.

- Admission rates for lifestyle-related chronic conditions such as coronary heart disease and stroke decreased by 11% over the past 10 years, while for chronic conditions of ageing and disability (for example, mental health, musculoskeletal and neurological conditions), there was a 46% increase.
- The leading broad causes of hospital admission in this age group were pregnancy and childbirth (25% of female admissions), tests, procedures and investigations (18% of all admissions), diseases of the digestive system (11%) and mental and behavioural disorders (9%).
- 7% of all new cancer cases diagnosed in Queensland in 2014, were in younger adults aged 30–44 years (about 1800 new cases).<sup>59</sup> The leading causes were breast cancer (27% of new female cases diagnosed) and melanoma (25% of all new cases).

**25%** of younger adults are drinking alcohol at risky levels.

### Achieving a healthy lifestyle

Two-thirds of younger adults do not consider they have a healthy lifestyle and the prevalence data largely supports this perception. For Queensland adults aged 30–44 years:

- 12% smoked daily while 26% were ex-smokers and more than half (57%) had never smoked (2018).<sup>34</sup> There has been a 15% increase in smoking cessation in this age group over the past nine years.
- 33% of 35–44 year olds were obese by measurement, 37% were overweight and 30% were in the healthy/underweight range (2014–15).<sup>33</sup>
- Many adults did not meet the Australian Dietary Guidelines for the five food groups in 2011–12<sup>49</sup> (see also page 65). Of concern is the proportion of total energy derived from unhealthy or discretionary food sources: 36% for those aged 31–50 years. This is evident in the high consumption of alcohol and sugary drinks, with males in this age group consuming about 1600g daily and females about 1100g daily.
- 25% were risky drinkers (lifetime risk), 37% of males, 12% of females (2018).<sup>34</sup>
- 8% had not been active in the previous week, while 61% were active on most days of the week (2018).<sup>34</sup>
- 21% of 35–44 year olds had undertaken strength and toning exercise on at least two days a week (2014–15).<sup>33</sup>
- 16% of 35–44 year olds had high blood pressure (>140/100 mmHg when measured) (2014–15).<sup>33</sup>

### Environments to support healthy lifestyles<sup>56</sup>

Young adulthood is often a time of significant life events including establishing and maintaining a committed relationship, growing a family, building a career, securing employment and earning a living. For some young adults it involves cycles of unemployment, under-employment, unstable jobs, and escalating work demands. Secure housing can be challenging and can lead to financial stress and uncertainty. In this context, an environment that supports good health and healthy choices will have a beneficial effect on the individual, their family and their future.

Maintaining well-planned communities through pedestrian-friendly neighbourhoods, breastfeeding facilities, smoke-free and accessible open spaces for recreation and leisure, vibrant and engaging streetscapes and adequate shade and lighting, will support young adults, their friends, partners and families to live well. Active recreational opportunities and access to sporting facilities are important.

Avoiding weight gain in the midst of easily accessible, affordable, unhealthy foods and food environments is difficult. Supermarkets, food outlets and vending machines that provide sugary drinks, sweet and salty snack foods and meals with lots of kilojoules or empty energy, make it easy for busy active young adults and families to make quick unhealthy choices.

Food environments can be modified to support healthier choices for busy young adults and families—for example, health star ratings can allow people to compare similar packaged foods for the healthier choice.

## Middle-aged adults (45–64 years)

### *Burden of disease summary*<sup>25</sup>

Chronic conditions associated with age and lifestyle related behaviours were responsible for a greater proportion of burden of disease by age 45 to 64 years.

**Broad causes:** Cancer was the leading cause of health loss in adults aged 45 to 64 years (24% of burden), followed by musculoskeletal conditions (16%) and cardiovascular disease (14%) in 2011.

**Specific causes:** Coronary heart disease was the leading cause of health loss in middle-aged adults (8% of burden), followed by lung cancer (5%) and back pain and problems (5%) in 2011.

**Risk factors:** Almost two-fifths (39%) of health loss in middle-aged adults could be explained by the joint effect of risk factors in 2011 (page 10). Tobacco use was a leading cause, accounting for 13% of the burden. Dietary risks caused 10% and high body mass 9%.

### *Population*

In 2018, 1 in 4 Queenslanders was aged 45–64 years, an estimated 1,245,000 people and about 3% or 35,000 were Indigenous Queenslanders.<sup>10</sup>

### *Perception of health and assessment of risk*

In 2017, for Queensland adults aged 45–64 years<sup>34</sup>:

- 1 in 5 (18%) reported poor or fair health.
- 1 in 6 (16%) reported reduced capacity to fulfil their usual role on five or more days in a 30-day period, due to ill health.
- 1 in 2 (47%) considered their lifestyle to be very healthy.

### *Leading conditions and comorbidities*

Many middle-aged Queenslanders are living with a chronic condition. In 2014–15, for 45–64 year olds<sup>33</sup>:

- 90% reported a sight problem (62% long-sighted, 35% short-sighted, 14% other eye disorders).
- 27% reported a back problem and a further 23% reported arthritis.
- 23% reported ear problems (18% deafness and 9% other ear diseases).
- 18% reported hay fever or allergic rhinitis and a further 14% chronic sinusitis.
- 17% reported hypertension and 11% high cholesterol.
- 15% reported a heart, stroke or vascular disease or other circulatory disease.

- 14% reported anxiety related problems and 13% depressive/mood problems.
- 14% reported allergies.
- 11% reported asthma.
- 8% reported migraine.
- 7% reported diabetes.

Multimorbidity was common in middle-aged adults (45–64 years) in Queensland. In 2014–15<sup>49</sup>:

- One-third (31%) reported one chronic condition, one-third (33%) reported two or more chronic conditions and one-third (36%) reported none.
- The four most prevalent chronic conditions in this age group were diseases of the circulatory system, back problems, arthritis and mental and behavioural disorders and many people experienced these conditions together.
- Of the 307,000 middle-aged adults who reported a circulatory condition, 75% reported a comorbid condition (usually arthritis, back problems and mental health problems).
- Of the 305,000 middle-aged adults who reported back pain, about 67% reported at least one other chronic condition (usually, circulatory conditions or arthritis).
- Of the 264,000 middle-aged adults who reported arthritis, about 72% reported at least one other chronic condition (usually circulatory conditions, back pain or mental health problems).
- Of the 230,000 middle-aged adults who reported mental and behavioural disorders, 78% reported a comorbid condition (usually circulatory conditions arthritis and back problems).
- Of the 85,000 middle-aged adults with diabetes about 89% reported at least one other chronic condition. The most common comorbid conditions of middle-aged adults with diabetes were circulatory conditions, back problems, mental health problems and arthritis.

In 2017, for middle-aged adults aged 45–64 years in Queensland, there were 21,272 notifications for communicable diseases and related conditions.<sup>47</sup> More than half (58%) were for laboratory-confirmed influenza (12,400 notifications). Other leading causes were varicella (chickenpox/shingles) (2484 notifications), campylobacter (1851), chlamydia (STI) (1026), and salmonellosis (788).

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**1 in 4** middle-aged adults have **back problems**.

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### Health service utilisation

For adults aged 45–64 years:

- The average middle-aged Queenslanders made about five visits to a GP in a year—4.8 visits per year for 45–54 year olds and six visits for 55–64 year olds in 2016–17.<sup>48</sup>
- Of the total increase in GP visits in Queensland over the past decade, 22% was due to more frequent visits of middle-aged people (a per capita increase of 0.6 visits for 45–54 year olds and 0.4 for 55–64 year olds).<sup>48</sup>
- Most (80%) middle-aged Australians visiting a GP had at least one diagnosed chronic condition and for this age group, multimorbidity was common—39% of middle-aged patients had three or more diagnosed chronic conditions, 9% had six or more and 1% had 10 or more.<sup>36</sup>
- 24% of middle-aged people in Queensland had been admitted to a hospital in 2015–16 with the proportion increasing by 11% over the past decade.
- There were 646,000 hospitalisations for this age group in 2015–16, 28% of total. The rate increased by 20% over a decade with an annual average increase of about 21,000 admissions per year.
- Admission rates for lifestyle-related chronic conditions such as coronary heart disease and stroke decreased by 14% over the past 10 years, and for chronic conditions of ageing and disability (for example, mental health, musculoskeletal and neurological conditions) there was a 21% increase.
- The leading broad causes of admission to hospital were tests, procedures and investigations (29% of all admissions), digestive diseases (11%) and symptoms and signs (8%).
- One-third (33%) of the 27,463 new cancer cases diagnosed in Queensland in 2014, were in middle-aged people (about 9100 new cases in those aged 45–64 years).<sup>59</sup> The leading cancers diagnosed for females in this age group were breast cancer (37%), melanoma (13%) and colorectal cancer (8%), and for males, prostate cancer (27%), melanoma (15%) and colorectal cancer (11%).

### Achieving a healthy lifestyle

While half of middle-aged people consider they have a very healthy lifestyle, there is substantial opportunity for improvement particularly as they enter the older years and face the challenges of ageing.

For Queensland adults aged 45–64 years:

- 14% smoked daily while 36% were ex-smokers and half (48%) had never smoked (2018).<sup>34</sup>
- 36% were obese by measurement, 36% were overweight and 28% were in the healthy/underweight range (2014–15).<sup>33</sup>

- Many middle-aged adults did not meet the Australian Dietary Guidelines for the five food groups in 2011–12<sup>49</sup> (see also page 65). Of concern is the proportion of total energy derived from unhealthy or discretionary food sources: 36% for those aged 31–50 years and 35% for those aged 51–70 years.<sup>49</sup> This is evident in the high consumption of alcohol and sugary drinks. Males aged 31–50 years consumed about 1600g daily and those aged 51–70 years about 1400g daily. For females, consumption was about two-thirds that of males 1100g and 800g respectively.
- 23% were risky drinkers (lifetime risk), 33% of males, 14% of females (2018).<sup>34</sup>
- 12% had not been active in the past week while 58% were active on most days of the week (2018).<sup>34</sup>
- 18% had undertaken strength and toning exercise on at least two days a week (2014–15).<sup>33</sup>
- 29% had high blood pressure (>140/100 mmHg when measured) (2014–15).<sup>33</sup>

### Environments to support healthy lifestyles<sup>56</sup>

During middle age, the challenges of work schedules, growing and maturing families and engagement in community activity can often lead to limited time and motivation to focus on healthy lifestyle choices. As a result, body weight reaches a peak, physical activity levels are dropping, smoking rates are highest, blood pressure and cholesterol levels are rising steadily and alcohol consumption may be increasing. Chronic health conditions start to emerge and early deaths occasionally occur.

Environments can support middle-aged people to take greater care of their health. For example, in workplaces replacing unhealthy foods with healthier options can help people make better choices at canteens and in meetings. Standing desks are becoming increasingly common and may help people to manage musculoskeletal problems. Environments that allow safe active transport to and from work and other places help people to achieve more movement in what can be long sedentary days. Some workplaces make policy, cultural and physical environmental changes that promote healthy lifestyles, such as offering health checks or healthy lifestyle programs. These can be timely reminders for middle-aged people about their rising chronic disease risk and the need to consider their longer-term health outlook.

## Older people (65 years and older)

### Burden of disease summary<sup>25</sup>

The impact of cardiovascular disease becomes more dominant later in life, as does the impact of neurological conditions. Past and current smoking behaviours have a major impact on health and are the leading risk in older people.

**Broad causes:** Cardiovascular disease accounted for 25% of health loss in older Queenslanders, 24% was due to cancer, and 10% to neurological conditions in 2011.

**Specific causes:** Coronary heart disease was the leading specific cause of health loss in older Queenslanders, accounting for 13% of burden, followed by dementia (7%) and COPD (7%) in 2011.

**Risk factors:** Of the health loss in older Queenslanders, 40% could be attributed to the joint effect of 29 selected risk factors in 2011 (page 10). Tobacco use caused 13%, dietary risks combined caused 11% and high blood pressure 9%.

### Population

In 2018, 15% of the Queensland population was aged 65 years or older, an estimated 766,000 people and the majority (88%) of these were aged 65 to 84 years. Most Queenslanders are likely to live to 65 years of age (88% of males and 93% of females in 2014–16) and having done so many will live an additional 20 years (19.5 years for males and 22.3 years for females).<sup>31</sup> It was estimated about 1% or 9000 of the older cohort were Indigenous Queenslanders in 2018.<sup>10</sup>

### Perception of health and assessment of risk

In 2017, for Queensland adults aged 65 years and older<sup>34</sup>:

- 1 in 4 (26%) reported poor or fair health.
- 1 in 6 (16%) reported reduced capacity to fulfil their usual role on five or more days in a 30-day period, due to ill health.
- 1 in 2 (54%) considered their lifestyle to be very healthy.

### Leading conditions and comorbidities

Many older Queenslanders are living with a chronic condition. In 2014–15, of older Queenslanders<sup>33</sup>:

- 93% reported a sight problem (61% long-sighted, 43% short-sighted, 9% cataracts).
- 44% reported arthritis and a further 25% a back problem.
- 41% reported deafness or ear problems.
- 37% reported hypertension and 21% high cholesterol.
- 27% reported heart, stroke or vascular disease.
- 14% reported diabetes.
- 9% reported cancer.

Multimorbidity was common in adults aged 65 years and older in 2014–15<sup>49</sup>:

- More than half (57%) of older Queenslanders reported having two or more chronic conditions while about 1 in 6 (17%) reported none.
- The two most prevalent comorbid conditions were circulatory disease and arthritis and these were most often reported together, with 173,000 older adults reporting both.
- Of the 349,000 older adults with a circulatory condition, about 76% reported at least one other chronic condition.
- Of the 276,000 older adults with arthritis, about 90% reported at least one other chronic condition.
- Of the 90,000 older adults with diabetes, 95% reported at least one other chronic condition. The most common comorbid conditions were circulatory conditions and arthritis.
- Cancer and COPD were less prevalent and occurred less often as comorbid conditions (57,000 and 51,000 adults respectively).

In 2017, for Queenslanders aged 65 years and older, there were 18,308 notifications for communicable diseases and related conditions.<sup>47</sup> Two-thirds (66%) were for laboratory-confirmed influenza (11,995 notifications), and 2142 were varicella (chickenpox/shingles), 1494 campylobacter, 918 nontuberculous mycobacteria, and 670 salmonellosis.

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**45%** of older people had been admitted to a hospital in the previous year.

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### Health service utilisation

For adults aged 65 years and older:

- The average older Queenslanders made at least eight visits to a GP in a year—eight visits per year for 65–74 year olds, 12 visits for 75–84 year olds and 13 for those aged 85 years and older in 2016–17.<sup>48</sup>
- Of the total increase in GP visits in Queensland over the past decade, 44% was due to more frequent visits of older people (a per capita increase of 2.6 visits for 65–74 year olds, 2.3 visits for 75–84 year olds and 4.3 for those aged 85 years and older).<sup>48</sup>
- Almost all (96%) older Australians visiting a GP had one or more diagnosed chronic conditions and for this age group, multimorbidity was almost universal—72% of older patients had three or more diagnosed chronic conditions, 27% had six or more and 4% had 10 or more.<sup>36</sup>
- 45% of older people in Queensland had been admitted to a hospital in 2015–16 (40% of 65–74 year olds, 51% of 75–84 year olds and 58% of those aged 85 years and older) with the proportion increasing by about 10% over the past decade.
- There were 911,000 hospitalisations for this age group in 2015–16, 40% of total. The rate increased by 25% over a decade with an annual average increase of about 43,000 admissions per year.
- Admission rates for lifestyle-related chronic conditions such as coronary heart disease and stroke decreased by 13% over the past 10 years while for chronic conditions of ageing and disability (for example, mental health, musculoskeletal and neurological conditions), there was a 15% increase.
- The leading broad causes of admission to hospital were tests, procedures and investigations (28% of all admissions), circulatory conditions (8.4%), symptoms and signs (8.1%).
- There were on average 107,000 admissions per year for falls in older people in the past five years with a 50% increase in rates over the previous 10 years. Frailty is a recognised aspect of ageing and may contribute to the risk of falls both in the home and in a care facility or hospital.
- More than half (58%) of the 27,463 new cancer cases diagnosed in Queensland in 2014 were in older people (about 16,000 new cases in those aged 65 years and older).<sup>59</sup> Prostate cancer was the leading cancer diagnosed in older males (27%) and for females, breast cancer (23%).
- The risk of a cancer diagnosis by age 75 years was 1 in 3 in 2010–2014 and by age 85 years, 1 in 2.<sup>60</sup>

### Achieving a healthy lifestyle

While older people generally report a healthier lifestyle than younger people, there is substantial opportunity for improvement with potential health benefits and enhanced quality of life.<sup>61</sup> The elevated risk and prevalence of chronic diseases in older people can be attributed in part to unhealthy behaviours and exposures earlier in life. For Queensland adults aged 65 years and older:

- 5% smoked daily while 41% were ex-smokers and half (53%) had never smoked (2018).<sup>34</sup>
- 34% were obese by measurement, 40% were overweight and 27% were in the healthy/underweight range (2014–15).<sup>33</sup>
- Many older people did not meet the Australian Dietary Guidelines for the five food groups in 2011–12 (see also page 65). One-third (32%) of total energy intake was from unhealthy or discretionary food sources.<sup>49</sup> Very few older people (2%) met the requirement for milk, yoghurt, cheese and alternatives. In contrast, two-thirds (65%) met the requirement for grain (cereal) products.
- 15% were risky drinkers (lifetime risk), 25% of older males, 6% of older females (2018).<sup>34</sup>
- 14% of 65–75 year olds had not been active in the past week while 48% were active on most days of the week (2018).<sup>34</sup>
- 12% had undertaken strength and toning exercise on at least two days a week (2014–15)<sup>33</sup>
- 43% had high blood pressure (>140/100 mmHg when measured) (2014–15)<sup>33</sup>

### Environments to support healthy lifestyles<sup>56</sup>

Healthy ageing is about optimising opportunities for good health so that older people can continue to take an active part in society and to enjoy an independent and high quality of life. Health and wellbeing in the later years will be enhanced by lifestyle choices and good foundations established in childhood and throughout life. At all stages of life, being physically active, having a healthy diet and not smoking are the best ways to avoid disease and enjoy the benefits of good health. The social environment also plays a part. Social support and participation, education, lifelong learning and safety all contribute to health and security for older age groups.<sup>62</sup>

Creating age-friendly communities with intergenerational facilities, safe public spaces, accessible footpaths, good signage for way-finding, shaded seating and drinking water, pedestrian crossings and public toilets will encourage older people to stay active, healthy and engaged with their neighbourhoods.

Organised walking or recreation activities suitable for older people, public transport and mobility options that provide access to a range of health services and local amenities such as shops and community organisations will create diverse options for community engagement, mentoring and volunteering and enable older people to remain socially active and valued.

## The health of Indigenous Queenslanders

### Burden of disease summary\*<sup>25</sup>

Indigenous Queenslanders experience a disproportionate burden of disease compared with others. In 2011, the burden of disease rate for Indigenous Queenslanders was 2.2 times the non-Indigenous rate.<sup>63</sup> Dying early caused more health loss for Indigenous Queenslanders than living with poor health.

**Broad causes:** The largest cause of disease burden for Indigenous Queenslanders in 2011 was mental and substance use disorders, accounting for 21% of total DALYs.<sup>63</sup> The second largest was injuries which caused 13%. Cardiovascular diseases caused 11%, cancer 9.6% and chronic respiratory problems 7.1%.

**Specific causes:** For Indigenous Australians (data not available for Queensland) coronary heart disease was the leading cause of health loss (7.2% of burden) in 2011, followed by suicide and self-inflicted injuries (4.5%), anxiety disorders (4.4%) and alcohol use disorder (4.2%) in 2011.<sup>63</sup>

**Risk factors:** More than one-third (37%) of health loss in Indigenous Australians (data not available for Queensland) could be explained by the joint effect of risk factors in 2011 (page 11).<sup>63</sup> Tobacco use was a leading cause, individually accounting for 12% of the burden. Dietary risks caused 10%, alcohol 8.3% and high body mass 8.2%.

\* Based on the AIHW burden of disease study

### Population

In 2018, it was estimated that about 1 in 20 (4.5%) of the state population was an Indigenous Queenslanders, about 224,000 people (221,000 in 2016).<sup>10</sup>

### Health conditions and development

In 2012–13, for Indigenous Queenslanders<sup>64</sup>:

- 33% reported eyesight problems.
- 14% reported asthma.
- 11% reported heart and circulatory problems.
- 11% reported ear or hearing problems.
- 11% reported back pain problems.
- 8.5% reported arthritis.
- 7.7% reported diabetes.

Compared with the non-Indigenous population, and after adjusting for age structure, Indigenous Australians\* were<sup>64,65</sup>:

- 3.3 times more likely to have diabetes
  - 40% less likely to be undiagnosed for diabetes
  - 40% less likely to be managing their diabetes
- about twice as likely to have asthma
- more than twice as likely to have signs of chronic kidney disease
- 31% more likely to have ear disease including deafness.

\* Australian data used as comparative data for Queensland are currently limited.

In 2017, for Indigenous Queenslanders, there were 8888 notifications for communicable diseases and related conditions.<sup>47</sup> About one-third (37%, 3251) were for chlamydia (STI). The widespread influenza season in 2017 affected Indigenous Queenslanders across all ages, accounting for 29% or 2604 notifications. There were 305 notifications for mumps in 2017.

The leading causes of notifiable conditions by age group:

- For children aged 0 to 14 years there were 1701 notifications—more than half were laboratory-confirmed influenza (57%, 968 notifications) with 130 for rotavirus, 123 salmonellosis, 104 pertussis (whooping cough), and 78 mumps.
- For those aged 15–29 years there were 4596 notifications—60% were chlamydia (STI) (2744 notifications), 684 were gonorrhoea (STI), 511 for laboratory-confirmed influenza, 220 infectious syphilis and 117 mumps.
- For those aged 30–44 years there were 1197 notifications—one-third (32%) was chlamydia (STI), 378 notifications, 294 were laboratory confirmed influenza, 164 gonorrhoea (STI), 107 infectious syphilis and 96 hepatitis C.
- For those aged 45–64 years there were 839 notifications—and 61% were laboratory-confirmed influenza (513 notifications) with 50 for varicella (chickenpox/shingles), 47 chlamydia (STI), 42 hepatitis C and 38 latent syphilis.
- For those aged 65 years and older there were 365 notifications and 69% were laboratory-confirmed influenza (250 notifications), 17 varicella (chickenpox/shingles), 15 campylobacter, and 15 latent syphilis.

There has been an ongoing outbreak of infectious syphilis in north Queensland since 2011. It is currently affecting the four HHSs of Cairns and Hinterland, North West, Torres and Cape, and Townsville. Between 1 January 2011 and 31 March 2018, there were 1109 notifications of infectious syphilis:

- 99% were for Indigenous Queenslanders (1093 notifications, 16 non-Indigenous).
- 52% were females, 48% males.
- 67% were aged 15–29 years, and a further 19% were aged 30–39 years.
- Eight notifications in Indigenous Queenslanders were of congenital syphilis and six resulted in death.

The Queensland Government has committed more than \$15.7 million over three years to implement the North Queensland Aboriginal and Torres Strait Islander Sexually Transmissible Infections Action Plan 2016–2021.<sup>66</sup> Implementation of the action plan is being led by the affected HHSs through the establishment of outbreak response teams. These investments have created a number of key clinical, public health and Indigenous health worker positions.

Queensland Health is working with key health stakeholders to embed the response across both the primary and acute settings. This includes Aboriginal and Torres Strait Islander Community Controlled Health Organisations, who are well placed to provide screening and treatment in a primary care setting. Additional investment of more than \$1.4 million is being made across these organisations in north Queensland to support the increased effort to address the outbreak. These investments support increased local and regional coordination, testing, treatment, contact tracing, health promotion and community engagement activities, clinician education, enhanced data collection and surveillance of syphilis cases.

The syphilis outbreak currently impacting Aboriginal and Torres Strait Islander peoples in northern Australia is attributable in part, to limited access to primary healthcare in many communities and as a consequence additional public health services have been required to fill the gap.

### Health service utilisation

Of Indigenous Queenslanders:

- 19% had consulted a GP in the previous two weeks in 2012–13.<sup>64</sup>
- 16% had consulted another health professional in the previous two weeks in 2012–13.<sup>64</sup>
- 17% had been admitted to a hospital in the previous year in 2012–13.<sup>64</sup>
- There were 116,000 hospitalisations for Indigenous Queenslanders in 2015–16, 5% of total (see also page 44).
- The crude hospitalisation rate for Indigenous Queenslanders increased by 51% over a decade with an annual average increase of about 5500 admissions per year.
- The leading broad causes of admission to hospital were tests, procedures and investigations (40% of all admissions), injury (8%), symptoms and signs (7%) and pregnancy (7%).
- 2.8% of the 27,463 new cancer cases diagnosed in Queensland in 2014 were for Indigenous Queenslanders (782 new cases).<sup>59</sup> Two-thirds (67%) occurred in those aged 45–74 years. For females the most frequently diagnosed cancers were breast cancer (22%) and lung cancer (14%) and for males, prostate cancer (19%) and lung cancer (17%).

### Achieving a healthy lifestyle

In 2012–13, of Indigenous Queenslanders aged 15 years and older<sup>64</sup>:

- 66% were overweight or obese by measurement (29% were overweight and 37% were obese).
- 42% were current daily smokers.
- 18% were drinking alcohol at lifetime risky levels.
- 58% did not meet the recommendations for daily fruit consumption.
- 95% did not meet the recommendations for daily vegetable consumption.
- 20% had high blood pressure.
- 65% were dyslipidaemic, that is, have high cholesterol or being treated for it.

Indigenous Australians consume too little of the five major food groups and too much sugar and other discretionary foods.<sup>67</sup> More than six serves of discretionary foods are being consumed daily, where the recommendation is for small amounts, occasionally. For Indigenous Australians (19 years and older) in 2012–13, 42% of energy intake was from discretionary or unhealthy food sources. The energy intake of Indigenous Australians aged two years and older was 13% more likely to be derived from discretionary food sources.

For Indigenous Queensland children<sup>64</sup>:

- 51% met the recommendation to be active for at least an hour every day.
- 91% of one year olds were fully immunised in 2017, 89% of two year olds and 97% of five year olds.

For Indigenous Queenslanders, compared with non-Indigenous (and adjusting for age)<sup>64,65</sup>:

- Adults were 2.5 times more likely to smoke daily.
- Teenagers aged 15–17 years were five times more likely to smoke daily (Indigenous Australians).
- Adult risky drinking (lifetime or single occasion risky drinking) was similar.
- Adults were 39% more likely to be obese but overweight prevalence was similar.
- Adults were 12% less likely to eat recommended serves of fruit.
- The prevalence of high blood pressure in Indigenous Australian adults was 17% higher than the non-Indigenous rate, and 13% higher for dyslipidaemia.

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### *Environments to support healthy lifestyles<sup>56</sup>*

Environments that support health for Indigenous Queenslanders are not confined to the physical characteristics of the places where people live. The historical and cultural circumstances in which Aboriginal and Torres Strait Islander people exist in contemporary Australia significantly and adversely affects their health.

Their relationship to ancestral lands, seas, and waterways are fundamentally important for cultural and physical survival, and for wellbeing. These relationships are key enablers of health. Furthermore, the history of settlement in Australia has impacted on Indigenous Australians in various ways, often involving some degree of dispossession, dislocation and cultural discrimination. The consequences of colonisation have had long-term impacts—evident today in significant health disparities, conditions of daily life and more broadly the deeply rooted social determinants of health.

Addressing these health disparities will require a renewed appreciation of the underlying causes that hinder the attainment of equitable health for Aboriginal and Torres Strait Islander people. Change may mean more than increasing investment and include cultural and system level redesign.

In Queensland, Apunipima Cape York Health Council has been working with Aboriginal and Torres Strait Islander Shire Councils to create healthy places in communities to reduce sugary drink consumption, increase water consumption and increase smoke-free spaces.

The project focusses on engagement with mayors, councillors, traditional owners and elders, community organisations and community members to develop appropriate local strategies for implementation. Strategies include installation of ‘No Smoking’ signs, the development and/or strengthening of workplace smoke-free policies and the installation of water bubblers.

Community stores are also making changes to support healthy drink choices such as placing water-only fridges near the store’s entrance and selling water at cost price.

The early success of the Apunipima project has been built on respect for local leadership and by engaging and working alongside the Aboriginal and Torres Strait Islander communities. As a result, there has been an increase in supportive environments in remote settings, and an increase in awareness of health issues and readiness to take action.



## Cape York communities

*We all live here and it doesn't matter if you're old or young, or a teenager. I think everyone's got their right to say their piece of mind.*

Health and wellbeing in Cape York communities is being supported by an integrated approach to healthy places, through strong partnerships between community members, Apunipima Cape York Health Council and Aboriginal Shire Councils.

Overweight and obesity, and poor dental health are being addressed by initiatives to increase access to drinking water and decrease the availability of sugary drinks.

Tobacco smoking is being addressed by creating and maintaining smoke-free spaces, events and policies.

Local community members and organisations are actively involved in the planning and implementation of these initiatives. Community-led engagement and action has been key to facilitating change and encouraging healthy lifestyle choices.



## Selected highlights from the regions

### Maternal smoking

The rate of maternal smoking is reducing in Queensland with greater decline among non-Indigenous women than Indigenous Queensland women (48% compared with 21% over a decade).

For non-Indigenous teenage mothers, the rate of decline was lower than for older mothers (38% decrease over a decade compared to 47%), whereas for Indigenous Queensland mothers there was no difference (Table 6).

There has been widespread decline in smoking during pregnancy for all women in Cairns and Hinterland, Darling Downs and Townsville HHSs, and substantial decline in Central Queensland, Metro North and Sunshine Coast (Table 6).

### Admissions for dental decay

There were 4146 hospital admissions per year for dental decay in children aged 0–9 years (2013–14 to 2015–16) (Table 7). About 1 in 8 admissions was for Indigenous Queensland children.

Hospitalisation rates are decreasing for non-Indigenous children, with change evident in eight of 15 HHSs.

For Indigenous Queensland children, over the past 10 years the hospitalisation rate for dental decay increased by 32%. There was an increase of 278% in North West HHS and 207% in South West, but no change in any other HHS.

### Adult perception of health

About 1 in 7 (16%) adult Queenslanders reported poor health in 2017 (Table 8). The highest prevalence was in Central West and Wide Bay and lowest in Gold Coast. The age profile of an HHS may help to explain differences as older people are more likely to report poor or fair health than younger people.

In 2017, Wide Bay and Sunshine Coast HHSs had the highest proportion of adults reporting five or more days in a 30-day period out of their usual role due to ill health. Torres and Cape, Metro South and North West were the lowest.

Almost half the adult population in Sunshine Coast HHS (49%) reported having a very healthy lifestyle, significantly higher than North West (37%) (Table 8). The age profile of the HHS may help to explain this difference as older people generally report healthier lifestyles than do younger people.

### Data sources and methods: lifetime health

Multiple data sources and definitions were used in this section. For detail, refer to citations, definitions (page 115) and the companion Methods for reporting health status 2018 report.<sup>1</sup> Perinatal data for 2016 is subject to revision.

**Table 6: Trends in maternal smoking, by Indigenous status, age group and HHS, Queensland, 2006–2017<sup>38</sup>**

	Indigenous		Non-Indigenous	
	< 20 years	20+ years	< 20 years	20+ years
Cairns and Hinterland	-29%	-19%	-40%	-41%
Central Queensland	-29%	ns	-42%	-49%
Central West	ns	ns	ns	-60%
Darling Downs	-35%	-24%	-40%	-44%
Gold Coast	ns	ns	-43%	-62%
Mackay	ns	ns	-35%	-45%
Metro North	ns	-20%	-21%	-39%
Metro South	ns	ns	-44%	-51%
North West	ns	ns	ns	-62%
South West	ns	ns	ns	-55%
Sunshine Coast	-50%	ns	-20%	-38%
Torres and Cape	ns	ns	ns	-49%
Townsville	-29%	-42%	-71%	-65%
West Moreton	ns	ns	-32%	-41%
Wide Bay	ns	ns	-43%	-32%
Queensland	-24%	-21%	-38%	-47%

Total % change between 2006 and 2017

ns no significant change

**Table 7: Hospitalisations for dental decay, by HHS, children aged 0–9 years, Queensland**

HHS	Indigenous		Non-Indigenous	
	Admissions*	Trend**	Admissions*	Trend**
Cairns and Hinterland	40	ns	125	-59%
Central Queensland	36	ns	249	-31%
Central West	4	ns	19	ns
Darling Downs	46	ns	367	ns
Gold Coast	8	ns	484	-17%
Mackay	9	ns	132	-50%
Metro North	28	ns	753	ns
Metro South	44	ns	688	-51%
North West	96	278%	143	ns
South West	19	207%	54	ns
Sunshine Coast	16	ns	343	-29%
Torres and Cape	108	ns	122	ns
Townsville	35	ns	149	-44%
West Moreton	23	ns	275	-42%
Wide Bay	32	ns	243	ns
Queensland	544	32%	4,146	-19%

\* average per year (2013–2014 to 2015–16)

ns no significant change

\*\* Total % change in crude rates over 10 years: 2005–06 to 2015–16

**Table 8: Perceptions of health and lifestyles, by HHS, adults, Queensland, 2017<sup>34</sup>**

	% self reported fair or poor health	% reporting 5 or more days out of role	% reporting very healthy lifestyles
Cairns and Hinterland	16 (13-20)	15 (12-18)	45 (41-49)
Central Queensland	16 (14-19)	13 (11-16)	43 (40-47)
Central West	26 (19-35)	17 (11-24)	42 (34-51)
Darling Downs	17 (15-20)	15 (13-18)	42 (38-46)
Gold Coast	12 (9-15)	14 (11-18)	47 (43-52)
Mackay	18 (15-22)	13 (10-16)	43 (39-48)
Metro North	15 (13-18)	17 (14-20)	42 (38-46)
Metro South	14 (12-16)	11 (9-13)	43 (39-46)
North West	17 (13-23)	11 (8-17)	37 (31-45)
South West	20 (16-25)	15 (12-20)	44 (38-50)
Sunshine Coast	15 (13-18)	18 (14-21)	49 (45-54)
Torres and Cape	21 (11-36)	10 (5-20)	45 (32-59)
Townsville	17 (14-20)	15 (12-19)	44 (39-49)
West Moreton	21 (17-25)	16 (13-19)	41 (37-46)
Wide Bay	23 (20-26)	19 (16-23)	42 (38-46)
Queensland	16 (15-16)	15 (14-16)	44 (42-45)