Research brief

Hamilton Centre

Chronic pain and integrated care for mental health and substance use disorders

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Chronic non-cancer pain (CNCP), broadly defined as pain persisting beyond the timeframe of normal healing, or more generally, for more than 3 months, is a condition associated with significant socioeconomic and quality-of-life impacts. Regardless of the cause, chronic pain[1] can have a negative impact on mental and physical health, disrupt the ability to undertake everyday tasks, result in a reduction in daily activities, and significantly reduce overall quality of life.

In Australia, chronic pain is common and costly. One in five Australians over the age of 45 experiences chronic pain, with a 67% increase in general practice visits related to chronic pain reported between 2006 and 2016 (1). The cost of chronic pain has been estimated at AUD$73.2 billion, including health system costs, productivity losses, informal care, and aids and modifications; when reduced quality of life was included, the total cost was estimated at $139 billion (2).

Prevalence among people with mental health and substance use disorders

Chronic pain often co-occurs with mental health conditions. People experiencing chronic pain are more likely to experience chronic stress and sleep disturbance (3-5), and are 2.5–10 times more likely to screen positive for anxiety or depressive disorders (1). Depression is one of the most frequently studied conditions among people with chronic pain, with a 2025 systematic review and meta-analysis finding that approximately 40% of adults with chronic pain had clinically significant depression and anxiety. Higher rates of comorbidity were found among women, younger adults, and people who experienced pain in the absence of tissue damage (6).

While most psychiatric disorders have been associated with increased rates of chronic pain, some relationships are more well-studied and understood than others (7, 8). Compared to depression, there has been less research on chronic pain and personality disorders (including borderline personality disorder) and post-traumatic stress disorder (PTSD), and neurodevelopmental disorders such as attention deficit hyperactivity disorder (ADHD). This is despite high levels of psychiatric comorbidity and evidence of overlapping psychological, neurobiological, and genetic mechanisms (8).

Chronic pain is also over-represented among people with substance use disorders. A recent systematic review and meta-analysis found a high prevalence of pain among people seeking or receiving treatment for opioid use disorder (40%-49%) compared with the general population (20.5-31.0%) (9). In a US electronic health record study of 951,533 patients where the overall prevalence of chronic pain was 46.3%, significantly higher rates were reported among people with opioid use disorder (74.7%) as well as sedative use disorder (72.3%), cocaine/amphetamine use disorder (68.1%), cannabis use disorder (64.3%), and alcohol use disorder (58.7%). Both studies also identified a relationship between chronic pain, substance use disorder, and the presence and severity of other mental health conditions such as depression and anxiety (9, 10).

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[1] *For clarity, this brief uses the term "chronic pain" to refer specifically to chronic non-cancer pain (CNCP). It does not address cancer-related pain or pain associated with cancer treatment.*

Women's pain

Research suggests that there are important sex and gender differences in experiences of chronic pain and comorbidity. In experimental studies, women show greater responses to painful stimuli, and live longer with chronic illness than men, including chronic pain conditions such as osteoarthritis, lower back pain, migraine, fibromyalgia (11, 12), and co-occurring conditions such as anxiety and depression (6, 11). While sex hormones are a major focus of investigation in this area, a range of biological and psychosocial factors (including role beliefs, coping strategies, mood, and pain-related expectancies) are likely to contribute to these differences (12).

Despite its prevalence and impacts, chronic pain in women is often associated with delays in diagnosis, under-recognition of symptoms, and disparities in treatment. A recent inquiry conducted by the Victorian Department of Health found that 90% of women reported experiencing pain lasting more than a year, with 54% living with pain every day, and 89% reporting impacts on their mental health. Despite this, 71% reported having their pain ignored, dismissed, or minimised by healthcare professionals, with 52% accessing six or more different services to help manage their pain (13).

Although men have a greater risk overall of opioid use disorder, it has been suggested that the pathway to opioid use disorder for women may be more likely to be through medical treatment than for men (14). A 2024 scoping review examining sex differences in comorbid pain and opioid use disorder found that women have a greater likelihood of persistent opioid use following surgery (15) while women with opioid use disorder are more likely than men to report opioid use for coping with stress, negative emotions, and pain (16). As in the general population, women with OUD are more likely than men to experience co-occurring psychiatric disorders, highlighting the importance of screening and integrated treatment to improve treatment outcomes (17).

Impacts of chronic pain and co-occurring conditions

People with co-occurring chronic pain and mental health conditions often experience poorer functioning, greater disability, higher healthcare use, reduced treatment response, and lower quality of life (18-20). Regardless of whether chronic pain is the primary or secondary diagnosis, its effect on sleep, stress levels, physical activity, and quality of life negatively impacts the ability to maximise recovery and effectively manage chronic conditions in the long term. Despite the importance of integrated treatment, the management of chronic pain is often fragmented among services and providers of varying specialties, and evidence-based treatments are often not readily available (21).

Chronic pain can also complicate substance use disorder treatment. Due to a lack of established guidelines for treating co-occurring chronic pain, treatment for substance use disorder is often prioritised, potentially leaving pain symptoms untreated and increasing the risk of treatment discontinuation and relapse. For example, a US study of 14,449 people receiving opioid dependence treatment found that most participants (66%) reported that their chronic pain was not treated at all, despite half (47%) experiencing severe pain (22). Other research has demonstrated that inadequately managed pain leads to suboptimal opioid treatment outcomes, increased risk for continued opioid use and poor psychiatric functioning (23).

It is important to note that lower socioeconomic status has been associated with an increased risk of chronic pain (24), with Australian research demonstrating that people with chronic pain are more likely to report reduced employment, unemployment for health reasons, or receive a disability pension (1, 25). While there is a lack of research on the intersectionality of sociodemographic factors (26), these add layers of complexity to chronic pain experiences and pose challenges in both treatment access and outcomes.

Treatment

There is increased recognition of the need for more effective treatment for patients with co-occurring conditions and chronic pain. As few studies have examined effective integrated treatment for chronic pain in the presence of co-occurring substance use and other (non-substance-related) mental health disorders, the evidence base to inform practice remains limited. However, the available research supports a common approach, rather than distinct interventions (27).

A transdiagnostic approach to pain involves focusing on addressing the psychological, cognitive, and behavioural mechanisms thought to underlie different diagnoses, rather than treating these separately. Treatments targeting transdiagnostic processes such as avoidant coping, catastrophising, and emotion dysregulation have been found to significantly improve both pain interference and depressive symptoms (28). More recent research has highlighted the relevance of processes such as anxiety sensitivity and emotion dysregulation in co-occurring chronic pain and opioid use disorder (29).

Use of opioids and medicinal cannabis to treat chronic pain

Opioid medications have been increasingly used to treat chronic pain over the past three decades. However, recent systematic reviews have concluded that there is a lack of evidence to support the effectiveness of long-term opioid use in improving pain and function, in addition to an increased risk of adverse outcomes such as increased rates of overdose and opioid dependence (30). The Faculty of Pain Medicine (FPM) of the Australian and New Zealand College of Anaesthetists (ANZCA) recommends considering medications as second-line and using them only as part of a broader multimodal plan focused on function and participation.

Cannabis is also often used to manage chronic pain, despite a lack of data on safety and efficacy. In Australia, over 150,000 approvals were issued for medicinal cannabis in the first five years of legalisation, with pain the most common indication category (61.0% of total approvals) (31). However, the general use of medicinal cannabis for chronic non-cancer pain is not recommended, due to insufficient evidence that it improves outcomes, concerns regarding adverse effects, and the potential for psychiatric harms, particularly among people with current or past psychotic disorders, anxiety disorders, or substance use disorders.

Resources

- ANZCA Faculty of Pain Medicine (FPM)
- ANZCA: Patient resources for pain management
- Pain Australia resources: 1) Fact sheet on self-managing chronic pain 2) Support groups & helplines
- Australian Prescriber: Prescribing wellness: comprehensive pain management outside specialist services
- Alcohol and Drug Foundation: Living with chronic pain
- Opioid safety toolkit: Your comprehensive guide to safer opioid use when taking opioids for pain relief
- Chronic Pain Australia: The national consumer peak body representing Australians living with chronic pain

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