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Australian Evidence-Based Clinical Guideline for ADHD

Summary of Recommendations

Summary of recommendations

Interpreting the guideline recommendations

In developing the recommendations in this guideline, evidence was assessed alongside multidisciplinary health professional expertise and consumer perspectives. There are four key elements of each recommendation:

- type
- wording
- certainty of evidence (for evidence-based recommendations)
- grade (strength) of recommendation (for evidenced-based recommendations).

Recommendation type is either evidence-based (EBR) or clinical consensus recommendation (CCR). In addition, clinical practice points (CPP) were included for implementation issues such as safety, side effects and risks (Table 1). For CCRs and CCPs certainty/strength and grade ratings are not applicable (NA).

Table 1. Recommendation types

EBR	Evidence-based recommendation: a structured/systematic evidence review was performed to answer a prioritised question to inform the recommendation.
CCR	Clinical consensus recommendation: recommendation was developed in either of the following ways: Evidence to answer a prioritised question was sought, but there was insufficient evidence to inform an EBR. Therefore, a narrative review was prepared by an expert subgroup of the guideline development group (GDG) (see Table 5 and Methods for more information about the narrative review approach). For questions of lower priority, or where high-quality evidence is known to be limited or non-existent, evidence was not sought and an expert subgroup within the GDG prepared a narrative review.
CPP	Clinical practice point: guidance based on expert opinion and clinical experience, provided on important issues arising from discussion of evidence-based or clinical consensus recommendations, outside the scope of the evidence-finding process.

Recommendation wording reflects the guideline development group's (GDG's) overall interpretation of the evidence and other considerations. The word 'should' indicate the GDG's judgment that the benefits of the recommended action exceed the harms. 'Could' indicates that the quality of evidence was limited, or the available studies did not clearly demonstrate advantage of one approach over another, or the balance of benefits to harm was unclear. 'Should not' indicates either a lack of appropriate evidence, or that the harms were judged to outweigh the benefits.

Certainty of evidence (very low to high) for EBRs reflects the quality and relevance of the evidence, based on information about the number and design of studies addressing the outcome, judgments about the quality of the studies and/or synthesised evidence, across risk of bias, inconsistency, indirectness, imprecision, and any other quality considerations; key statistical data; and classification of importance of outcomes (see Table 2).

Summary of recommendations

Table 2. Certainty of the evidence leading to the recommendation for Evidence Based Recommendations

Certainty	
⨁⨁⨁⨁ **HIGH**	We are very confident that the true effect lies close to that of the estimate of the effect.
⨁⨁⨁◯ **MODERATE**	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
⨁⨁◯◯ **LOW**	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.
⨁◯◯◯ **VERY LOW**	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

The grade (strength) of EBRs (strong recommendation or conditional recommendation; Table 3) was determined by the GDG based on comprehensive consideration of all elements of the evidence to decision framework (National Health and Medical Research Council, 2009) including: desirable and undesirable effects, balance of effects, resource requirements, equity, acceptability, and feasibility (see Methods).

Table 3. Strength (grade) of recommendations for Evidence Based Recommendations

Strength (grade)	
****	Strong recommendation for the option
***	Conditional recommendation for the option
**	Conditional recommendation for either the option or the comparator
*	Conditional recommendation against the option

This guideline integrates a summary of the clinical need for guidance on each topic, the clinical question, the evidence summary (systematic and/or narrative), the recommendation or practice points and a justification developed by the GDG. The full evidence reviews, narrative reviews and GRADE frameworks supporting each recommendation, when relevant, can be found in the supplementary Technical Report, along with voting to reflect degree of consensus (voting results available upon request).

Recommendations

The following recommendations should be read in conjunction with the Principles and Assumptions section, which provides information about requirements for clinicians implementing these recommendations.

No	Type	Recommendation	Strength	Certainty
1	**Identification**			
1.1	**High risk groups**			
1.1.1	**EBR** **#CCR**	Clinicians should be aware that the following groups of children, adolescents, and adults, have an increased prevalence of ADHD, compared with the general population: **Children:** • in out of home care • diagnosed with oppositional defiant disorder or conduct disorder# **Children and adolescents:** • diagnosed with anxiety disorders • with epilepsy • with a history of substance abuse# **Adults:** • with any mental health disorder (including substance use disorders, borderline personality disorder, intermittent explosive disorder, internet addiction, psychotic disorders, binge eating disorder#, gambling disorder#) • who experience suicidal behaviour or ideation **People of all ages:** • with neurodevelopmental disorders including autism spectrum disorder, intellectual disability, tic disorders, language disorders# and specific learning disorders# • born preterm • with a close family member diagnosed with ADHD# • born with prenatal exposure to substances including alcohol and other drugs# • with acquired brain injury# • who are imprisoned# • with low birth weight# • with anxiety, depressive or bipolar and related disorders# • with sleep disorders# # Indicates a clinician consensus recommendation (CCR)	****	⊕⊕◯◯ LOW to ⊕⊕⊕⊕ HIGH

1.1.2	**CPP**	Clinicians should be aware that ADHD could be under-recognised in girls and women and that they: • are less likely to be referred for assessment for ADHD • may be more likely to have undiagnosed ADHD • may be more likely to receive an incorrect diagnosis of another mental health or neurodevelopmental disorder, such as an anxiety or depressive disorder	Not Applicable (NA)	Not Applicable (NA)
1.2	**Screening and identification**			
1.2.1	**CCR**	Universal screening for ADHD should not occur at the population level (e.g., in preschools, primary and secondary schools).	NA	NA
1.2.2	**CPP**	Organisations that provide services to people from high-risk groups could consider systematic screening for ADHD. Screening could involve use of a screening questionnaire, asking questions during clinical interviews or performing observations.	NA	NA
1.2.3	**CCR**	Clinicians conducting mental health/psychiatric diagnostic assessments with people from high-risk groups (as identified in high-risk groups recommendations 1.1.1) could screen for ADHD.	NA	NA
1.2.4	**CPP**	Screening for ADHD in high-risk groups should occur when the person: • does not respond to treatment for high-risk condition as expected, or is unable to adhere to their treatment protocol • often has difficulty attending appointments on time or forgets appointments, show signs of ADHD symptoms such as restlessness, difficulty maintaining routines, lack of time awareness, poor working memory, disorganisation, forgetfulness, and distraction that: • are not explained by other psychiatric diagnoses • have resulted in, or are associated with, clinically significant psychological, social and/or educational or occupational impairment.	NA	NA
1.2.5	**CCR**	Individuals who screen positive should undergo further diagnostic assessment for ADHD.	NA	NA
2	**Diagnosis**			
2.1	**Diagnosis**			
2.1.1	**CPP**	Clinicians conducting diagnostic assessments should be: • appropriately registered (such as with Australian Health Practitioner Regulation Agency) (see Principles and Assumptions section) • adequately trained in diagnostic assessment using the Diagnostic and Statistical Manual of Mental Disorders (DSM) and/or International Classification of Diseases (ICD) • experienced with conducting clinical interviews, administering – and interpreting standardised rating scales, and assessment of functional impairment • experienced in ADHD diagnostic assessment or undergoing ADHD-specific supervision with an experienced clinician.	NA	NA

2.1.2	**CCR**	Assessment for diagnosis of ADHD should include all the following: • a full clinical and psychosocial assessment, including discussion about the person's symptoms and strengths and how these present in the different domains and settings of the person's everyday life • a full developmental, mental health and medical history • observer reports and assessment of the person's symptoms and mental state • a medical assessment to exclude other causes of the symptoms and identify any associated disorders that also require investigation, intervention, and support. Medical investigations should only be performed if clinically indicated.	NA	NA
2.1.3	**CCR**	In an assessment for a diagnosis of ADHD, a clinician should assess symptoms and signs of hyperactivity/impulsivity and/or inattention and ensure all the following apply: • symptoms meet the diagnostic criteria in DSM-5, ICD-10 (hyperkinetic disorder) or ICD-11 • symptoms cause clinically significant psychological, social and/or educational or occupational impairment based on interview, questionnaire and/or direct observation in multiple settings (including school for those in educational settings) • symptoms are pervasive, occurring in two or more important settings including social, familial, educational and/or occupational settings. • symptoms are assessed in the context of the person's age, developmental level, and intellectual ability • include an assessment of the person's needs, functional impairments, participation, and quality of life • include an assessment of possible differential conditions or co-occurring physical and mental health/neurodevelopmental disorders, social, familial, and educational or occupational circumstances and physical health • include an assessment of the person's strengths, and factors the person may have identified that minimise symptoms or their impact • for children and adolescents, enquire about family functioning and parents' or carers' mental health, to enable provision of support for parents/carers at the time of diagnosis.	NA	NA
2.1.4	**CCR**	A diagnosis of ADHD should not be made solely based on rating scales or observational data. However, rating scales assessing ADHD symptoms (See Box 2 for examples) are valuable adjuncts to the assessment process.	NA	NA
2.1.5	**CCR**	Observations from more than one setting and reporter (e.g. a teacher, in the case of children) should be used to confirm if symptoms, function and participation difficulties occur in more than one setting.	NA	NA
2.1.6	**CCR**	ADHD should be considered as a possible diagnosis in all age groups, including adults over age 65 years. Symptom criteria should be considered based on age and developmental level.	NA	NA

2.1.7	**CPP**	Clinicians should consider the different presentations of ADHD and the fact that many children and adults may not present with the most visible symptoms of hyperactivity/impulsivity. Clinicians should be aware that inattentive symptoms may not be identified until secondary school (or later), following increased demands for organisation and independent study or work. Clinicians should also be aware that people may have developed compensation strategies that may mask symptoms.	NA	NA
2.1.8	**CPP**	The views of people with ADHD, including children and adolescents, should be considered when determining the importance of their symptoms and limitations.	NA	NA
2.2	**Co-occurring conditions and differential diagnosis**			
2.2.1	**CCR**	As ADHD commonly co-occurs with other medical and neurodevelopment/mental health conditions (see recommendations 1.1.1, 1.1.2), the diagnosis of ADHD should prompt consideration of the presence of other conditions, including those noted in high-risk groups recommendation 1.1.1. Clinicians should be aware that some conditions, such as substance use, anxiety and depressive disorders, may be a consequence of undiagnosed and/or untreated ADHD.	NA	NA
2.2.2	**CCR**	Clinicians should conduct a comprehensive assessment (including history and examination) to identify: • factors that could present similarly to, or exacerbate, ADHD symptoms, such as: ◦ hearing or vision impairment ◦ thyroid disease ◦ anaemia ◦ other conditions as noted in recommendation 1.1.1 • medications that may have psychomotor side effects such as: ◦ cognitive dulling (e.g. mood stabilisers) ◦ psychomotor activation (e.g. decongestants, asthma medication, non-prescribed stimulants like caffeine).	NA	NA
2.2.3	**CPP**	Treatment for any co-occurring conditions should be offered. Treatment approaches for co-occurring conditions should follow best-practice guidelines for each co-occurring condition, but with treatment delivery methods adjusted to account for ADHD symptoms. For example: • using strategies to increase adherence to medications (see 5. Pharmacological interventions) and non-pharmacological treatment (see 4. Non-pharmacological interventions) • providing information to people with ADHD based on strategies identified in 5.8.2 • being aware of the impacts of attention and hyperactivity/impulsivity symptoms, on the ability to attend and participate in treatment sessions and complete tasks outside of session.	NA	NA

2.3	Information needs after the diagnosis of ADHD			
2.3.1	**CCR**	During the diagnostic process and ongoing treatment and support, clinicians should provide the person or their carers with education and information on the causes and potential consequences of ADHD and evidence-based treatments, in a way that instils hope and motivation. Both positive and negative impacts could be discussed, as appropriate, including information about: • understanding of the symptoms of ADHD • identifying and building on individual strengths • common difficulties that may affect ADHD symptoms or result from them, such as regulating emotions and switching attention when required, accurately perceiving time, and initiating tasks that are not engaging (even when the importance of a task is understood) • severity of ADHD symptoms and associated impairments, which may vary due to many factors such as stress or personal interest • treatment and support of ADHD when a person has a co-occurring mental health or neurodevelopmental disorder • secondary impacts of ADHD such as learning difficulties, anxiety, sleep disorders, oppositional symptoms, depression, and reduced self-esteem • environmental modifications that can be made to help to the person function to meet their own realistic goals • educational and occupational issues and rights to reasonable adjustments at school, university and in the workplace • possible negative impacts of receiving a diagnosis, including stigma and labelling • possible increased risk of self-medicating • increased risks of substance misuse • impacts on driving when ADHD is not treated • possible impacts on relationships.	NA	NA
2.3.2	**CCR**	Clinicians should inform people receiving a diagnosis of ADHD (and their families or carers as appropriate) about: • local and national support groups and voluntary organisations (also known as consumer groups) • up-to-date, reliable, and reputable websites • support for education and employment • eligibility for disability support • eligibility for government benefits and allowances, including Carer Allowance provisions People who have had an assessment, but whose symptoms and impairment do not meet criteria for a diagnosis of ADHD, may benefit from similar information.	NA	NA
2.3.3	**CPP**	Clinicians should provide information to people with ADHD (and their families and carers, as appropriate) in a form that is tailored to: • their developmental and reading level, cognitive profile, emotional maturity, and cognitive capacity, considering any learning disabilities, sight or hearing problems, delays in language development or social communication difficulties • any co-occurring neurodevelopmental and mental health conditions • their individual needs and circumstances, including age, gender, culture, educational level and life stage.	NA	NA

2.3.4	**CPP**	Information provided by clinicians should be: • in plain language, clearly presented and free of jargon • culturally appropriate and available in the person's first language • multimodal, taking into consideration different information processing preferences and needs • non-judgemental, inclusive, affirming and focused on personal empowerment. Clinicians should: • be aware that smaller, more manageable chunks of information are easier to remember, and that visual aids or pictures can be useful • encourage questions • ensure that information is consistent and up to date • be aware that information will need to change over time as circumstances change • provide a written copy of any information provided verbally (e.g. copy of the diagnosis report) • verify that the information provided has been understood.	NA	NA
2.3.5	**CPP**	Clinicians should encourage parents/carers/siblings/partners to monitor their own wellbeing, develop a support network, and seek guidance and support if facing challenges.		NA
2.3.6	**CPP**	Clinicians should explain to parents and carers that a recommendation of parent/family training is to optimise parenting skills to meet the additional parenting needs of children and adolescents with ADHD, and does not imply bad parenting.		NA
2.3.7	**CPP**	Clinicians and educators supporting a person with ADHD should discuss whether the person would like to share information about their ADHD and care with other professionals or service providers (e.g. educators, employers, or sporting groups), where such information-sharing will better enable them to support the person with education, employment, community activities or other roles. Consent to share information may be relevant at the time of the ADHD diagnosis, when symptoms change, or when there is transition between settings (e.g. between schools or from primary school to secondary school or to tertiary studies). Information to provide could include: • the symptoms of ADHD and how symptoms are likely to affect the person in the relevant setting • the presence of other co-occurring conditions (e.g. learning disorders) that require adjustments in the setting • the treatment plan • identified special needs, including advice for reasonable adjustments and environmental modifications within the setting (e.g. small groups or individualised learning; see 4. Non-pharmacological interventions) • the value of open channels of communication between education/ workplace/community settings and clinicians.	NA	NA

2.3.8	**CPP**	When a person with ADHD has another co-occurring condition that is being treated, their clinician should offer to contact the relevant other involved clinicians, with consent, to explain: • the validity, scope and implications of a diagnosis of ADHD • how ADHD symptoms are likely to affect the person's daily life (e.g. organisation, time management, motivation) and adherence to specific treatments • the treatment plan and the value of open channels of communication between clinicians.	NA	NA
3	**Treatment and support**			
3.1	**Multimodal treatment and support**			
3.1.1	**CPP**	Clinicians should offer multimodal treatment and support. Clinicians should explain to people with ADHD and their families/ parents/carers: • that the components of multimodal treatment for ADHD include non-pharmacological interventions as described in Chapter 4 and pharmacological interventions as described in Chapter 5 • that pharmacological treatment is most effective in reducing core ADHD symptoms and that non-pharmacological treatments provide additional support to minimise the daily impact of ADHD symptoms and associated difficulties • the typical benefits, adverse effects, efficacy, treatment length, and time taken before symptom or functional improvements occur for each mode of treatment. The treatment plan and sequence of treatments should accommodate the person's preferences, unique needs and individual goals, and take into consideration their personal strengths and the impact of any co-occurring conditions.	NA	NA
3.1.2	**CPP**	Clinicians should suggest that people with ADHD use pharmacological and non-pharmacological treatments concurrently, unless: • ADHD symptoms are likely to be adequately supported by only one mode of treatment • the severity of ADHD symptoms necessitates pharmacological treatment as the first-line treatment, to reduce symptoms as quickly as possible, and enable later engagement in non-pharmacological treatment, if needed. • one mode is more accessible than the other, based on cost, location, and service availability including waiting times to access services	NA	NA
3.1.3	**CPP**	When there are multiple clinicians and/or educators involved, clinicians should suggest that a care coordinator is appointed. A person with ADHD or a family member may choose to take on this role. If not, the person with ADHD should be supported to arrange an appropriate care coordinator, who could be a clinician from their support team.	NA	NA

3.2	**Transition between services**			
3.2.1	**CCR**	People who require ongoing care should receive support to transition between services, including transitions between different services and between tiers of the health system (e.g. from paediatric services to adolescent services, or between youth and young adult services to general adult services). Clinicians should identify such people early (e.g. at least 12 months before their 18th birthday for those transitioning to adult services), to allow appropriate planning to occur in advance.	NA	NA
3.2.2	**CCR**	Transition of care between services for each person should be coordinated. This is best achieved through the identification of an appropriately trained transition lead within the team.	NA	NA
3.2.3	**CCR**	Transitions should take place with appropriate collaboration between the person with ADHD, their family/carers, and other stakeholders, and should be holistic and include education and support.	NA	NA
4	**Non-pharmacological interventions**			
4.1	**Lifestyle changes**			
4.1.1	**CPP**	Clinicians should offer guidance on lifestyle factors to help people with ADHD, including: • asking about sleep and offering strategies and/or a referral to assist with sleep, if needed • asking about diet and physical activity levels, and offering strategies and/or referral to assist with any challenges, if needed.	NA	NA
4.2	**Parent/Family Training**			
	Young children (under 5 years of age)			
4.2.1	**EBR**	Parent/family training should be offered to parents/families of young children with ADHD.	****	⊕⊕◯◯ LOW to ⊕⊕⊕◯ Moderate
	Children and adolescents (aged 5 to 17 years)			
4.2.2	**EBR**	Parent/family training should be offered to parents/families of children with ADHD.	***	⊕⊕◯◯ LOW
4.2.3	**EBR**	More intensive parent/family training programs should be offered to parents/families of children with ADHD who have co-occurring oppositional defiant disorder or conduct disorder.	****	⊕⊕⊕◯ Moderate

	Considerations for Parent/family training			
4.2.4	**CCR**	Parent/family training should be delivered in individual and/or group format, depending on the availability of services and parent/family preference, and should be delivered to all parents/carers involved in the care of an individual child, where feasible.	NA	NA
4.2.5	**CPP**	Parent/family training should be provided with sensitivity and awareness of the stigma and misunderstandings that parents/carers of children with ADHD may have experienced.	NA	NA
4.2.6	**CPP**	Parent/family training should be specific to the needs of parents/ families with children with ADHD. A focus on individual strengths, values and interests should be balanced with any focus on challenges, for both the parent/carer and child. One or more of the following components should be included: • education and information on the causes of ADHD and impacts on functioning • environmental modifications to promote a positive, predictable and structured environment, and to reduce impacts of ADHD symptoms • behaviour modifications to help minimise the impact of symptoms and impairments associated with ADHD • information on positive parenting approaches. *Further guidance on intervention components for an ADHD-specific intervention can be found in Box 4.*	NA	NA
4.2.7	**CPP**	Clinicians delivering parent/family training should be aware of the capabilities of the parent/carer themself, and ensure the intervention addresses any challenges or barriers the parent/carer may experience. Additional treatment needs of the parent/carer may include: • grief and adjustment to their child's diagnosis • adjustment of interpersonal dynamics within the family • management of multiple family members' needs • emotion-regulation, resilience and self-care • ADHD, mental health conditions, language and learning disorders • skills and confidence for advocating for their child.	NA	NA
	Cognitive-behavioural interventions			
	Children and adolescents aged 5 to 17 years			
4.2.8	**EBR**	Cognitive-behavioural interventions could be offered to children with ADHD.	***	⊕⊕◯◯ LOW
4.2.9	**EBR**	Cognitive-behavioural interventions should be offered to adolescents with ADHD.	***	⊕⊕◯◯ LOW

4.2.10	**CPP**	Clinicians delivering cognitive-beha vioural interventions to children and adolescents should consider the developmental capabilities of the person, including their capacity to self-reflect and their awareness of, and ability to influence, their thinking processes. Younger children may benefit from a foundational focus of emotional literacy, proactive help-seeking, problem-solving and self-esteem growth, whilst children approaching adolescence may benefit from simple behavioural techniques. Through adolescence, increasingly sophisticated behavioural and cognitive restructuring techniques may be of benefit.	NA	NA
	Adults (aged 18 years and above)			
4.2.11	**EBR**	Cognitive-beha vioural interventions should be offered to adults with ADHD.	****	⊕⊕◯◯ LOW
	Considerations – Cognitive-behavioural interventions			
4.2.12	**CCR**	Cognitive-beha vioural interventions could be delivered in an individual or group format, depending on the availability of services and person's/ family's preference. Group sessions may be particularly beneficial due to the opportunity for social support. Individual sessions may be required to address individual needs comprehensively. If cognitive-beha vioural interventions are accessed by children and adolescents with ADHD, they should be provided alongside parent/ family training. Parents should also be involved in the cognitive-behavioural intervention delivered to a child or adolescent to an extent that allows for support with implementation of the intervention.	NA	NA
4.2.13	**CPP**	Cognitive-beha vioural interventions should be specific to the needs of people with ADHD. A focus on individual strengths, values and interests should be balanced with any focus on challenges. One or more of the following components should be included: • education and information on the causes and impacts of ADHD • environmental modifications to promote a positive, predictable and structured environment, and to reduce negative impacts of ADHD symptoms • behaviour modifications to help minimise the impact of symptoms and impairments associated with ADHD • psychological adjustment and cognitive restructuring *Further guidance on intervention components can be found in Box 4.*	NA	NA
4.6	**ADHD Coaching**			
	Adolescents (aged 13 to 17 years)			
4.3.1	**CCR**	ADHD coaching could be considered as part of a treatment plan for adolescents with ADHD.	NA	NA
	Adults (18 and above)			
4.3.2	**CCR**	ADHD coaching could be considered as part of a treatment plan for adults with ADHD.	NA	NA

	ADHD coaching considerations			
4.3.3	**CPP**	Elements of coaching could be provided by appropriately credentialled* ADHD coaches and allied health professionals for people with ADHD. *Such as membership with the International Coaching Federation	NA	NA
4.8	**Non-pharmacological adherence**			
4.4.1	**CPP**	Clinicians should support adherence to non-pharmacological treatments by discussing the following with the person with ADHD and/or their parents/caregivers or family: • potential benefits of intervention, including the opportunity to develop lifelong skills in reducing the impact of ADHD symptoms, and the opportunity to improve self-esteem, mental health and broader wellbeing • time required to complete a sufficient duration of intervention to assess the benefits • likely costs involved and funding considerations, such as Medicare rebates • options for changing intervention providers, should the person wish to do so.	NA	NA
5	**Pharmacological interventions**			
5.1	**Starting and managing pharmacological treatment**			
5.1.1	**CPP**	Clinicians initiating medication for ADHD should: • ensure they are familiar with the pharmacokinetic profiles of all the short- and long-acting pr eparations available for ADHD • ensure that treatment is tailored effectively to the individual needs of the child, adolescent or adult • take account of variations in bioavailability or pharmacokinetic profiles of different preparations to avoid reduced effect or excessive adverse effects • take account of pharmacodynamic interactions with other prescribed medications • explain to the person with ADHD or their parents/family/carers that sometimes when a person starts taking ADHD medication that reduces symptoms, they become aware of how severe their untreated symptoms were, and prepare them for this awareness • explain that medication reduces symptoms but rarely reduces them completely, therefore, it is important to have realistic expectations and ensure medication is only one part of a person's treatment and support plan.	NA	NA

5.1.2	**CPP**	Before starting medication for ADHD, a comprehensive assessment should include: • confirmation that ADHD diagnostic criteria are met (see recommendations 2.1.1, 2.1.2) • evaluation of current educational or employment circumstances • risk assessment for substance misuse and drug diversion • assessment of physical health, including: ◦ a medical history, considering disorders that may be contraindications for specific medications ◦ current medication ◦ height and weight (measured and recorded against the normal range for age and sex) ◦ a cardiovascular assessment, including baseline heart rate and blood pressure (measured with an appropriately sized cuff and compared with centile for age and height). Note: An electrocardiogram (ECG) is not needed before starting stimulants, atomoxetine or guanfacine, unless the person has any of the features listed in recommendation 5.1.3 or a co-occurring condition that is being treated with medications that may pose an increased cardiac risk.	NA	NA
5.1.3	**CCR**	People with ADHD should be referred for a cardiology opinion before commencing stimulant medication if any of the following is present: • a history of congenital heart disease or previous cardiac surgery • a history of sudden death in a first-degree relative under 40 years suggesting a cardiac disease • shortness of breath on exertion, compared with peers • fainting on exertion • palpitations that are rapid, regular and start and stop suddenly • chest pain suggesting cardiac origin • a heart murmur (not including innocent heart murmurs in children) • hypertension.	NA	NA
5.1.4	**CCR**	People with ADHD should be referred to an appropriate physician if blood pressure is consistently above age-based normal values, or for children and adolescents above the 95th centile for age and height.	NA	NA
5.1.5	**CPP**	Before titration, baseline ADHD symptoms and level of functioning should be recorded. During titration, adverse effects should be monitored and recorded at each dose change. The treating clinician should review progress regularly during the dose-titration period.	NA	NA
5.1.6	**CPP**	The dose should be titrated against symptoms, level of functioning and adverse effects until the optimal dose has been identified (i.e. the dose at which symptoms are reduced and functional outcomes are improved, with minimal adverse effects).	NA	NA

5.1.7	**CCR**	Dose titration should be slower, and monitoring more frequent, if any of the following are present: • other neurodevelopmental disorders (e.g. autism spectrum disorder, tic disorders, intellectual disability) • other mental health conditions such as anxiety disorders, schizophrenia or bipolar disorder, depression, personality disorders, eating disorders, post-traumatic stress disorder, substance misuse • physical health disorders (e.g. cardiac disease, epilepsy or acquired brain injury).	NA	NA
5.2	**Medication choice – young children aged under 5 years**			
5.2.1	**CPP**	If ADHD symptoms cause significant impairment in more than one setting, a specialist with expertise in child development and treatment of ADHD in young children (either a paediatrician or a child psychiatrist) should assess the child to identify suitable treatment options. Medication should be used cautiously, and monitored closely, in this age group.	NA	NA
5.3	**Medication choice – children and adolescents (aged 5 to 17 years)**			
5.3.1	**EBR**	Methylphenidate or dexamfetamine or lisdexamfetamine should be offered as the first-line pharmacological treatment for people with ADHD, where ADHD symptoms are causing significant impairment.	****	⊕⊕◯◯ LOW
5.3.2	**CPP**	The decision to start with a short or long-acting stimulant formulation[a] should be based on clinical decision, together with the wishes of the person with ADHD or their parent/carer/family, by considering the advantages and disadvantages of each. For example: • a short-acting formulation may be preferred when close monitoring is required • a long-acting formulation may be preferred for convenience, or when there is a medical contraindication[b] • consideration of any potential cost implications [a] *Evidence has been assessed for the following stimulants available in Australia:* • *Short-acting: immediate-release methylphenidate or dexamfetamine* • *Long-acting: modified-release methylphenidate or lisdexamfetamine* [b] *For example, some short-acting stimulants contain gluten and/ or lactose; a long-acting preparation free of these should be used in someone with gluten or lactose intolerance.*	NA	NA
5.3.3	**CPP**	If one medication type or duration of action of stimulant medication is not effective or poorly tolerated, then another should be trialled.	NA	NA

5.3.4	**EBR**	Atomoxetine or guanfacine or clonidine should be offered to children and adolescents if any of the following apply: • stimulants are contraindicated • the person cannot tolerate methylphenidate, dexamfetamine or lisdexamfetamine • symptoms have not responded to separate trials of dexamfetamine or lisdexamfetamine, and of methylphenidate, at adequate doses • the clinician considers that the medication may be beneficial as an adjunct to the current regimen Due consideration of risks and safety is required, especially if medications are used in combination.	****	⊕⊕◯◯ LOW
5.4	**Medication choice – adults (aged 18 years and above)**			
5.4.1	**EBR**	Methylphenidate or dexamfetamine or lisdexamfetamine should be offered as the first-line pharmacological treatment for people with ADHD, where ADHD symptoms are causing significant impairment.	****	⊕⊕◯◯ LOW
5.4.2	**CPP**	The decision to start with a short-acting or long-acting formulation [a] should be based on clinical decision, together with the wishes of the person with ADHD, by considering the advantages and disadvantages of each. For example: • a short-acting formulation may be preferred when close monitoring is required • a long-acting formulation may be preferred for convenience, or when there is a medical contraindication[b] • consideration of any potential cost implications [a] *Evidence has been assessed for the following stimulants available in Australia:* • *Short-acting: immediate-release methylphenidate or dexamfetamine* • *Long-acting: modified-release methylphenidate or lisdexamfetamine* [b] *For example, some short-acting stimulants contain gluten and/or lactose; a long-acting preparation free of these should be used in someone with gluten or lactose intolerance.*	NA	NA
5.4.3	**CPP**	If one medication type or duration of action of stimulant medication is not effective or poorly tolerated, then another should be trialled.	NA	NA
5.4.4	**EBR**	Atomoxetine or guanfacine should be offered to adults with ADHD if any of the following apply: • Stimulants are contraindicated • They cannot tolerate methylphenidate, lisdexamfetamine or dexamfetamine • Their symptoms have not responded to separate trials of dexamfetamine or lisdexamfetamine and of methylphenidate, at adequate doses • The clinician considers that the medications may be beneficial as an adjunct to the current regimen Due consideration of risks and safety is required, especially if medications are used in combination.	****	⊕◯◯◯ VERY LOW
5.4.5	**CPP**	Clinicians should apply the same recommendations and principles of prescribing for adults aged over 65 years as for adults below 65 years, with careful monitoring of side effects.	NA	NA

5.5	**Further medication choices**			
5.5.1	**EBR**	The following could be offered to adults with ADHD, in no particular order: • bupropion • clonidine • modafinil • reboxetine • venlafaxine. Careful monitoring of adverse side effects is required.	***	⊕○○○ VERY LOW
5.5.2	**CPP**	The following could also be offered to adults with ADHD, in no particular order: • lamotrigine • aripiprazole • agomelatine • armodafinil • desvenlafaxine. Careful monitoring of adverse side effects is required.	NA	NA
5.6	**Factors influencing medication choices**			
5.6.1	**CPP**	For people with ADHD who also have co-occurring conditions (e.g. anxiety disorders, mood disorders, tic disorder or autism spectrum disorder), clinicians should offer the medication choices listed in recommendations 5.2–5.5.	NA	NA
5.6.2	**CPP**	If a person with ADHD experiences an acute psychotic or manic episode during treatment with stimulant medication, the clinician could do the following: • stop stimulants and review other medication for ADHD • treat the psychotic or manic episode as necessary • consider introduction of a mood stabiliser • consider alternate treatment for ADHD after the episode has resolved • consider costs and benefits of reintroducing stimulant medication. If stimulant medication is to be reintroduced, take extra precautions in monitoring, such as admitting the person to a hospital/clinic for observation.	NA	NA
5.6.3	**CPP**	Clinicians should consider the impact of appetite suppression due to stimulant treatment when people have a co-occurring eating disorder or other medical conditions contributing to weight loss.	NA	NA
5.6.4	**CPP**	Clinicians should exercise caution when prescribing stimulants if there is a risk of diversion for cognitive enhancement.	NA	NA
5.6.5	**CPP**	Clinicians should not offer immediate-release stimulants or modified-release stimulants that can be easily injected or inhaled if there is a risk of stimulant misuse or diversion.	NA	NA

5.6.6	**CPP**	Modified-release once-daily preparations could be offered for any of the following reasons: • convenience • improving adherence • reducing stigma by removing the need to take medication at school or in the workplace • reducing problems of storing and administering controlled drugs at school or work • if there is a risk of stimulant misuse and diversion with immediate-release preparations • if their pharmacokinetic profile offers an advantage for symptom improvement.	NA	NA
5.6.7	**CCR**	Short-acting and long-acting stimulants could be offered together to optimise effect (e.g. a modified-release preparation of methylphenidate in the morning and an immediate-release preparation of methylphenidate at another time of the day to extend the duration of effect).	NA	NA
5.7	**Monitoring treatments**			
5.7.1	**CPP**	Clinicians should arrange regular and frequent follow-up until medication is optimised and stabilised. • Once medication is titrated and stabilised, clinicians should proactively arrange individualised monitoring based on a chronic disease management model • The optimal frequency of follow-up depends on individual factors such as co-occurring conditions, medical complications, compliance, response to treatment, social supports, and lifestyle factors. Monitoring may be conducted by a range of different clinicians, depending on these factors.	NA	NA
5.7.2	**CPP**	People taking medication for ADHD should be encouraged to monitor and record their adverse effects.	NA	NA
5.7.3	**CPP**	Standard symptom and adverse effect rating scales should be used for clinical assessment and throughout the course of treatment.	NA	NA
5.7.4	**CPP**	People receiving treatment for ADHD should have regular review and follow-up according to the severity of their condition, regardless of whether or not they are taking medication.	NA	NA
5.7.5	**CPP**	When monitoring medication use, effects on all the following areas should be considered: • height and weight • cardiovascular function • tics • sexual function • seizures • sleep quality • worsening symptoms • worsening of mood • increased anxiety • the risk of stimulant diversion • other side-effects.	NA	NA

5.7.6	**CCR**	For people taking medication for ADHD, monitoring should include all the following: • For children and adolescents, measure height every 6 months • For children at any age, measure weight 3 and 6 months after starting treatment and 6 months thereafter, or more often if concerns arise • For children and adolescents, plot height and weight on a growth chart • For adults, monitor weight if indicated • If weight loss/insufficient weight gain in children is a clinical concern, consider the following strategies: ◦ taking medication either with or after food, rather than before meals ◦ taking additional meals or snacks early in the morning or late in the evening when stimulant effects have worn off ◦ obtaining dietary advice ◦ consuming high-calorie foods of good nutritional value ◦ taking a planned break from treatment ◦ changing or stopping medication. If a child or adolescent's growth rate measured by height has significantly decreased over time while using stimulant medication, consider a planned break in treatment over school holidays to allow 'catch-up' growth, or an alternate medication. Also consider non-medication causes.	NA	NA
5.7.7	**CCR**	Monitor heart rate and blood pressure and compare with the normal range for age before and after each dose change and every 6 months. Seek appropriate specialist support if indicated.	NA	NA
5.8	**Adherence to medication treatment**			
5.8.1	**CPP**	Clinicians should be aware that people with ADHD (or parents/carers) may have difficulty adhering to treatment plans (e.g. remembering to organise repeat prescriptions and collect medication) due to the symptoms of ADHD or their effects. Ensure that people are fully informed of the balance of risks and benefits of any medication for ADHD. Check that problems with adherence are not due to misconceptions.	NA	NA
5.8.2	**CCR**	To optimise adherence to medication, clinicians should encourage people with ADHD to use the following strategies: • being responsible for their own health, including taking their medication as needed • following clear instructions about how to take the medication in picture or written format, which may include information on dose, dosage schedule, adverse effects. The instructions should stay with the medication (e.g. a sticker on the side of the packet) • using visual reminders to take medication regularly (e.g. apps, alarms, clocks, pill dispensers, or notes on calendars or fridges) • taking medication as part of their daily routine (e.g. with/after meals or after brushing teeth) • attending peer support groups (for both the person with ADHD and for the families and carers) • making regular appointments with their prescribing clinicians to ensure timely reviews and prescriptions • considering the use of electronic medical records and apps to remind and track medication usage.	NA	NA

5.8.3	**CCR**	Clinicians should encourage parents and carers to oversee ADHD medication for children and adolescents.	NA	NA
5.8.4	**CCR**	To increase medication adherence in children, clinicians could offer parent/family training (see recommendations 4.2.1, 4.2.2) to help them better understand the benefits of medication.	NA	NA
5.9	**Review of medication and discontinuation**			
5.9.1	**CPP**	ADHD medication should be reviewed and discussed with the person with ADHD (and their families and carers as appropriate) at least once a year. At each review the following should be comprehensively assessed: • the preferences of the child, adolescent, or adult with ADHD (and their family or carers as appropriate) • benefits, including how well the current treatment is working throughout the day • adverse effects • the clinical need and whether medication has been optimised • impact on education, employment and participation • effects of missed doses, planned dose reductions and periods of no treatment • effect of medication on existing or new mental health, physical health or neurodevelopmental disorders • need for support and type of support (e.g. psychological, educational, social) if medication has been optimised but ADHD symptoms continue to cause a significant impairment.	NA	NA
5.9.2	**CPP**	People with ADHD should be encouraged to discuss their preferences for continuing, stopping or changing medication, and to be actively involved in any decisions about their treatment.	NA	NA
5.9.3	**CCR**	Trial periods of stopping medication or reducing the dose should be considered when assessment of the overall balance of benefits and harms suggests this may be appropriate. If the decision is made to continue medication, the reasons for this should be documented.	NA	NA
5.9.4	**CCR**	Medications known to have discontinuation symptoms, such as SSRIs, should be gradually reduced then discontinued, to minimise these symptoms.	NA	NA
6	**Considerations – Subgroups**			
6.1	**People in the correctional system**			
6.1.1	**CPP**	Screening and assessment processes should be established to identify the presence of ADHD and co-occurring conditions among people entering the criminal justice system.	NA	NA
6.1.2	**CPP**	Custodial staff and those within the criminal justice system (e.g. police, magistrates) should receive ADHD awareness training.	NA	NA

6.1.3	**CPP**	Treatment in custodial settings should include pharmacological and non-pharmacological appr oaches, equivalent to the treatment available in the community.	NA	NA
6.1.4	**CPP**	Prisons should include ADHD tailored educational and occupational programs to increase engagement and skills development.	NA	NA
6.1.5	**CPP**	Prisons should establish safe processes of administering long-acting stimulant medications to those with ADHD (similar to ways of administering other controlled drugs and ensuring the safety of the person in prison receiving stimulant medication). Specific screening for comorbid substance use disorders should be undertaken before administering stimulant medication.	NA	NA
6.1.6	**CPP**	Prisoners with ADHD should have a comprehensive multi-agency integrated and coordinated care plan, with particularly close coordination between criminal justice, mental health agencies and disability services, and at all transition points, with appropriate identified care pathways into the community.	NA	NA
6.1.7	**CPP**	Prisons should be resourced to enable identification and treatment of offenders with ADHD, to improve clinical and criminal justice outcomes.	NA	NA
6.2	**Aboriginal and Torres Strait Islander Peoples**			
6.2.1	**CPP**	Clinicians should conduct a culturally appropriate screening assessment of ADHD in Aboriginal and Torres Strait Islander peoples. A strengths-based focus should be emplo yed wherever possible. Clinicians should be aware that ADHD symptom questionnaires and other tools used for screening and assessing ADHD may not be valid in Aboriginal and Torres Strait Islander peoples and should be used with caution. Clinicians should seek the assistance of a cultural interpreter or Aboriginal and Torres Strait Islander health worker.	NA	NA
6.2.2	**CPP**	Culturally and psychometrically validated symptom questionnaires should be developed for ADHD presenting in Indigenous children, adolescents, and adults.	NA	NA
6.2.3	**CPP**	Clinicians should conduct a culturally appropriate assessment of ADHD in Aboriginal and Torres Strait Islander peoples. This should include a cultural and social assessment of the meaning and significance of symptoms. A strengths-based focus should be emplo yed wherever possible and the assistance of a cultural interpreter or Aboriginal and Torres Strait Islander health worker should be sought if needed.	NA	NA
6.2.4	**CPP**	Interventions should include input from parents, families, community, and Elders, as appropriate, to maximise treatment effectiveness given strong family values in Aboriginal and Torres Strait Islander cultures. The wishes of parents, families and individuals with ADHD regarding treatment options (e.g. cultural, pharmacological versus non-pharmacological treatments and their combination) should be prioritised.	NA	NA

6.2.5	**CPP**	Non-pharmacological inter ventions need to be culturally sensitive and appropriately tailored for Aboriginal and Torres Strait Islander peoples with consideration for the local cultural context.	NA	NA
6.2.6	**CPP**	Pharmacological interventions should be explained carefully with an awareness of potential cultural issues. Pharmacological options may be more acceptable if offered as part of a broad package aimed at helping a person reach their potential.	NA	NA
6.3	**People with substance use disorders**			
6.3.1	**CCR**	Those working in public and mental health settings should be aware of the high co-occurr ence of substance use disorders in those with ADHD. Clinicians treating ADHD in these settings should routinely screen for problematic substance use or substance use disorders using best-practice screening questionnaires for substance use disorders. Formal diagnosis of substance use disorders in an individual with ADHD should follow recommended guidelines for substance use disorders and include a structured diagnostic interview.	NA	NA
6.3.2	**CCR**	Those working in drug and alcohol settings should be aware of the high co-occurr ence of ADHD and substance use disorders. Clinicians treating substance use disorders in these settings should routinely screen for ADHD using appropriate screening questionnaires for ADHD. Formal diagnosis of ADHD in an individual with substance use disorders should follow recommended guidelines (see 2. Diagnosis).	NA	NA
6.3.3	**CCR**	Screening and diagnostic assessment should take place when the person's substance use is sufficiently stabilised. Only in case of acute intoxication or severe withdrawal symptoms should these assessments be postponed.	NA	NA
6.3.4	**CCR**	Treatment for people with ADHD and substance use disorders should focus on both disorders concurrently, should consider their interrelationship, and should follow the guidelines for each separate disorder and the general guidelines about treatment of people with co-occurring disorders.	NA	NA
6.3.5	**CCR**	In most cases of concurrent ADHD and substance use disorders, clinicians should start treatment aimed at abstaining from or reducing/stabilising the use of substances first, since current substance use disorders may complicate diagnosis and treatment of ADHD. However, start of pharmacological or non-pharmacological tr eatment of ADHD should not unnecessarily be delayed.	NA	NA
6.3.6	**CCR**	Treatment of substance use disorders in patients with ADHD should follow a multimodal treatment approach comprising both pharmacological and cognitive behavioural based interventions.	NA	NA
6.3.7	**CCR**	Clinicians treating ADHD with substance use disorders should be aware of, and monitor for, the risk of misuse and diversion of psychostimulant medication. To minimise risk of diversion and misuse, use of long-acting, rather than short-acting, psy chostimulants should be considered.	NA	NA

6.3.8	**CCR**	Before starting stimulant pharmacotherapy in people with concurrent ADHD and substance use disorders, it is important that the person is abstinent or has reduced/stabilised their substance use. If this is not the case, the clinician should consider non-stimulant pharmacotherapy (e.g. atomoxetine, guanfacine, or bupropion)	NA	NA
6.3.8	**CCR**	Pharmacological treatment of ADHD requires careful titration and monitoring of its effect and possible adverse effects. Higher doses of stimulants may be required in people with ADHD and concurrent substance use disorders than in those without substance use disorders to achieve a favourable effect on both the ADHD symptoms and reduction of substance use.	NA	NA

Considerations – Summary of consultations

The following sections are summaries of consultations with the GDG members regarding service, policy and future research opportunities.

7	Considerations – Service and Policy
7.1	**National services**
7.1.1	Funding should be made available for an ADHD helpline, accessible to all Australians, consistent with those of other major mental health conditions. This could involve an expansion of the existing unfunded National ADHD Helpline.
7.1.2	Laws and regulations for stimulant prescribing and shared care should be uniform between the states and territories in Australia, and allow for cross-bor der dispensing. They should reflect best practice and evidence of safety and effectiveness.
7.1.3	People with ADHD should have the same rights of access to the National Disability Insurance Scheme (NDIS) as those with a disability who do not have ADHD. To ensure optimisation of necessary and reasonable NDIS interventions and supports for people with ADHD, a shared understanding of the following are needed: • appropriate accommodations • value of suitably qualified ADHD coaches • the importance of a specialist in ADHD as a lead member of the care team.
7.1.4	Eligibility and access to support from the NDIS should be decided based on the functional needs of the person with ADHD, and not based solely on diagnosis.
7.1.5	Primary care and public mental health services should make diagnosis and treatment available to people of all ages with ADHD, as for other mental health conditions.
7.1.6	A system of ADHD-specific peer support should be established to ensure that this support is accessible throughout Australia. Peer-suppor t programs already exist, providing opportunities to explore different models on which to base nationally available ADHD specific peer-suppor t development. National ADHD-specific peer support should ensure the peer support worker is embedded as part of a multidisciplinary team and works with clinicians to provide training, monitoring and support.
7.2	**Education Settings**
7.2.1	All education settings should identify a learning support coordinator with appropriate training to be the key point of contact for people with ADHD and their clinicians and parents/carers.
7.2.2	Students with ADHD of all ages require reasonable adjustments to be made to maximise their inclusion and learning opportunities. Co-occurring neur odevelopmental disorders including specific learning disorders should be identified and supported. The types and number of adjustments should be decided as part of an individual learning support plan developed with the person with ADHD, their carers, education staff and other relevant clinicians.
7.2.3	Education settings should be supported to implement learning support plans, host inter-agency meetings, and possibly host visiting clinicians to consult and provide intervention recommendations.

7.3	**Service configuration and activities**
7.3.1	Services for people with ADHD should be configured to ensure they are person- and family-centr ed.
7.3.2	Agencies providing services for people with ADHD should collaborate with each other, the care coordinator, and the person with ADHD and/or their family, to provide integrated models of care that encompass recovery principles and with a focus on shared decision-making.
7.3.3	Development of agreed pathways, to simplify navigating the healthcare system for both consumers and clinicians, are needed throughout the lifespan for people with ADHD to ensure seamless transition.
7.3.4	A readily available source of information for GPs about the referral pathways in their region is needed. For example, Primary Care Networks should identify ADHD specific local referral pathways and provide a directory of these to the general practices they serve.
7.3.5	As part of the development of agreed referral and care pathways, all relevant agencies should be consulted and their roles clarified, and where possible, expanded. People with a lived experience of ADHD, including clinicians with ADHD, should be involved to inform the design of services, supports and care pathways.
7.4	**Professional Training**
7.4.1	Information about ADHD and its treatment and support options throughout the lifespan should be included in the curriculums of mental health/developmental disorder training for educators, medical, nursing, pharmacy, and allied health professionals and other relevant professions such as social work, justice system, and child protection.
7.4.2	Organisations that provide services to people with ADHD, including all public health services (child, adolescent, adult), should ensure staff receive appropriate ADHD training including, where appropriate, skills to identify, diagnose, treat and provide ongoing monitoring and support. This includes training and resources for those involved in transitioning people with ADHD from adolescents to adult services.
7.4.3	General practitioners and other specialist medical practitioners, paediatricians, psychiatrists, and geriatricians should be supported to increase their skills in identifying, diagnosing, and treating people with ADHD, including prescribing stimulants.
7.4.4	An ADHD medication prescribing handbook should be developed to provide detailed guidance on treatment choice, initiation, side-effects, dosing, combination therapy and product information, relevant to the Australian context. Training for prescribers should be based on the handbook.
7.4.5	Ongoing professional development for ADHD treatment and care options (both interdisciplinary and discipline-specific) should be made easily available.
8	**Considerations – Research**
8.1.1	A process for setting research priorities should be established, involving all key stakeholders, including people with a lived experience of ADHD, and following established participatory research methods.
8.1.2	Research prioritisation should include individual and health service research and should consider cost-effectiveness and new models of shared care.