

## Managing the Patient with ADHD - helping your registrar deliver best practice care

#### What does ADHD stand for?

Attention Deficit Hyperactivity Disorder

#### Is ADHD in adulthood a separate entity to ADHD in childhood?

NO: ADHD starts in childhood – a person is born with ADHD - and it can persist into adulthood.

- ADHD is a neurodevelopmental disorder characterised by persistent inattention and/or hyperactivity – impulsivity that interferes with functioning or development,
- The symptoms of ADHD need to be evident in more than one setting (e.g. home and work), and vary depending on the environmental context and cognitive demands,
- First identified in the early 1900s as a disorder occurring in children, and one which they would "grow out of", it was not until 1976 that ADHD was even recognised as a disorder that persisted into adulthood (Adler & Chua, 2002,
- As a disorder associated with substantial mental and physical comorbidities, considerable stigma is attached to the ADHD label (Sumich & Morgan, 2018).

#### Is ADHD hereditary?

While we are yet to know the exact cause of ADHD, the heritability of the disorder is similar to that for height: about 79%.

ADHD is thus considered a "family affair":

- As many as 50% of the children born to adults with ADHD will at least have traits of the disorder,
- The entire family unit is impacted when one member has the condition,
- Clinicians are often asked to assess the spouses or children of their adult ADHD patients,
- Individuals whose ADHD remains undiagnosed may have significant impairments from their symptoms, affecting day-to-day responsibilities and relationships (Sumich & Morgan, 2018).

#### What ADHD statistics should my registrars be aware of?

- Worldwide, ADHD affects as many as 1 in10 children (Kessel et al, 2006), (Lichtenstein et al, 2010),
- Two-thirds of children with ADHD will continue to be affected by the disorder into adulthood (Sibley et al, 2016),
- Over 800,000 Australians are affected by ADHD, the majority going untreated,
- ADHD was the most common mental disorder in Australian children and adolescents (7.4%) in 2015.
- Total financial cost attributed to ADHD in 2019 in Australia was \$20 billion (Deloitte Access Economics, 2019),
- The mortality rate of people with ADHD is ~2.6 times greater than those without ADHD,
- People with ADHD taking medication have a 40% lower risk of car accidents'.
- High response rate to treatment (the treatment effect size for stimulant treatment is large 0.8-1.0 +).

#### What are the most common traits of ADHD?

- Dimensional,
- Evolves across the lifespan,
- Hyperactivity tends to diminish towards end of adolescence,
- Inattention symptoms more likely to persist,
- Executive functioning impairments are more problematic in adulthood with the removal of scaffolding and increase in responsibilities.



#### What should my registrar be prepared for when patients with ADHD present in the practice?

- There is a good chance your registrar has already seen patients who have ADHD, especially as most individuals with ADHD have at least 1 comorbid disorder (Larson et al, 2011) which may mask the disorder, such as:
  - Depression
  - Anxiety
  - Substance Use
  - Mood Disorder
  - PTSD
- The impact of ADHD varies due to:
  - How well a person and family understands and manages their ADHD
  - The severity of their ADHD
  - Comorbidity
  - Personality style
  - Conscientiousness (Openness to experience, Extraversion, Agreeableness, Neuroticism)

- The right level of Support vs Independence
- Parents, School, University, TAFE, Work Environment
- Underlying ADHD may be distinguished from masking comorbidities by determining if the attentional, hyperactive or organisational problems:
  - Pre-date the comorbid disorders (have they only recently started?)
  - Are not episodic (are they longstanding?)
- Visible identifiers in the practice may include:
  - Turning up late/DNA
  - Incomplete paperwork/questionnaires
  - Fidgeting, foot tapping
  - Speech circumstantial, overinclusive, excitable
  - Seems a bit scatty or vague
  - Poor historian
  - Generally feels overwhelmed.







#### How are patients assessed with ADHD?

Longstanding relationships enable GPs to notice clues from their patients' history that may collectively point to undiagnosed ADHD.

Time Management	Home/Work	Personal	Relationships
Procrastination	Disorganised	Emotional Dysregulation	Prone to blurting out, interrupting, oversharing
Frequently late	Forgetting, losing, misplacing things, keys, wallet, phone	Managing money	Low self-esteem – feeling stupid and different, a sense of underachievement, not performing at a level expected of self
Overcommitting	Driving - prone to road rage, parking or speeding fines, DUI, loss of licence	Sleep problems - delays going to bed, has difficulty switching off at night to get to sleep, with chronic sleep debt	

When considering ADHD as a diagnosis for an adult, a timeline of symptoms might involve reviewing school reports from their childhood. The following examples from a 50-year old adult's school reports reflect underlying ADHD in comments from his/her teachers:

AGE AT TIME OF REPORT	COMMENTS
12	<ul> <li>More concentration required</li> <li>He tries very hard always</li> <li>He is often distracted in class, concentration needed next term</li> <li>He is anxious to do well but does not always comprehend quickly, his attention is insufficient</li> <li>He will change his behavior in science laboratories which has been stupid and dangerous</li> </ul>
13	<ul> <li>He has not really settled into a working frame of mind</li> <li>A student with a keen mind. He has not learnt that he must be consistent</li> <li>Always tries hard and there is a pleasing sensitivity about his character</li> <li>His shirt is too often hanging out</li> <li>He cannot be a good scholar if he has an untidy outlook</li> </ul>
15	<ul> <li>He is still inclined to be a little careless, both in his working and organization</li> <li>For him a relatively poor term. He has been distracted far too often into unproductive areas not related to science</li> <li>I hesitate to use the word "lazy" - lack of zest is the problem</li> <li>I think the view that he is amiable but not very hard working puts it nicely</li> </ul>



Once identified as a likely diagnosis, using the 6-item Adult ADHD Self-Report Screening Scale for DSM-5 will help further detect ADHD.

	ork University and President and Fellows of Harvard College  mposite International Diagnostic Interview for DSM-5 (CIDI-5.0)  lent and Fellows of Harvard College					
you qu	eck the box that best describes how you have felt and conducted urself over the past 6 months. Please give the completed estionnaire to your healthcare professional during your next pointment to discuss the results	N	R	s	0	vo
1	How often do you have difficulty concentrating on what people are saying to you even when they are speaking to you directly?					
2	How often do you leave your seat in meetings or other situations in which you are expected to remain seated?					
3	How often do you have difficulty unwindding and relaxing when you have time to yourself?					
4	When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to before they can finish them themselves?					
5	How often do you put things off until the last minute?					
6	How often do you depend on others to keep your life in order and attend to details?					
	N = Never ( <b>0</b> ), R = Rarely ( <b>1</b> ), S = Sometimes ( <b>2</b> ), O = Often (	<b>(3</b> ), \	/O =	Very	ofte	n ( <b>4</b> )

Scores of 14 or above detect roughly 84% of ADHD cases in the general population, with a false-positive rate of about 10% (Sumich & Morgan, 2018).

The GP's next step is to refer the patient to a psychiatrist, who will formalise the assessment and determine the suitable type and level of medication.

Once stabilised by the specialist, the patient will be able to see their GP for ongoing management/ prescriptions.

#### Can a person with ADHD be high functioning?

Yes. Without identification and treatment, people with ADHD can be high functioning, high achieving individuals; however, without the appropriate use of stimulant medication, achievement at a high level can be difficult on many levels.

#### How should ADHD be managed with co-existing psychiatric diagnoses and other comorbidities?

The prevalence of co-existing psychiatric diagnoses makes this a very important consideration, as does the likelihood the patient not responding to medication for depression or other disorders may have underlying ADHD.





Co-existing Disorder	Prevalence
Any anxiety disorder	47%
Any mood disorder	38%
Social anxiety disorder	29%
Specific phobia	23%
Bipolar disorder	19%
Major depression	18%
Any substance disorder	15%
Post-traumatic stress disorder	12%

It is important to note that the treatment of ADHD often improves the symptoms of other diagnoses. However, separate treatment may be needed for the ADHD patient's comorbidities which entails prioritisation against ADHD treatment.

Co-existing Disorder	Treatment / Priority
Any anxiety disorder v ADHD	Prioritise whichever disorder is most severe
Social anxiety disorder v ADHD	
Specific phobia v ADHD	
Post-traumatic stress disorder v ADHD	
Any mood disorder v ADHD	Prioritise the mood disorder before commencing any pharmacological treatment for ADHD
Bipolar disorder v ADHD	Prioritise the bipolar disorder before commencing any pharmacological treatment for ADHD
Major depression v ADHD	Prioritise whichever disorder is most severe
Any substance disorder v ADHD	Prioritise the substance abuse/ dependence before commencing any pharmacological treatment for ADHD (using atomoxetine as a first line agent)
Any psychotic symptoms v ADHD	Seek a second opinion

### What other conditions should potentially be screened for when seeing a patient with ADHD?

- Obstructive sleep apnoea
- Iron-deficiency anaemia, vitamin B12 and folate deficiency
- Malabsorption problems (e.g. coeliac disease)
- Petit mal epilepsy
- Severe substance dependence
- Head injury (neuropsychological assessment can be helpful here)

#### What does the registrar need to know about ADHD medication?

- Patients with ADHD are likely to feel calmer after starting on stimulant medication
- Some patients starting on ADHD may experience an increase in heart rate and blood pressure, possibly amplifying anxiety
- Most find that use of the stimulant medication makes it easier to stay on task and get things done without distraction, reducing the patient's anxiety
- 90% of people with ADHD will respond well to either Dexamphetamine (SIGMA) or Methylphenidate IR (Ritalin)







Medication	Initiation	Dose		
Methylphenidate IR	Start at 5-10mg morning the first day; Further increments weekly at 5-10mg per week	Total daily dose typically varies between 10mg and 60mg/day		
(RITALIN)	,	Doses over 80mg/day uncommon		
Methylphenidate	ER formulation - (CONCERTA):	Maximum of 72 mg/day		
longer-acting formulations	Start at 18 or 36 mg/day, taken once daily in the morning	Adjust dosage at weekly intervals - 18mg		
	LA formulation – (RITALIN LA):	Adjust dose weekly in 10mg increments		
	Recommended initial dose is 20mg/day taken once daily in the morning	Daily dose usually would not exceed 60mg		
<b>Dexamphetamine</b> (SIGMA)	Start at 2.5-5.0mg morning the first day	Total daily dose typically varies between 5mg and 30mg/day		
(G. G y	Further increments weekly 2.5-5.0mg	Doses over 40mg are uncommon		
Atomoxetine	For adults or children >70kg, start at 40mg/day	Target dose 80 mg/day		
(STRATTERA)	taken once daily for 3 days then increase to target dose of 80mg.	Maximum dose 100mg		
<b>Lisdexamfetamine</b> (VYVANSE)	Recommended starting dose is 30 mg taken once daily in morning.	Dose may be adjusted by 20 mg weekly up to 70 mg daily.		
Guanfacine (TGA approved only in children 6-17 years)	Recommended starting dose is 1mg morning or night	Increase dose by 1mg weekly up to max of 7mg daily in monotherapy. Adjunctive therapy with stimulants – dosing 1-4mg		





#### Can GPs prescribe stimulant medication?

YES, but the rules for prescribing are different for each state and territory across Australia.

In NSW, the following applies:

- GPs may apply for authorisation to continue to prescribe a psychostimulant for a person 18 years or over by submitting an Application for Authority to Prescribe a Schedule 8 Drug - Psychostimulant
  - Note: GPs seeking authorisation to prescribe psychostimulant medication for a patient must provide a supporting letter from the patient's current specialist with their application.
- Initial application must have attached specialist letter within 12 months
  - You will receive an AUTH number that has to be written on the script
  - This is separate to the PBS Auth number
- A break of 3-6 months in treatment requires a new psychiatrist referral
- GPs can apply for lower doses, but not higher doses, without specialist letter <a href="https://www.health.nsw.gov.au/pharmaceutical/doctors/Pages/prescribe-psychostimulant.aspx">https://www.health.nsw.gov.au/pharmaceutical/doctors/Pages/prescribe-psychostimulant.aspx</a>

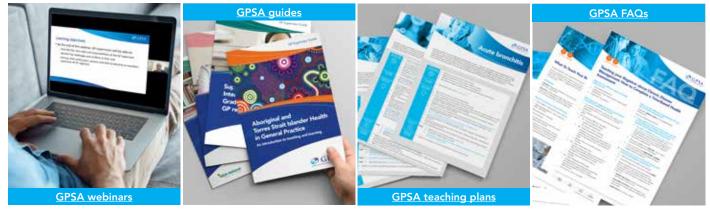
#### What are the key points we should emphasise for our registrars?

- If use of stimulant medications for ADHD causes sleep disruption, melatonin can be used; however for most people, the calming effect of the lifestyle changes experienced with these medications will result in better sleep patterns
- Awareness of ADHD will only help to decrease stigma
- ADHD is undertreated, not overtreated
- Remember ADHD is a "family affair"
- Think about ADHD with and without comorbidities
- Consider screening questionnaires
- Co-prescribe stimulant medications with psychiatrist
- Get involved in AADPA https://aadpa.com.au/





#### Resources



All GPSA resources are available here

- GPSA Teaching Plan: ADHD <a href="https://gpsupervisorsaustralia.org.au/download/15105/">https://gpsupervisorsaustralia.org.au/download/15105/</a>
- ADHD Stimulant Prescribing Regulations & Authorities In Australia & New Zealand https://aadpa.com.au/adhd-stimulant-prescribing-regulations-in-australia-new-zealand/

#### References - further reading

- Adler LA, Chua HC. Management of ADHD in adults. J Clin Psychiatry. 2002;63 Suppl 12:29-35.
- Deloitte Access Economics. The social and economic costs of ADHD in Australia Report prepared for the Australian ADHD
  Professionals Association. Canberra, ACT;2019. <a href="https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-social-costs-adhd-australia-270819.pdf">https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-social-costs-adhd-australia-270819.pdf</a>
- Graves, Stacy Jean, "Validity and Diagnostic Accuracy of an ADHD Symptom Rating Scale for Identifying Adults with ADHD" (2020). UNLV Theses, Dissertations, Professional Papers, and Capstones. 4054. <a href="https://digitalscholarship.unlv.edu/thesesdissertations/4054">https://digitalscholarship.unlv.edu/thesesdissertations/4054</a>
- Kessler RC, Adler L, Barkley R, et al. The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Replication. Am J Psych 2006; 163: 716-723.
- Larson K, Russ SA, Kahn RS, Halfon N. Patterns of comorbidity, functioning, and service use for US children with ADHD, 2007. Pediatrics. 2011;127(3):462-470. doi:10.1542/peds.2010-0165
- Lichtenstein P, Carlström E, Råstam M, Gillberg C, Anckarsäter H. The genetics of autism spectrum disorders and related neuropsychiatric disorders in childhood. Am J Psychiatry 2010; 167: 1357-1363.
- Polanczyk G, de Lima MS, Horta BL, Biederman J, Rohde LA. The worldwide prevalence of ADHD: a systematic review and metaregression analysis. Am J Psych 2007; 164: 942-948.
- Sibley MH, Mitchell JT, Becker SP. Method of adult diagnosis influences estimated persistence of childhood ADHD: a systematic review of longitudinal studies. Lancet 2016; 3: 1157-1165.
- Sumich HJ, Morgan H. Could it be ADHD? Recognising ADHD in youth and adults. Med Today 2018; 19(3): 28-35.