





Chronic Pain in Australia

Published May 2020

Chronic pain is common in Australia. One in 5 Australians aged 45 and over are living with persistent, ongoing pain. This pain can be disabling and stressful, making it hard for a person to work and do the things they enjoy. More people are seeing their **general practitioner** (GP) for chronic pain. In 2018, chronic pain cost an estimated \$139 billion in Australia, mostly through reduced quality of life and productivity losses.

This report provides insight into the experience of Australians managing chronic pain. It explores the latest national data on the proportion of people with chronic pain, as well as its impact, treatment and management.

What is chronic pain?

Chronic pain is pain that lasts beyond normal healing time after injury or illness—generally 3 to 6 months. It is a common and complex condition, and the pain experienced can be anything from mild to severe. The defining characteristic of chronic pain is that it is ongoing and experienced on most days of the week.

Chronic pain can result from injury, surgery, **musculoskeletal conditions** such as **arthritis**, or other medical conditions such as cancer, **endometriosis** or **migraines**. In some cases, there may be no apparent physical cause (Treede et al. 2015; Painaustralia 2019a).

Pain that is acute, or short-term, is a response to damaged tissue and usually disappears once the tissue has healed. Chronic pain is more complex, and may result from damage to body tissue from an acute or chronic condition, or changes in the nerves or nervous system that result in the nerves continuing to signal pain after the original condition has healed (Painaustralia 2019a).

Chronic pain can affect a person's use of health care and ability to work, exercise and socialise (Hadi et al. 2018; Duenas et al. 2016). People with chronic pain are more likely than those without chronic pain to experience mental health conditions, including **depression**, **anxiety**, sleep disturbance and fatigue (Painaustralia 2019a).





had chronic pain in 2016

People with
chronic pain are
5 times as likely as those
without pain to be 'limited a lot'
in daily activities



GPs are seeing more people for chronic pain— patient encounters have risen by 67% over 10 years



People with chronic pain are almost **3 times** as likely to be dispensed opioids and other analgesics and migraine medication as those without pain



In 2017–18, there were nearly 105,000 hospitalisations involving chronic pain





How do we measure chronic pain in Australia?

Measuring how many people have chronic pain in Australia is difficult (Painaustralia 2019b). Pain is a subjective experience, and the few national data sources that include measures of chronic pain use different definitions.

This report analyses results from the Survey of Health Care (SHC) 2016. The survey was funded by the Australian Institute of Health and Welfare and conducted by the Australian Bureau of Statistics. The SHC asked participants whether they had moderate or severe pain lasting longer than 6 months.

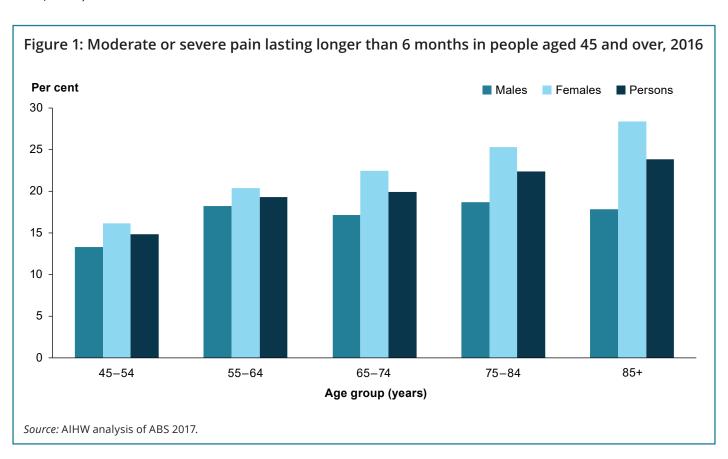
The SHC participants are aged 45 and over, therefore the analysis in this report focuses on this age group.

For more information on this survey, see 'About the data' on page 12.

How many Australians have chronic pain?

In 2016, almost 1 in 5 (19%, or 1.6 million) Australians aged 45 and over reported having chronic pain (ABS 2017) (Figure 1). Chronic pain increased with increasing age, to almost 1 in 4 adults (24%) aged 85 and over. This may be because older people often experience medical conditions associated with pain, such as musculoskeletal conditions. Attitudes towards pain and biological changes in the perception of pain may also influence the experience of pain in older adults (Molton & Terrill 2014).

Chronic pain was 1.8 times as high for women aged 85 and over (28%) as women aged 45–54 (16%). Among men, chronic pain was 1.3 times as high in those aged 85 and over (18%) as in those aged 45–54 (13%) (Figure 1). Overall, women had higher rates of chronic pain (21%) than men (17%). According to a different data source, the ABS Survey of Disability, Ageing and Carers, chronic pain rates in adults aged 45 and over remained stable between 2003 and 2015 for both males (20%) and females (25–26%) (ABS 2005, 2012, 2014, 2016).



What are the behavioural risk factors for chronic pain?

Several factors increase the likelihood of developing chronic pain, including being female, increasing age, **genetic predisposition** and environmental influences, such as **socioeconomic disadvantage** (Blyth et al. 2001; Diatchenko et al. 2013). Many behavioural risk factors have also been linked to chronic pain, including physical inactivity, smoking, and being overweight or obese.



Physical activity

Sedentary behaviours and low levels of physical activity are associated with chronic pain (Nielens & Plaghki 2001). Regular physical activity may also reduce pain severity and increase the ability to perform the tasks required for daily living and recreation in those with chronic pain (Geneen et al. 2017).



Smoking

People who smoke are more likely to have chronic pain conditions such as **fibromyalgia**, back pain and headaches (Orhurhu et al. 2015). In 2016, smokers and ex-smokers were more likely to self-report chronic pain (15% and 13%, respectively) than people who had never smoked (8.2%) (AIHW 2017).



Weight

Being overweight or obese is a risk factor for developing chronic pain (Okifuji & Hare 2015). A higher body mass index is associated with greater joint and back pain due to the increased pressure on these areas. Obesity is also linked to other pain conditions, including fibromyalgia, headaches and abdominal pain (Wright et al. 2010).

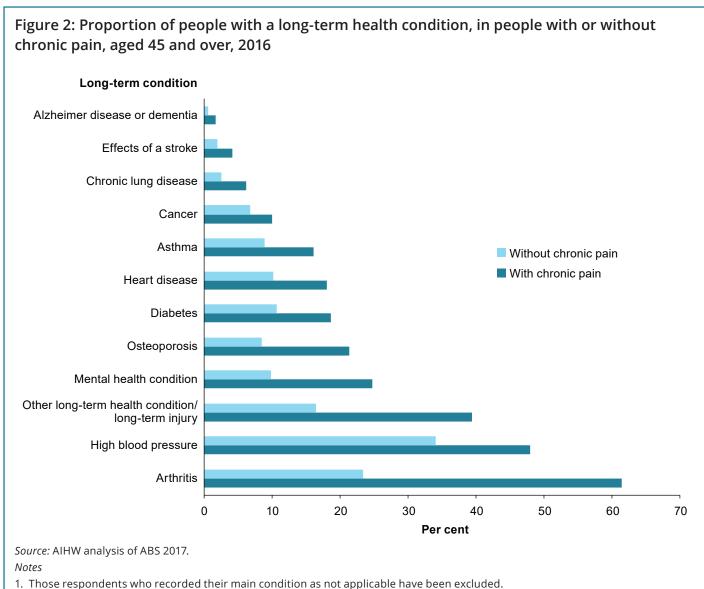
People with chronic pain have higher rates of long-term conditions

Several long-term health conditions are associated with chronic pain. Musculoskeletal conditions (for example, arthritis and back pain), cardiovascular diseases, diabetes, asthma, stroke, and bowel disease may be associated with increased risk of experiencing chronic pain (Butchart et al. 2009; Dominick et al. 2012).

There may also be a two-way relationship between chronic pain and mental health disorders. Many people with chronic pain report psychological distress (Lerman et al. 2015), and psychological symptoms may be associated with increased risk of chronic pain (Gerrits et al. 2015).

Compared with people without chronic pain, those with chronic pain were 2.6 times as likely to have arthritis, 2.5 times as likely to have mental health problems, 2.5 times as likely to have osteoporosis and 2.4 times as likely to have other long-term health conditions, or a long-term injury (Figure 2).

The survey did not explore whether the long-term health conditions caused the person's chronic pain. The cause of chronic pain is often complex and difficult to identify (Painaustralia 2019a).

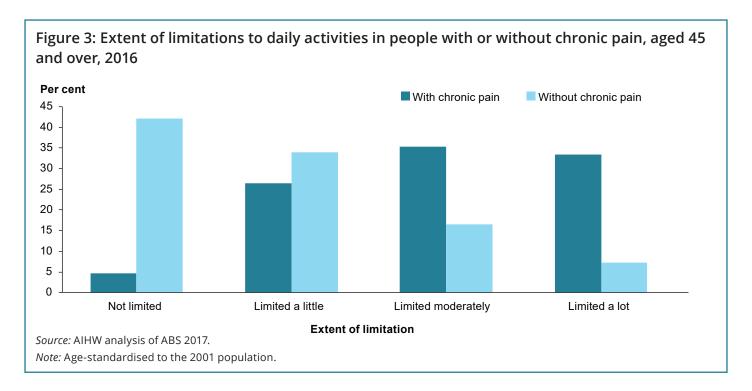


- 2. The total of the proportions does not equal 100% because a person can have more than 1 chronic condition.

How does chronic pain affect a person's life?

Chronic pain can have a profound effect on a person's life. People with chronic pain may have trouble sleeping, going to work, going to school or social activities, and difficulty with physical tasks such as household chores, lifting, or exercising (Breivik et al. 2006; Finan et al. 2013; Hadi et al. 2018; Roehrs et al. 2013). Older adults with chronic pain are at increased risk of falling, deteriorating mobility, and disability. This can affect their ability to look after themselves independently later in life (Eggermont et al. 2014; Stubbs et al. 2014).

People with chronic pain reported significantly higher rates of limitations to daily activities than those without chronic pain (ABS 2017). They were almost 5 times as likely to report their daily activities were 'limited a lot' (33%) and twice as likely to report their activities were 'limited moderately' (35%). People without chronic pain were 9 times as likely as those with chronic pain to say that their activities were not limited (Figure 3).



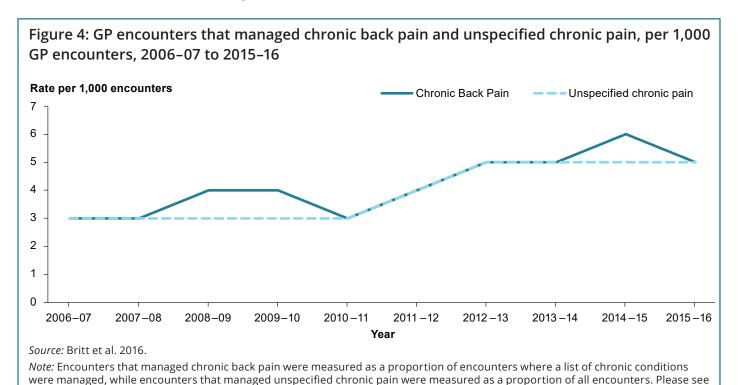
How is chronic pain treated?

A person with chronic pain may consult a range of health professionals to help manage their pain, including GPs, medical specialists, psychologists, physiotherapists and social workers. Many patients also use medications, such as **paracetamol** and **non-steroidal anti-inflammatory drugs (NSAIDS)**, and some may receive treatment in hospital (RACP 2009).

More people are seeing GPs for chronic pain

Britt et al. 2016 for more details about how these rates were calculated.

According to the Bettering the Evaluation and Care of Health (BEACH) study, more people are seeing GPs about chronic pain. Between 2006–07 and 2015–16, the rate of GP visits where chronic back pain or unspecific chronic pain were managed during the visit increased 67%, representing about 400,000 more encounters for both conditions (Figure 4).



What medications do people use for their chronic pain?

Analgesics (pain medications) are often used to treat the symptoms of pain. These medications aim to reduce the severity of a person's pain, so that they can function more easily in their daily life. Analgesics used to treat pain include paracetamol, NSAIDs and opioids (RACGP 2018).

How do we measure medication use in people with chronic pain?

In Australia, most prescription pharmaceuticals are subsidised for all Australian Medicare cardholders under the Pharmaceutical Benefits Scheme (PBS).

The PBS codes medications using the Anatomical Therapeutic Chemical (ATC) classification system, which classifies the active ingredients of medications according to their therapeutic, pharmacological and chemical properties and the organ or system on which they act. In the ATC, analgesics are classified under the nervous system anatomical main group and comprise 3 subgroups: opioids, antimigraine medications and other analgesics and antipyretics (WHO Collaborating Centre for Drug Statistics Methodology 2018).

This section examines linked data from the PBS and the 2016 Survey of Health Care to compare the differing patterns in analgesic prescriptions between people (aged 45 and over) who had chronic pain and those who did not. This does not capture people who did not have their prescription filled, or who bought over-the-counter medications (such as paracetamol).

For more information, see 'About the data' section on page 12.

In 2016, among those aged 45 and over, more than half (57%) of people with chronic pain were dispensed analgesics, compared with 1 in 5 (21%) people without chronic pain. These medications included prescription opioids, other analgesics and migraine medications. People with chronic pain were almost 3 times as likely to be dispensed opioids, other analgesics or migraine medications as those without chronic pain (Table 1). Paracetamol was the most commonly dispensed analgesic (28% of those with chronic pain and 8.9% of those without chronic pain). This was followed by codeine, with 18% of those with chronic pain and 7.5% of those without chronic pain having been dispensed codeine, either by itself or in combination with **non-opioid analgesics**, such as paracetamol, aspirin and ibuprofen (Supplementary Table 1).

Table 1: Proportion of people, aged 45 and older, with and without chronic pain, who were dispensed at least 1 analgesic medication, 2015–2016

	With chronic pain	Without chronic pain
Dispensed opioids	40%	13%
Dispensed migraine medication	2.5%	1.3%
Dispensed other analgesics	38%	11%
Total dispensed analgesics ^(a)	57%	21%

⁽a) Does not equal the sum of the analgesics groups as people can be dispensed more than 1 type of analgesic.

Notes

- 1. Those respondents who recorded their main condition as not applicable have been excluded.
- 2. People who did not have their prescription filled, or who bought over-the-counter medications are not captured in the above data. *Source:* AIHW analysis of ABS 2017

Opioid use

Opioids are drugs that have a morphine-type action in the body and are commonly used for pain relief—this includes relief of chronic pain and of acute pain, such as the pain experienced after surgery or after an injury. Examples of opioids include oxycodone, codeine, tramadol, buprenorphine, tapentadol and morphine.

Opioids are recommended in the treatment of chronic pain where other pharmacological and non-pharmacological treatment strategies have not been effective (ACSQHC & AIHW 2018). However there is increasing evidence of harm and negative side effects, and a lack of evidence of the effectiveness of long-term opioid use for managing chronic pain (AIHW 2018; Currow et al. 2016; Megale et al. 2018). Opioids may not offer any additional pain relief to non-opioid medications such as paracetamol or NSAIDs, and the risk of harm is higher (Chaparro et al. 2013; Krebs et al. 2018).

Opioid misuse is of national and international concern. All opioids carry a risk of **dependence**, accidental overdose, hospitalisation and death (AIHW 2018).

The number of opioid prescriptions dispensed in Australia through the PBS increased from 55,900 per 100,000 people in 2013–14, to 58,600 per 100,000 people in 2016–17. While there was an increase in opioid prescriptions, the defined daily dose of opioids (number of defined daily doses dispensed per 1,000 people per day) decreased, from 16 in 2013–14, to 15 in 2016–17 (ACSQHC & AIHW 2018).

Australia has introduced a range of initiatives in response to opioid use and misuse. In 2020, the Australian Government will implement measures to:

- increase restrictions on prescribing **fentanyl** patches
- tighten and align the rules for when opioids should be prescribed
- provide clearer warnings in information for prescribers and consumers
- create smaller pack sizes for immediate-release opioids, so that patients are not left with unused opioids after recovering from episodes of acute care (DoH TGA 2020).

Since 1 February 2018, medicines containing codeine cannot be bought over the counter at pharmacies. This policy change led to a 50% reduction in the total number of codeine-containing products supplied in 2018, compared with the average total supplied in the previous 4 years (DoH TGA 2019).

Another option to tackle opioid use and misuse is to increase the use and awareness of non-opioid treatments for chronic pain (DoH TGA 2018). This includes increasing access to specialist pain management services (Painaustralia 2019b).

How many hospitalisations are there?

How do we measure chronic pain hospitalisations?

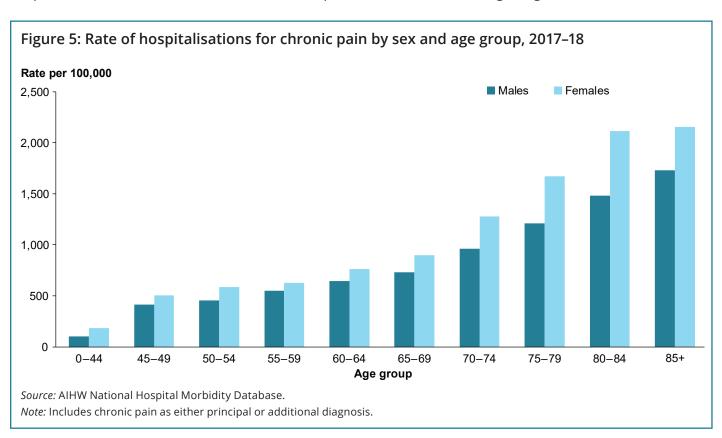
A hospitalisation, or a hospital **separation**, refers to an episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute to rehabilitation care) (AIHW 2019a).

For hospital separations, the **principal diagnosis** is the diagnosis established after study to be chiefly responsible for the patient's episode of admitted patient care. An **additional diagnosis** is a condition or complaint that either coexists with the principal diagnosis or arises during the episode of care. An additional diagnosis is reported if the condition affects patient management (AIHW 2019a).

When chronic pain is documented, and there is a known cause for chronic pain (for example, back pain), the cause is the principal diagnosis and chronic pain is reported as the additional diagnosis. Chronic pain is the principal diagnosis only when there is no known cause. For more information, see 'About the data' section on page 12.

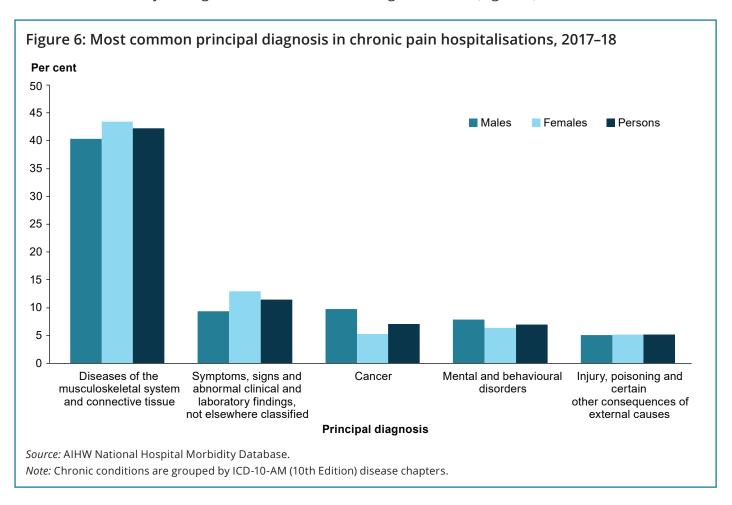
A **procedure** or **intervention** is a clinical intervention that is either surgical, carries an anaesthetic risk, requires specialised training and/or requires special facilities or services available only in an acute care setting. Patient support interventions that are neither investigative nor therapeutic (such as anaesthesia) are also included (AIHW 2019a). In 2017–18, procedures were recorded using the 10th edition of the Australian Classification of Health Interventions (ACHI) (ACCD 2017).

In 2017–18, there were nearly 105,000 hospitalisations for chronic pain (both principal and additional diagnosis). Almost all of these (99%, or 103,700) recorded chronic pain as an additional diagnosis and 1.2% (1,300) recorded it as a principal diagnosis (no known cause of pain). Hospitalisation rates were higher for women across all age groups and the rate of hospitalisations involving chronic pain increased with age (Figure 5). However, this may be explained by a combination of females having higher overall hospitalisation rates than males and overall hospitalisation rates increasing as age increases.



Most people with chronic pain are in hospital for musculoskeletal conditions

More than 4 in 10 people (42%) with chronic pain as the additional diagnosis had a principal diagnosis of diseases of the musculoskeletal system and connective tissue (such as arthritis and back pain). Other common reasons for hospitalisation were symptoms, signs and abnormal findings (12%), cancer (7.1%), mental and behavioural disorders (7.0%) and injury, poisoning and other external causes (5.1%) (Figure 6). The principal diagnoses in chronic pain hospitalisations were mostly similar between males and females with the exception of cancer, which was 1.8 times as high in men as women, and signs and abnormal clinical and laboratory findings, which was 1.4 times as high in women (Figure 6).



More than half of hospital procedures are for allied health

In 2017–18, 23.7 million procedures were performed in Australia's hospitals, 1.4% (322,000) of which were associated with a chronic pain diagnosis (principal or additional). The proportion of hospitalisations that involved at least 1 procedure was similar between hospitalisations with and without chronic pain (83% and 84%, respectively). However, hospitalisations involving chronic pain involved more procedures: 22% had 5 or more procedures, compared with 8.9% for other hospitalisations (AIHW 2019b).

The most common groups of procedures associated with chronic pain were:

- allied health interventions, such as physiotherapy and occupational therapy (52%, or 167,000 procedures)
- general anaesthesia or sedation (8%, 25,800 procedures)
- procedures to deliver local anaesthetic to a small nerve (6%, 20,100 procedures).

Chronic pain patients spend more time in hospital

More than two-thirds (69%) of patients with chronic pain were not **discharged** on the same day they were admitted—a rate 1.8 times as high as patients without chronic pain (39%) (AIHW 2019b).

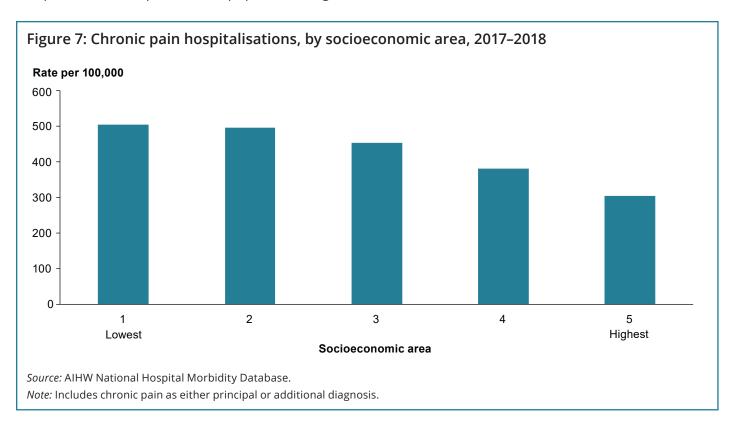
The mean and median number of days spent in hospital were higher among patients with chronic pain. These patients stayed an average (mean) 5 days longer (7.5 bed days) in hospital than patients without chronic pain (2.6 bed days). The median number (middle value) of bed days was also 3 times as long for chronic pain patients than for patients without chronic pain (3 days compared with 1).

When considering only patients who were not discharged on the same day, those with chronic pain stayed on average twice as long in hospital as patients without chronic pain (10 days compared with 5 days).

Rate of hospitalisations is higher for people in lower socioeconomic areas

Socioeconomic disadvantage has been associated with increased risk of chronic pain (Blyth et al. 2001), although other factors may contribute to this relationship, including psychological distress and reduced ability to take steps to improve health (Davies et al. 2009).

People from the lowest socioeconomic (most disadvantaged) areas were 1.7 times as likely to be hospitalised with chronic pain as those from the highest socioeconomic (least disadvantaged) areas (505 compared with 303 per 100,000 population) (Figure 7).



How much does chronic pain cost?

Chronic pain has an enormous effect on a person's life, and on the Australian economy more broadly. The financial cost of chronic pain in 2018 was an estimated \$73.2 billion (Painaustralia 2019c). This included:

- \$48.3 billion (66%) for productivity costs, reflecting the impact on a person's ability to work, work performance and employment outcomes
- \$12.2 billion (17%) for direct health system costs (where known cause and unknown cause of chronic pain estimates are the same).

The remaining financial costs include indirect costs such as informal care, forgone taxation revenue, welfare payments and aids and modification costs. Quality of life reduction costs (including loss of healthy life and premature death) bring the total estimated cost to \$139.3 billion. By 2050, it is estimated that the annual cost of chronic pain in Australia will rise to \$215.6 billion, partly due to an ageing population (Painaustralia 2019c).

What are the challenges in reporting on chronic pain in Australia?

Measuring chronic pain is difficult due to the subjective nature of pain, lack of a national definition, and variation in questions measuring chronic pain in surveys. The subjective and ongoing nature of pain results in variation in reported pain intensity, pain persistence and pain-related disability (Painaustralia 2019a).

A person can experience several types of pain (for example, cancer, **neuropathic** and musculoskeletal pain). The surveys and data collections examined in this report do not measure these distinct types but measure them collectively, which makes it difficult to explore the different types of chronic pain experienced in Australia.

Limited data are available on Aboriginal and Torres Strait Islander people's experience of chronic pain, as there are currently no national surveys of Indigenous people that include a question about chronic or long-term pain.

Older Australians, those with disabilities and those in residential care are at higher risk of experiencing chronic pain. However, there are additional barriers to identifying and treating their pain, as care facilities are often out of the scope of national reporting measures and cognitive or communication disabilities, such as dementia or hearing loss, may prevent people from reporting their experience of pain (Savvas & Gibson 2015).

It is also difficult to measure the treatment of chronic pain in Australia, as insufficient data are available measuring primary care services (including allied health and alternative health services) used for chronic pain.

Next steps

In 2019, the World Health Organization adopted the International Classification of Diseases 11th Revision (ICD-11), which is the first version of the ICD to contain systematic definitions and codes for chronic pain (IASP 2019). In Australia, a decision has not yet been made as to whether ICD-11 will replace ICD-10 and ICD-10-AM for the collection and reporting of health-care statistics. The Australian Institute of Health and Welfare reviewed ICD-11, and its potential implementation in Australia, in consultation with a range of stakeholders in early 2019. They suggested further research to inform a decision on whether, when and how to implement ICD-11 in Australia (AIHW 2020).

Steps that could be taken to improve the collection of data on chronic pain include:

- clearly defining chronic pain (for example, pain persisting daily for at least 3 months) in national data collections
- measuring the different types of chronic pain
- further researching the relationship between other conditions that occur with pain, such as mental health conditions (for example, depression and anxiety)
- including chronic pain when collecting primary care data (that is, from both GPs and other primary care providers such as physiotherapists) to provide further insight into how the condition is managed
- including a question on the experience of chronic pain in surveys targeted at Indigenous Australians
- exploring opportunities to capture chronic pain experienced in residential care facilities.

Where do I go for more information?

Further information on chronic pain in Australia is available from https://www.painaustralia.org.au/>.

For more information on opioid use in Australia, see https://www.aihw.gov.au/reports/illicit-use-of-drugs/opioid-harm-in-australia/contents/summary>.

About the data

Survey of Health Care

The Survey of Health Care 2016 sampled people aged 45 and over who saw a GP in the previous 12 months. Participants were asked whether they had a long-term health condition. Participants were classified as having chronic pain if they reported moderate or severe pain lasting longer than 6 months.

Data linkage—2016 Survey of Health Care and Pharmaceutical Benefits Scheme

More than 16,000 study participants consented to the linking of their 2016 Survey of Health Care responses to information about the health services they used between 1 January 2014 and 30 June 2018, obtained from the PBS (and MBS; not included in this report) (ABS 2017).

This report used data from participants' use of PBS services in 2015–16 to coincide with the Survey of Health Care reference period of 2016.

Survey of Disability, Ageing and Carers

The Survey of Disability, Ageing and Carers collects information from 3 populations: people with a disability, older people, and people who are their carers. Participants reported whether they had chronic or recurrent pain, or discomfort, and whether or not this limited their activities.

National Hospital Morbidity Database

The data in this report was sourced from the AIHW's National Hospital Morbidity Database (NHMD) from 2006–07 to 2017–18, which covers all (admitted) episodes of care in Australian hospitals. A record is included for each separation, not for each patient, so patients who were admitted to hospital more than once in 1 year have multiple records in the NHMD.

Records where an admission was reported as a transfer from another hospital were excluded to reduce double counting of cases. For more information, please refer to *Admitted patient care 2017–18*, Appendix A: Data Quality Statements at https://www.aihw.gov.au/reports/hospitals/admitted-patient-care-2017-18/ contents/at-a-glance>.

Hospitalisations for chronic pain conditions, especially those caused by musculoskeletal conditions, usually occur only when surgical intervention is required or the condition is severe. Due to this, chronic pain hospitalisations are less frequent than general practice visits (ABS 2017, AIHW 2019a, AIHW 2019b). The following care types were excluded when undertaking the analysis: 7.3 (newborn—unqualified days only), 9 (organ procurement—posthumous) and 10 (hospital boarder).

In this report, chronic pain hospitalisations were defined as those classified in the International Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM) (ACCD 2017) as *chronic pain (R52.2)*. The *Australian Coding Standard (1807)* for *Acute and Chronic Pain* governs how ICD-10-AM codes for chronic pain are assigned to records. Where there is a known underlying cause for chronic pain, the chronic pain code is assigned as an additional diagnosis. Where there is no known cause, chronic pain is assigned as the principal diagnosis. Neoplastic (cancer) pain, neuropathic pain and nociceptive pain are synonymous with chronic pain and classified as *chronic pain (R52.2)*.

Acknowledgments

This report was written by Rosalind Morland, Karen Webber and Stephanie Gordon of the Australian Institute of Health and Welfare. The authors gratefully acknowledge valuable contributions and guidance by the following AIHW staff: Karen Hobson, Katherine Faulks and Richard Juckes. Professor Fiona Blyth of the University of Sydney, Painaustralia and the National Arthritis and Musculoskeletal Monitoring Advisory Group also provided valuable advice: Professor Lyn March (Chair), Professor Flavia Cicuttini, Professor Robert Cumming, Professor Peter Ebeling, Professor Anne Taylor, Ms Pam Webster, Professor Mellick Chehade, Professor Chris Maher, and Professor Paul Hodges. This report was funded by the Australian Government Department of Health.

Glossary

Aboriginal or Torres Strait Islander: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander.

additional diagnosis: The diagnosis of a condition or recording of a complaint—either coexisting with the principal diagnosis or arising during the episode of admitted patient care (hospitalisation). Multiple diagnoses may be recorded.

allied health: Branches of health which are not medicine, nursing or dentistry. Allied health includes (but is not limited to) occupational therapy, optometry, osteopathy, pharmacy, physiotherapy, podiatry, psychology, radiography and speech pathology.

analgesics: Medications that relieve pain.

antipyretics: Medications that reduce fever.

anxiety: A group of mental disorders marked by excessive feelings of apprehension, worry, nervousness and stress.

arthritis: A group of disorders including osteoarthritis and rheumatoid arthritis, for which there is inflammation of the joints—which can then become stiff, painful, swollen or deformed.

dependence: A physical dependence on a substance characterised by withdrawal. It is not equivalent to addiction, though it is often considered to be a stepping stone towards it.

depression: A mood disorder with prolonged feelings of being sad, hopeless, low and inadequate, with a loss of interest or pleasure in activities and often with suicidal thoughts or self-blame.

discharged: When a patient is medically cleared to leave a hospital.

endometriosis: A health condition affecting females where endometrial tissue, or tissue that lines the uterus, grows onto other pelvic tissues where it shouldn't, for example the ovaries or bowel.

Fentanyl: A highly addictive opioid analgesic similar to morphine used for severe pain relief.

fibromyalgia: A condition characterised by general muscle pain across the body, often accompanied by symptoms of fatigue and interrupted sleep.

general anaesthesia: Medically induced coma or loss of consciousness, usually before surgery or other medical procedure.

general practitioner (GP): A medical practitioner who provides primary comprehensive and continuing care to patients and their families in the community.

genetic predisposition: The increased risk of developing a disease given an individual's particular genes.

intervention: A clinical intervention that is either surgical, carries an anaesthetic risk, requires specialised training and/or requires special facilities or services available only in an acute care setting.

migraines: A neurological condition characterised by an intense headache and other sensations such as light sensitivity, visual auras and nausea.

musculoskeletal conditions: One of a group of conditions, along with arthritis and other conditions, that affects the bones, muscles and joints. These other conditions include back pain and problems, juvenile arthritis, osteopenia, osteopenia, osteoporosis (low bone density) and rheumatoid arthritis.

neuropathic pain: Sensation of pain caused by damage or disease of sensory nerves.

non-opioid analgesics: Pain relief medications which do not belong to the opioid class.

non-steroidal anti-inflammatory drugs (NSAIDS): A class of medications that reduces pain and inflammation.

occupational therapy: Interventions aimed to maintain an individual's activities of daily living following trauma or injury through assessment and support.

opioids: A chemical substance that has a morphine-type action in the body. Opioids are most commonly used for pain relief, but they are addictive and can lead to drug dependence.

osteoporosis: A condition that causes bones to become thin, weak and fragile, such that even a minor bump or accident can break a bone.

paracetamol: An antipyretic and analgesic medication frequently used for mild pain relief.

physiotherapy: The treatment or management of physical disability, malfunction, or pain using therapeutic exercises, physical modalities such as massage and hydrotherapy, assistive devices, and patient education and training. Sometimes referred to as physical therapy.

principal diagnosis: The diagnosis established after study to be chiefly responsible for the patient's episode of admitted patient care.

procedure: A clinical intervention that is either surgical, carries an anaesthetic risk, requires specialised training and/or requires special facilities or services available only in an acute care setting.

sedentary: A lifestyle characterised by frequent sitting and physical inactivity.

separation: A hospital separation, or hospitalisation, refers to an episode of admitted patient care which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute to rehabilitation care).

socioeconomic disadvantage: Lack of access to material or social resources affecting an individual's ability to participate to their potential in society. May include factors such as lower income or years of education.

sedation: Medically induced reduction of consciousness and sensations of pain, but not complete loss of consciousness, usually before surgery or other medical procedure.

References

ABS (Australian Bureau of Statistics) 2005. Microdata: Survey of Disability, Ageing and Carers, 2003, CURF. ABS cat. no. 4430.0.30.002. Canberra: ABS. Findings based on AIHW analysis of ABS microdata.

ABS 2012. Microdata: Survey of Disability, Ageing and Carers, 2009, CURF. ABS cat. no. 4430.0.30.002. Canberra: ABS. Findings based on AIHW analysis of ABS microdata.

ABS 2014. Microdata: Survey of Disability, Ageing and Carers, 2012, CURF. ABS cat. no. 4430.0.30.002. Canberra: ABS. Findings based on AIHW analysis of ABS microdata.

ABS 2016. Microdata: Survey of Disability, Ageing and Carers, 2015, Confidentialised Unit Record File. ABS cat. no. 4430.0.30.002. Canberra: ABS. Findings based on AIHW analysis of ABS microdata.

ABS 2017. Survey of Health Care, Australia 2016. ABS cat. no. 4343.0. Canberra: ABS. Findings based on AIHW analysis of ABS microdata.

ACCD (Australian Consortium for Classification Development) 2017. The International Statistical Classification of Diseases and Related Health Problems Australian Modification, 10th Revision, and the Australian Classification of Health Interventions, 10th edn. Tabular list of diseases, and alphabetic index of diseases. Adelaide: Independent Hospital Pricing Authority.

ACSQHC (Australian Commission on Safety and Quality in Health Care) and AIHW (Australian Institute of Health and Welfare) 2018. The third atlas of health care variation. Sydney: ACSQHC.

AIHW 2017. National drug strategy household survey 2016: detailed findings. Cat. no. PHE 214. Canberra: AIHW.

AIHW 2018. Opioid harm in Australia and comparisons between Australia and Canada. Cat. no. HSE 210. Canberra: AIHW.

AIHW 2019a. Admitted patient care 2017–18: Australian hospital statistics. Health services series no. 90. Cat. no. HSE 225. Canberra: AIHW.

AIHW 2019b. National Hospital Morbidity Database, 2017–18. Canberra: AIHW. Findings based on AIHW analysis of NHMD data.

AIHW 2020. ICD-11 Review: Stakeholder consultation report 2019. Cat. no. HWI 31. Canberra: AIHW.

Blyth FM, March LM, Brnabic AJ, Jorm LR, Williamson M & Cousins MJ 2001. Chronic pain in Australia: a prevalence study. Pain 89:127–34.

Breivik H, Collett B, Ventafridda V, Cohen R & Gallacher D 2006. Survey of chronic pain in Europe: prevalence, impact on daily life, and treatment. European Journal of Pain 10:287–333.

Britt H, Miller GC, Bayram C, Henderson J, Valenti L, Harrison C et al. 2016. A decade of Australian general practice activity 2006–07 to 2015–16. General practice series no. 341. Sydney: Sydney University Press.

Butchart A, Kerr EA, Heisler M, Piette JD & Krein SL 2009. Experience and management of chronic pain among patients with other complex chronic conditions. The Clinical Journal of Pain 25:293–298.

Chaparro LE, Furlan AD, Deshpande A, Mailis-Gagnon A, Atlas S & Turk DC 2013. Opioids compared to placebo or other treatments for chronic low-back pain. Cochrane Database of Systematic Reviews 8(8). doi:10.1002/14651858.CD004959.pub4.

Currow DC, Phillips J & Clark K 2016. Using opioids in general practice for chronic non-cancer pain: an overview of current evidence. Medical Journal Australia 204:305–09.

Davies KA, Silman AJ, Macfarlane GJ, Nicholl BI, Dickens C, Morriss R et al. 2009. The association between neighbourhood socio-economic status and the onset of chronic widespread pain: results from the EPIFUND study. European Journal of Pain 13(6):635–40.

Diatchenko L, Fillingim RB, Smith SB & Maixner W 2013. The phenotypic and genetic signatures of common musculoskeletal pain conditions. Nature Reviews Rheumatology 9(6):340–50.

DoH TGA (Australian Government Department of Health Therapeutic Goods Administration) 2018. Prescription strong (Schedule 8) opioid use and misuse in Australia— options for a regulatory response. Canberra: Australian Government. Viewed 03 April 2019, https://www.tga.gov.au/consultation/consultation-prescription-strong-schedule-8-opioid-use-and-misuse-australia-options-regulatory-response>.

DoH TGA 2019. Significant decrease in the amount of codeine supplied to Australians: TGA data analysis. Canberra: Australian Government. Viewed 03 July 2019, https://www.tga.gov.au/media-release/significant-decrease-amount-codeine-supplied-australians.

DoH TGA 2020. Prescription opioids hub: upcoming changes to reduce harm. Canberra: Australian Government. Viewed 17 February 2020, https://www.tga.gov.au/alert/prescription-opioids-hub

Dominick CH, Blyth FM & Nicholas MK 2012. Unpacking the burden: understanding the relationships between chronic pain and comorbidity in the general population. Pain 153:293–304.

Duenas M, Ojeda B, Salazar A, Mico JA & Failde I 2016. A review of chronic pain impact on patients, their social environment and the health care system. Journal of Pain Research 9:457–467.

Eggermont LHP, Leveille SG, Shi L, Kiely DK, Shmerling RH, Jones RN & Bean JF 2014. Pain characteristics associated with the onset of disability in older adults: the maintenance of balance, independent living, intellect, and zest in the Elderly Boston Study. Journal of the American Geriatrics Society 62(6):1007–1016. doi: 10.1111/jgs.12848.

Finan PH, Goodin BR & Smith MT 2013. The association of sleep and pain: an update and a path forward. The Journal of Pain 14(12):1539–52.

Geneen LJ, Moore RA, Clarke C, Martin D, Colvin LA & Smith BH 2017. Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews. Cochrane Database of Systematic Reviews 2017 4(CD011279). doi:10.1002/14651858.CD011279.pub3.

Gerrits MM, van Marwijk HW, van Oppen P, van der Horst H & Penninx BW 2015. Longitudinal association between pain, and depression and anxiety over four years. Journal of Psychosomatic Research 78:64–70.

Hadi MA, McHugh GA & Closs SJ 2018. Impact of chronic pain on patients' quality of life: a comparative mixed-methods study. Journal of Patient Experience. doi:10.1177/2374373518786013.

IASP (International Association for the Study of Pain) 2019. Chronic Pain has arrived in the ICD-11. Washington: International Association for the Study of Pain. Viewed 25 November 2019, https://www.iasp-pain.org/PublicationsNews/NewsDetail.aspx?ltemNumber=8340&navltemNumber=643.

Krebs E, Gravely A, Nugent S, Jensen AC, DeRonne B, Goldsmith ES et al. 2018. Effect of opioid vs nonopioid medications on pain-related function in patients with chronic back pain or hip or knee osteoarthritis pain: the SPACE randomized clinical trial. Journal of the American Medical Assocation. 319(9):872–82.

Lerman SF, Rudich Z, Brill S, Shalev H & Shahar G 2015. Longitudinal associations between depression, anxiety, pain, and pain-related disability in chronic pain patients. Psychosomatic Medicine 77(3):333–341.

Megale RZ, Deveza LA, Blyth F, Naganathan V, Ferreira PH, McLachlan AJ & Ferreira ML 2018. Efficacy and safety of oral and transdermal opioid analgesics for musculoskeletal pain in older adults: a systematic review of randomized, placebo-controlled trials. The Journal of Pain 19(5):475.e1–475.e24. doi: 10.1016/j.jpain.2017.12.001>.

Molton IR & Terrill AL 2014. Overview of persistent pain in older adults. American Psychologist 69(2):197–207.

Nielens H & Plaghki L 2001. Cardiorespiratory fitness, physical activity level, and chronic pain: are men more affected than women? The Clinical Journal of Pain 17:129–37.

Okifuji A & Hare BD 2015. The association between chronic pain and obesity. Journal of Pain Research 8:399-408.

Orhurhu VJ, Pittelkow TP & Hooten WM 2015. Prevalence of smoking in adults with chronic pain. Tobacco Induced Diseases 13(1):17. doi:10.1186/s12971-015-0042-y.

Painaustralia 2019a. National strategic action plan for pain management: evidence base companion document. Canberra: Painaustralia. Viewed 25 November 2019, https://www.painaustralia.org.au/static/uploads/files/evidence-base-companion-document-action-plan-06-06-2019-wfvafzuuposr.pdf.

Painaustralia 2019b. National Pain Strategy. Canberra: Painaustralia. Viewed 25 November 2019, https://www.painaustralia.org.au/static/uploads/files/national-pain-strategy-2011-wfvjawttsanq.pdf.

Painaustralia 2019c. The cost of pain in Australia. Canberra: Deloitte Access Economics. Viewed 10 April 2019, https://www.painaustralia.org.au/static/uploads/files/the-cost-of-pain-in-australia-final-report-12mar-wfxbrfyboams.pdf.

RACGP (Royal Australian College of General Practitioners) 2018. Guideline for the management of knee and hip osteoarthritis. 2nd edition. East Melbourne, Vic: RACGP.

RACP (Royal Australasian College of Physicians) 2009. Prescription opioid policy: improving management of chronic non-malignant pain and prevention of problems associated with prescription opioid use. Sydney: RACP.

Roehrs T, Diederichs C, Gillis M, Burger AJ, Stout RA, Lumley MA et al. 2013. Nocturnal sleep, daytime sleepiness and fatigue in fibromyalgia patients compared to rheumatoid arthritis patients and healthy controls: a preliminary study. Sleep Medicine 14:109–15.

Savvas S & Gibson S. 2015 Pain management in residential aged care facilities. Australian Family Physician 14(4):198–203.

Stubbs B, Binnekade T, Eggermont L, Sepehry A, Patchay S & Schofield P 2014. Pain and the risk for falls in community-dwelling older adults: systematic review and meta-analysis. Archives of Physical Medicine and Rehabilitation 95(1):175–187.e9. doi: 10.1016/j.apmr.2013.08.241.

Treede RD, Rief W, Barke A, Aziz Q, Bennett MI, Benoliel R et al. 2015. A classification of chronic pain for ICD-11. Pain 156(6):1003–7. doi:10.1097/j.pain.000000000000160.

WHO (World Health Organisation) Collaborating Centre for Drug Statistics Methodology 2018. ATC/DDD Index 2019. Oslo: Norwegian Institute of Public Health. Viewed 27 September 2019, <www.whocc.no/>.

Wright LJ, Schur E, Noonan C, Ahumada S, Buchwald D & Afari N 2010. Chronic pain, overweight, and obesity: findings from a community-based twin registry. The Journal of Pain, 11(7):628–635.

© Australian Institute of Health and Welfare 2020

This product, excluding the AIHW logo, Commonwealth Coat of Arms and any material owned by a third party or protected by a trademark, has been released under a Creative Commons BY 3.0 (CC BY 3.0) licence (http://creativecommons.org/licenses/by/3.0/au/). You may distribute, remix and build upon this work. However, you must attribute the AIHW as the copyright holder of the work in compliance with our attribution policy available at http://creativecommons.org/licenses/by/3.0/au/). The full terms and conditions of this licence are available at http://creativecommons.org/licenses/by/3.0/au/).

Suggested citation

Australian Institute of Health and Welfare 2020. Chronic Pain in Australia. Cat. no. PHE 267. Canberra: AIHW.

ISBN 978-1-76054-669-4 (Online)

ISBN 978-1-76054-670-0 (Print)

Any enquiries about copyright should be directed to the Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601, Tel: (02) 6244 1000, Email: <info@aihw.gov.au>.



