ADULT ADHD

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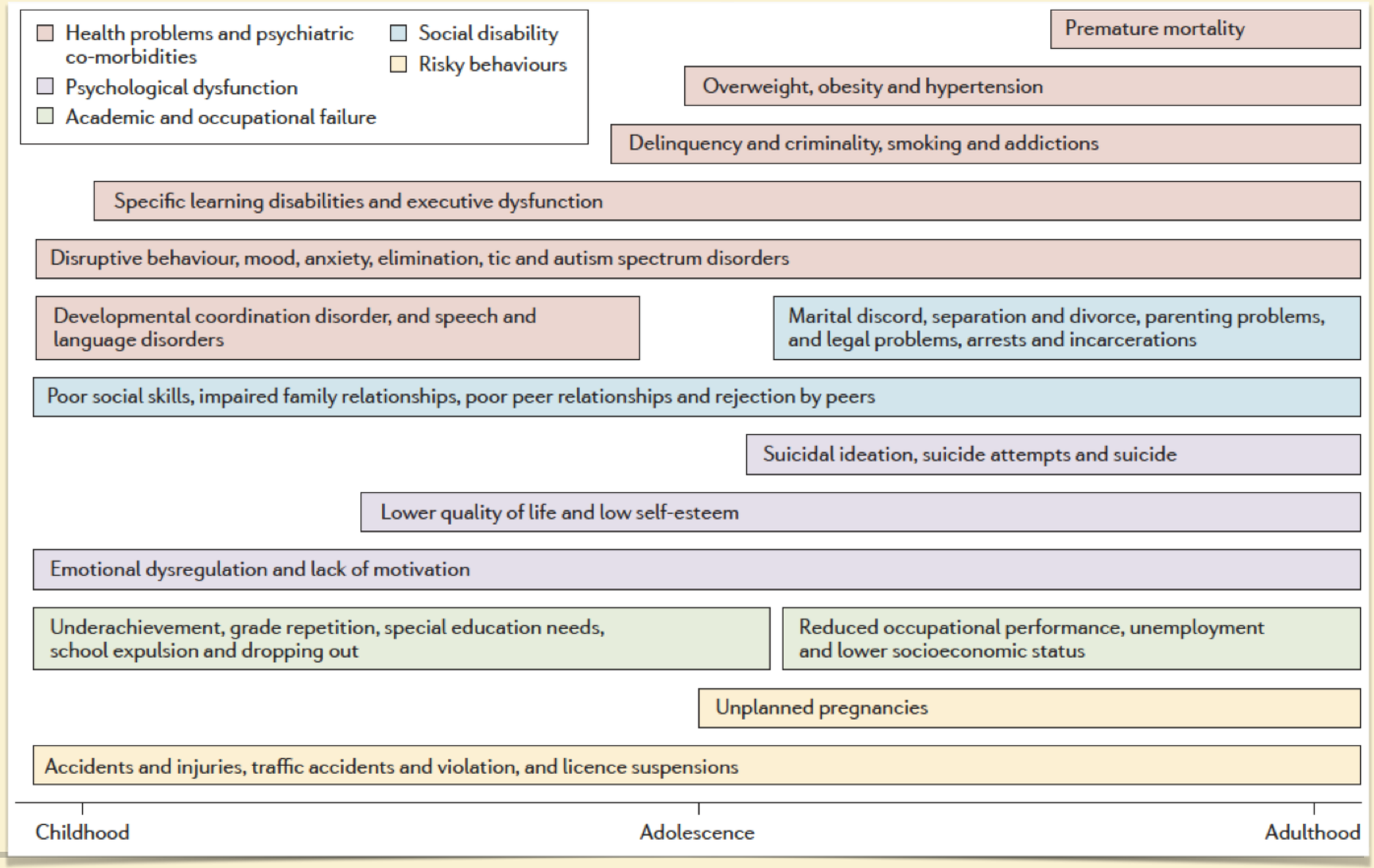
OBJECTIVES

- ADHD in adulthood
- Diagnostic criteria
- Rating scales
- Assessment and management principles
- Case vignette
- Questions

WHAT IS ADULT ADHD?

- Neurodevelopmental disorder that starts in childhood
- Persists in adulthood in majority and some have sub-syndromal features, occasionally remits.
- Condition is characterized by features of Inattention, hyperactivity and impulsivity.
- High rates of comorbidity
- Male preponderance 4:1 less in adulthood due to referral patterns

WHY IS IT IMPORTANT TO IDENTIFY ADHD?



MORTALITY IN ADHD VS NON-ADHD

- Less than 6 year olds 2-fold increase
- 6-17 year old 1.5 times more
- 18 years old and above 4 -fold increase

EPIDEMIOLOGY

- Prevalence in children and adolescents estimated to be between 6% - 8%
- Prevalence in adults estimated to be between 2% and 6%
- Social and economic costs of ADHD is 20.42 billion per year or 25,071 per person with ADHD per annum.
- Majority of the children with ADHD will not meet full criteria for ADHD as adults but they might have functional impairment or subthershold impairing symptoms into adulthood.
- 2/3rds of youth with ADHD retain impairing symptoms of ADHD into adulthood.
- Less than 1 in 5 adults are currently diagnosed and treated.

RED FLAGS

- Organizational skill problems (time management difficulties, missed appointments, frequent late and unfinished projects).
- Erratic work/academic performance.
- Anger control problems.
- Family/marital problems.
- Difficulty in maintaining organized household routines, sleeping patterns and other self-regulating activities.
- Difficulty managing finances.
- Addictions such as substance use, compulsive shopping, sexual addiction, overeating, compulsive exercise, video gaming or gambling.
- Frequent accidents either through recklessness or inattention.
- Problems with driving (speeding tickets, serious accidents, license revoked).
- Having a direct relative who has ADHD.
- Having to reduce course load, or having difficulty completing assignments in school.
- Low self-esteem or chronic under-achievement.

DIAGNOSTIC CRITERIA - INATTENTION

1. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities (e.g. overlooks or misses details, work is inaccurate).
2. Often has difficulty sustaining attention in tasks or play activities (e.g. has difficulty remaining focused during lectures, conversations, or lengthy reading).
3. Often does not seem to listen when spoken to directly (e.g. mind seems elsewhere, even in the absence of any obvious distraction).
4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g. starts tasks but quickly loses focus and is easily sidetracked).
5. Often has difficulty organising tasks and activities (e.g. difficulty managing sequential tasks; difficulty keeping materials and belongings in order; messy, disorganised work; has poor time management; fails to meet deadlines).
6. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g. schoolwork or homework; for older adolescents and adults, preparing reports, completing forms, reviewing lengthy papers).
7. Often loses things necessary for tasks or activities (e.g. school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
8. Is often easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).
9. Is often forgetful in daily activities (e.g. doing chores, running errands; for older adolescents and adults, returning calls, paying bills, keeping appointments).

Requires 5 symptoms

DIAGNOSTIC CRITERIA - HI SYMPTOMS

1. Often fidgets with or taps hands or feet or squirms when sitting.
2. Often leaves their seat in situations when remaining seated is expected (e.g. leaves his or her place in the classroom, in the office or other workplace, or in other situations that require remaining in place).
3. Often runs about or climbs in situations where it is inappropriate. (Note: In adolescents or adults, may be limited to feeling restless.)
4. Often unable to play or engage in leisure activities quietly.
5. Is often 'on the go', acting as if 'driven by a motor' (e.g. is unable to be still or is uncomfortable being still for extended time, as in restaurants, meetings; may be experienced by others as being restless or difficult to keep up with).
6. Often talks excessively.
7. Often blurts out an answer before a question has been completed (e.g. completes people's sentences; cannot wait for their turn in conversation).
8. Often interrupts or intrudes on others (e.g. butts into conversations, games, or activities; may start using other people's things without asking or receiving permission; for adolescents and adults, may intrude into or take over what others are doing).
9. Often has difficulty waiting his or her turn (e.g. while waiting in line)

Requires 5 symptoms

DIAGNOSTIC CRITERIA

In addition, the following conditions must be met:

- Several inattentive or hyperactive-impulsive symptoms were present before age 12 years.
- Several symptoms are present in two or more settings, (such as at home, school or work; with friends or relatives; in other activities).
- There is clear evidence that the symptoms interfere with, or reduce the quality of, social, school, or work functioning.
- The symptoms are not better explained by another mental disorder (such as a mood disorder, anxiety disorder, dissociative disorder, or a personality disorder). The symptoms do not happen only during the course of schizophrenia or another psychotic disorder.

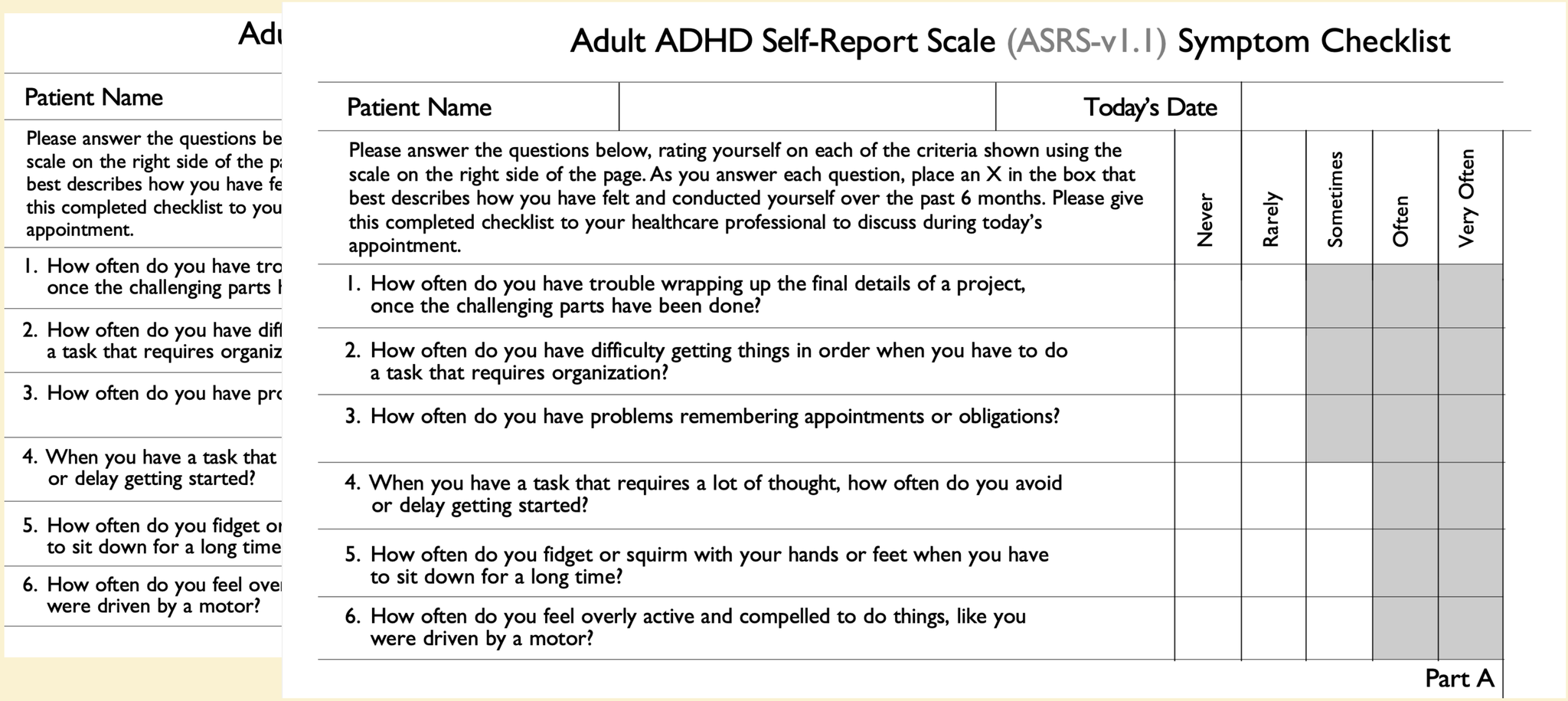
SUBTYPES

- Inattentive type
- Hyperactive and Impulsive type
- Combined Type
- HI symptoms less obvious and common in adults.

PRINCIPLES

- Diagnosis of ADHD should not be made solely based on rating scales.
- Observations or reports from more than one setting should be used to confirm symptoms and functional difficulties.
- ADHD should be considered in all ages including over 65 years of age.
- Inattentive symptoms may not be identified until secondary school.
- Individuals might have developed compensation strategies to mask symptoms.
- Neuropsychological testing is not required for diagnosis.

RATING SCALES - SCREENING



Adu

Patient Name

Please answer the questions be
scale on the right side of the p
best describes how you have fe
this completed checklist to you
appointment.

1. How often do you have tro
once the challenging parts h
2. How often do you have diff
a task that requires organiz
3. How often do you have pro
4. When you have a task that
or delay getting started?
5. How often do you fidget or
to sit down for a long time
6. How often do you feel ove
were driven by a motor?

Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist

Patient Name		Today's Date					
Please answer the questions below, rating yourself on each of the criteria shown using the scale on the right side of the page. As you answer each question, place an X in the box that best describes how you have felt and conducted yourself over the past 6 months. Please give this completed checklist to your healthcare professional to discuss during today's appointment.			Never	Rarely	Sometimes	Often	Very Often
1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?							
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?							
3. How often do you have problems remembering appointments or obligations?							
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?							
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?							
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?							

Part A

7. How often do you make careless mistakes when you have to work on a boring or difficult project?						
8. How often do you have difficulty keeping your attention when you are doing boring or repetitive work?						
9. How often do you have difficulty concentrating on what people say to you, even when they are speaking to you directly?						
10. How often do you misplace or have difficulty finding things at home or at work?						
11. How often are you distracted by activity or noise around you?						
12. How often do you leave your seat in meetings or other situations in which you are expected to remain seated?						
13. How often do you feel restless or fidgety?						
14. How often do you have difficulty unwinding and relaxing when you have time to yourself?						
15. How often do you find yourself talking too much when you are in social situations?						
16. 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?						
17. How often do you have difficulty waiting your turn in situations when turn taking is required?						
18. How often do you interrupt others when they are busy?						

Part B

WURS-25

- Available online
- Self report
- Evaluates childhood symptoms of ADHD
- Cut off 36 has 96% sensitivity and specificity

MEDICAL ASSESSMENT

Common medical conditions that may have overlapping symptoms with ADHD:

- Thyroid dysfunction
- Hypoglycemia
- Severe anemia
- Lead poisoning
- Sleep disorders
- Fetal Alcohol Spectrum Disorder

(FASD)

Medications that may have psychomotor side effects:

- Medication with cognitive dulling side effect (e.g. mood stabilizers).
- Medication with psychomotor activation (e.g. decongestants, beta-agonists like asthma m

ASSESSMENT

- Confirming the presence of impairing ADHD symptoms
- Obtaining school records and speaking to family to establish childhood symptoms.
- Evaluating impairment observed by patient and others across lifespan.
- Family psychiatric history
- Psychiatric comorbidity
- Rating scale can be utilised.

ASSESSMENT

- Perinatal history - exposure to alcohol and drugs, low birth weight and preterm birth.
- Developmental milestones
- Impact of symptoms on learning, social development and independent functioning.
- Symptoms before age 12.
- Mental state exam
- ADHD specific diagnostic interviews DIVA - 5

GOALS OF TREATMENT

- Symptom reduction
- Functional improvement
- Removing barriers
- Addressing comorbidity

CASE VIGNETTE 1

- 27 year old man in a defect relationship - 2 children preschoolers
- Employed as software developer
- P.C: was “googling” his concerns and adhd came up as a possibility
- He struggled to articulate his concerns in a coherent manner, in essence in transpire after some laborious interviewing that he retrenched due to poor performance - not listening to others in meeting, missing key details of information and similar feedback from his partner as well.
- Jumped into doing ASRS - Difficulty completing project once the challenging aspects are done, his interest levels will wane becoming less productive, difficulty organising his work or project, trouble remembering to attend meetings, not responding to reminders to do certain tasks, procrastinating on starting complex tasks instead thinks a lot about it, making careless mistakes, finding it hard to focus in meetings and individual conversations, pacing, restless, talking too much in social situations

CASE VIGNETTE

- No mood problems or anxiety. Nil previous psychiatric history
- Sleep - poor quality, went to bed late
- Maternal uncle - and cousin substance misuse. 3 siblings nil diagnosis.
- Schooling - did not pay attention to instruction in Kindy was asked to repeat. Parents did not believe there was any concern. Did well in software and IT but other subjects did not do well. Not much recollection of childhood.
- Bachleors in IT - HD in assignments, other tests credits or Ds.
- Started trial of Ritalin titled up to 20mg 3 doses per day - initial benefit, but no consistent improvement, wear off effects in the evening and in between doses.
- Concerta wasn’t that effective either
- Hypertension managed by GP
- Vyvanse trialled quite effective with his symptoms overall and functioning improved

CASE VIGNETTE

- Interview with mother arranged after there initial reluctance.
- Confirmed childhood symptoms to some extent.
- Not lasting the whole day Dex 5 mg added at 4pm
- Stable for many months, maintained good lifestyle and functioning
- Discharge to GP - 2 yearly follow ups

PHARMACOLOGICAL MANAGEMENT

- 1st line options Methylphenidate, dexamphetamine and lisdexamphetamine
- Methylphenidate formualtions - Ritalin(4 hours), Ritalin LA(8 hours) and Concerta(8-10 hours)
- LA preferred - convenience, adherence, storage and administration, concern of misuse, preferred pharmacokinetic profile, combination can be used to extend duration of action.

NON-STIMULANTS

- Alpha -2a agonists - clonidine and guanfacine(selective)
- Clonidine - more side effects - hypotension, bradycardia. Has adjunctive serotonergic and GABA effect helpful with sedation.
- Clonidine - 100-400 mcg per day
- Guanfacine 1-4 mg per day
- Guanfacine is TGA approved in children and adolescents
- Clonidine not approved for AHDH treatment in Australia.

OTHER NON-STIMULANTS

- Bupropion
- Clonidine
- Modafinil
- Reboxetine
- Venlafaxine

NON PHARMACOLOGICAL MANAGEMENT

- Environmental changes to maximise chance of improvement.
- Removing challenges that are likely to result from ADHD.
- Help the person understand the impact of symptoms in their day-day life.
- Cognitive processes that influence behaviour.
- Compensatory strategies the person has developed - positive and negative impact
- Manage other stressors and symptom fluctuations.

NEUROFEEDBACK

- Principles of operant conditioning to teach self medication of cortical electrical activity.
- EEG patterns recognised by a software which then provides visual or auditory rewards when more beta activity is seen in right DLPFC.
- Some improvement with inattention symptoms in children on some measures.
- Adults inconclusive.

NSW LEGISLATION

- The assessment of ADHD in adults and initial prescribing of psychostimulants is generally limited to psychiatrists.
- General practitioners may apply for individual patient authorisation to prescribe a psychostimulant for an adult. General practitioners seeking such authorisation must obtain written support from the patient's current treating specialist supporting the shared care or continuation of care. The support should specify the drug, dose and care arrangement. Treatment with the current specialist is generally expected to have been in place for a minimum of six months prior to transfer (continuation) of care.
- Patients may not be transferred from a Paediatrician directly to a General Practitioner. They must be referred to a Psychiatrist or a Neurologist who may then refer the patient to a General Practitioner after assessment
- Applications from General Practitioners to increase the dose or change the drug must be supported by the referring specialist.
- Maximum doses without second opinions : **30mg** dexamfetamine, or **60mg** methylphenidate daily in immediate release (IR), or **80mg** methylphenidate in controlled release (CR) formulations, or **70mg** lisdexamfetamine
- Combinations can be used as long as sum ratio does not exceed 1.

PBS

- Short acting methylphenidate and dexamphetamine subsidised for all ages.
- Ritalin LA and Vyvanse - Patient must have a retrospective diagnosis of ADHD if PBS-subsidised treatment is commencing or continuing after turning 18 years of age.
- A retrospective diagnosis of ADHD for the purposes of administering this restriction is:
- (i) the presence of pre-existing childhood symptoms of ADHD (onset during the developmental period, typically early to mid-childhood); and
- (ii) documentation in the patient's medical records that an in-depth clinical interview with, or, obtainment of evidence from, either a: (a) parent, (b) teacher, (c) sibling, (d) third party**,** has occurred and which supports point (i) above

SUBSTANCE MISUSE AND ADHD

- 50% of SUD also diagnosed with ADHD
- Other significant psychiatric comorbidities
- Treatment of SUD should start first.
- Non stimulants preferred first line particularly if SUD is not stabilised.
- Higher doses might be required.
- Manage diversion
- Close monitoring
- New onset SUD doesn’t tend to occur in patients starting stimulants without a history of SUD.

FEMALES WITH ADHD

- Rapid glial cell maturation and faster cortical volume growth - protective against neurodevelopmental insults.
- Female sex hormones are neuroprotective.
- Present with emotional arousal and can mask ADHD - mood disorders, personality disorders, PMDD, alcohol and cannabis misuse
- Less hyperactivity, impulsivity and externalizing behaviors.
- Can present during menopause, post partum and pregnancy.
- Symptoms can fluctuate during phases of menstural cycle - dose adjustments might be required.

CARDIOLOGY OPINION

- History of congenital heart disease or cardiac surgery
- Sudden death in a 1st degree relative under the age off 40
- SOB or fainting on exertion
- Palpitations that start and stop suddenly
- Chest pain
- Heart murmur
- Hypertension

QUESTIONS AND THOUGHTS

COMORBIDITY

- ADHD in its different presentations (combined, inattentive or hyperactive-impulsive), and the most common comorbid disorders, change over time and by developmental stage.
- The most common comorbid disorders in early childhood are oppositional defiant disorder (ODD), language disorders and anxiety disorders.
- Many children with ADHD have a Specific Learning Disorder.
- ADHD may be two to three times more common in children with developmental disabilities or borderline IQ and intellectual disabilities.
- In the mid-school-age years, symptoms of anxiety or tic disorders become more common.
- Mood disorders and substance use disorders tend to be more observable by early adolescence compared to childhood.
- In adulthood, anxiety, major mood disorders (depression or bipolar disorder) and substance use disorders are commonly seen with ADHD.