Research brief

Adult ADHD and substance use

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Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental condition characterised by clinically significant difficulties with attention and/or hyperactivity and impulsivity. Among children and adolescents, it is one of the most common conditions worldwide (1). While originally thought to resolve by young adulthood, it is now recognised that ADHD often persists into adulthood, affecting between 2-6% of the population (2). In Australia, it has been estimated that at least 800,000 people live with ADHD, including 281,200 children and adolescents and 533,300 adults (3).

Clinical manifestations of ADHD in both adolescents and adults include inattention, difficulties with task completion, disorganisation, and executive dysfunction. For those diagnosed in childhood, hyperactivity tends to subside in adulthood, although many still report inner restlessness. Adult impulsivity can present as edginess, shopping sprees, quitting jobs, and risky behaviours (4).

Despite increasing recognition over the past two decades, ADHD frequently goes undetected in adults. Untreated ADHD is associated with a range of adverse outcomes, including higher rates of academic failure, workplace difficulties, financial problems, family and interpersonal conflict, injuries and accidents, and contact with the criminal justice system. In 2019, the costs of untreated ADHD in Australia were estimated at $20.42 billion per year (3).

ADHD and substance use disorder

The rate of psychiatric comorbidity among adults with ADHD has been estimated at three to seven times that of the general population (5). A 2022 systematic review found that the most frequent comorbid disorder among adults with ADHD was substance use disorder, followed by mood disorders, anxiety disorders, and personality disorders (6). Similarly, a 2023 meta-analysis found that approximately one out of five people in treatment for substance dependence also had ADHD (7).

Co-occurring substance use disorder can complicate the diagnosis of ADHD and worsen prognosis. ADHD is a risk factor for earlier initiation and progression of substance use, which can reflect shared vulnerabilities in impulsivity and reward processing. In addition, untreated or missed comorbidity in childhood and adolescence - such as conduct disorder - can be associated with SUD. When ADHD and substance use disorder co-occur, both conditions tend to be more severe and earlier in onset, with higher rates of polydrug use, suicidality, hospitalisation, and poorer treatment adherence, which worsens overall prognosis (8).

Diagnosis and treatment of ADHD

When accurately diagnosed, ADHD is highly treatable. The first Australian Evidence-based Clinical Guidelines for Attention Deficit Hyperactivity Disorder (ADHD) were published in 2022, and provide evidence-based recommendations for diagnosis and treatment. A Consumer Companion guide has also been developed to make the information in the Guidelines more accessible for individuals with ADHD, their families, and other stakeholders without a clinical background.

Psychoeducation is an essential initial approach. The first line medication treatment is stimulant medication, with non-stimulant medication recommended when stimulants are contraindicated, not effective, or poorly tolerated. There is less evidence for non-pharmacological treatments in reducing core ADHD symptoms, with a 2025 meta-analysis of pharmacological and non-pharmacological interventions finding that only stimulants and the non-stimulant atomoxetine were effective (9). The same study found that ADHD medications had no significant effects on broader outcomes, such as quality of life (9).

However, the interpretation of these findings has since been questioned, as when clinician-reported outcomes were considered separately (rather than combined with self-report), a number of non-pharmacological treatments demonstrated similar or greater effects than pharmacological treatments (10). Non-pharmacological interventions can reduce the impact of core ADHD symptoms, improve broader aspects of functioning, and cognitive-behavioural interventions play an important role in addressing co-occurring conditions for people with ADHD. The Australian Guidelines recommend that these interventions be tailored to meet the specific needs of people with ADHD, including environmental and behavioural modifications to promote a positive and structured environment, and reduce the negative impacts of ADHD symptoms on daily life (11).

Treatment considerations for people with co-occurring substance use disorder

While ADHD can be diagnosed in people who are still actively using substances (12), comprehensive assessment and continuity in treatment are critical. ADHD is rarely the sole presenting complaint among people seeking treatment for substance use problems, and symptoms such as agitation, impulsivity, concentration difficulties, and restlessness can be caused – or suppressed – by drug intoxication and withdrawal. Diagnosis should include a thorough investigation of current symptoms using diagnostic instruments, collateral history, including a thorough developmental history with elements from childhood, family history, educational and occupational history, and examinations for comorbidities and differential diagnosis (13).

Several screening tools have been validated for use in adults with co-occurring ADHD and SUD, including the Adult ADHD Self-Report Scale (ASRS), Conners' Adult ADHD Rating Scale (CAARS), and the Wender Utah Rating Scale (WURS). However, in complex clinical populations, there can be high rates of false positives, and when screeners are used in isolation without taking a thorough history, they can lead to misdiagnosis if not used carefully.

Screening should be followed by a structured diagnostic interview, such as the Diagnostic Interview for ADHD in adults (DIVA)(13). There may be additional challenges in obtaining collateral information on current and childhood symptoms for people who experienced disrupted or adverse childhoods or family estrangement. Wherever possible, this should be obtained from previous reports and assessments to support developmental history, with particular attention to symptom presence during substance-free periods (13).

Integrated treatment, where ADHD and substance use disorder are treated concurrently, is recommended for people with co-occurring disorders. The Australian Guidelines note that while the start of pharmacological or non-pharmacological treatment for ADHD should not be delayed for people with co-occurring substance use disorder, in most cases, clinicians should first start treatment aimed at treating substance use disorders, with a target of abstaining from or reducing and stabilising substance use(14). A combination of pharmacological and cognitive-behavioural based interventions is also recommended (11, 13). Structured and adapted psychotherapies, such as motivational enhancement, CBT, and/or contingency management can be beneficial, in addition to psychoeducation of patients and family members (8).

More broadly, ethical concerns have been raised about the rapid increase in single-session online ADHD assessment clinics in Australia (15). A key concern is that, for any patient, it is rarely possible to conduct a comprehensive assessment within a single session. In addition, recognition of comorbid disorders is essential to effectively manage adult ADHD (4), and ongoing treatment is required to monitor treatment response and manage medication side effects. Single-session clinics are unable to provide comprehensive longitudinal assessment or continuity of care, and risk misattributing symptoms of complex psychosocial issues to ADHD without adequate exploration of underlying causes (15).

The changing treatment landscape in Australia

In most Australian states and territories, adults seeking an ADHD diagnosis have been required to first see a psychiatrist for assessment and initiation of treatment. Due to a lack of public services for ADHD, most are diagnosed by private psychiatrists, often facing long waiting lists and significant costs in order to be assessed. This raises concerns regarding equity of access for adults in greatest need of treatment (15). Concerns have been raised about disproportionate rates of diagnosis among people who have the organisational skills and financial resources to receive a formal diagnosis, while excluding people who do not have the means or resources to access private psychiatry (15).

As part of broader efforts to address increasing demand for treatment, long wait times for specialists, and access challenges in regional areas, multiple Australian states have recently granted general practitioners (GPs) the authority to formally diagnose and manage ADHD following specialist training. Supported by the RACGP, these reforms began to come into effect in 2025 and continue to be implemented nationally.

Risks of stimulant medication for people with substance use disorders

While the benefits of treating ADHD are generally believed to outweigh potential risks, these risks have not been well-characterised for adults with substance use disorders. Longer-term exposure to ADHD medication has been associated with an increased risk of cardiovascular diseases (16), and people with substance use disorders may be at increased risk of cardiovascular events associated with prescription stimulants (17).

However, there has been limited research on these outcomes in people with substance use disorders specifically. In addition, most studies of psychostimulants for the treatment of ADHD have been short-term, with less research examining their long-term effects on dopamine transmission, ADHD symptoms, and functional outcomes (8).

The prescription of stimulants to adults with co-occurring substance use disorders remains controversial due to the risk of misuse and diversion with these medications; there is less risk with non-stimulant options (18). Although stimulants can be an effective treatment for this group, particularly at higher doses, clinicians are often reluctant to prescribe them for this reason (13). Caution is needed when prescribing stimulants among high-risk populations; however, risks can be reduced by close monitoring, discussing safe storage of medications with patients, and use of longer-acting formulations and prodrugs (as immediate-release stimulants are more commonly diverted)(11, 13, 18).

More broadly, there is increasing concern about the use of stimulant medications to treat ADHD in Australia, with evidence of rising prescription stimulant poisoning over the past decade (19, 20). This correlates with an increase in the prevalence of medicine use for ADHD among adults in Australia in recent years. Between 2011-2012 and 2023-2024, the rate of medicine use among people with ADHD increased from 7 per 1000 to 57 per 1000, with psychostimulants accounting for 84% of the prescriptions dispensed in 2023-2024 (21).

The Royal Australian and New Zealand College of Psychiatrists (RANZP) recommend that a universal precautions approach should be routinely applied when prescribing stimulants for the treatment of adult ADHD (14). Originally developed to guide safe opioid prescribing for chronic non-cancer pain, this approach treats every patient as potentially at risk of developing dependence on regulated medications, and aims to improve patient care and reduce harms without increasing stigma.

Applied to all adults with ADHD for whom stimulants are being considered, this approach highlights the value of continuity of care with the treating practitioner and suggests careful diagnosis and consideration of comorbidities, baseline risk stratification, informed consent processes, treatment agreements, periodic reassessments of treatment response, and documentation and regular reviews of benefits versus harms (4).

Resources

- Australian Evidence-based Clinical Guidelines for Attention Deficit Hyperactivity Disorder (ADHD)
- Consumer Companion – developed to make the information in the Australian Guideline more accessible for individuals with ADHD, their families, and other stakeholders
- ADHD resources – Australian ADHD Professionals Association (AADPA)
- RACGP ADHD training for GPs

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