وزارة الصحة
Ministry of Health

MOH Protocols for the Management of Attention Deficit Hyperactive Disorder (ADHD) Across the Life Span

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- ## Introduction

A. Purpose

Attention Deficit Hyperactivity Disorder (ADHD) is a chronic, usually persistent, neurodevelopmental condition with genetic and neurobiological roots, associated with a high rate of comorbid neuropsychiatric disorders, the most common of which are anxiety and mood disorders, personality disorders, and substance-related disorders [1,2]. ADHD is among the most common and heritable neurodevelopmental disorders, with a global prevalence of 5.29 % and an 8 % local prevalence in Saudi Arabia, in both children and adults, with a modest increase in male prevalence [3-5].

ADHD is defined as a constant lack of attention, impulsivity, and hyperactivity before age 12 that are developmentally inappropriate and evident in more than one sitting, producing academic, occupational, and social problems [7]. As a result, it affects a person's day-to-day activities, producing disruption in academic, occupational, and social aspects, which impacts their family and community [6]. An ADHD diagnosis can be performed through the clinical examination and rating scales more commonly used in children and youth to help measure the severity of the symptoms and track the response to therapy [8,9].

The biopsychosocial model of managing ADHD can be classified into two types of interventions; the pharmacological type, which includes stimulant and non-stimulant medications, and the non-pharmacological type, which includes psychoeducation, social interventions, behavioral interventions, psychotherapy, and educational/vocational accommodations.

The early diagnosis and appropriate management of ADHD guarantee the best result and reduce the risk of developing other comorbid psychiatric disorders [12]. The diverse clinical presentation, high comorbidities rate, and various elements of ADHD management create a challenge for health care practitioners. It is necessary to have a simplified, user-friendly, and up-to-date protocol to improve the quality of care and health care results for the ADHD population.

B. Aim & Scope

These protocols aim to deliver evidence-based recommendations on assessment and the non-pharmacological and pharmacological management of Attention Deficit Hyperactive Disorder (ADHD). This protocol also aims to reduce the unnecessary use of psychotropics in children under the age of six and to ensure that, when unavoidable, they are prescribed according to best practice.It provides an overview of fundamental principles and practical resources for less experienced employees, which they may implement and discuss with their superiors. Multidisciplinary teams can utilize it as a shared reference point to aid in coordinated treatment, and more experienced professionals can use it as a refresher or training resource. The protocol should be applied within a framework of local policies and procedures

C. Targeted Population

The protocol is intended to be a practical and ready reference for health professionals who work in settings where they will care for patients with ADHD. Given the extensive range of expertise, disciplines, and positions of employees at the MOH, it is impossible to capture the whole scope of specialist practice that can be used by experienced professionals across different disciplines and settings. As a result, this protocol can be applied in several cases.

D. Setting

- Iradah Complex / Hospital and Mental Health.
- Psychiatric clinics in MOH General Hospitals.

E. Methodology

This is the first version of the Saudi MOH practical protocol on managing Attention Deficit Hyperactivity Disorder (ADHD) across the life span. This protocol development is completed through 2 phases:

Phase 1: In the literature, a group of mental health professionals looked for clinical practice protocols for assessing and managing ADHD across the lifespan. Furthermore, another member looked through the MOH's directory for registered drugs listed in international protocols. Several clinical practice protocols emerged from the search, with seven being the most recent and commonly used. Six CPGs for ADHD were chosen for further examination; the American Academy of Pediatrics (AAP) in 2012 [2], the University of Michigan Health System (UMHS) in 2012 [3], and the National Institute of Health and Care Excellence (NICE) in 2016 (updated in 2018) [4], the National Health Medical Research Center (NHMRC) in 2013 [5], the Canadian ADHD Resource Alliance (CADDRA) updated in 2018 [6], the Singapore Ministry of Health (SMOH) in 2014 [7] and finally, the Adapted Saudi Arabian ADHD guidelines (Saudi Arabia 2021) [8]. According to our literature review, a summary evaluation of six of the seven most relevant CPGs was undertaken in 2019 using the AGREE-II tool [9]. The Saudi CPG was created using NICE guidelines and tweaked to fit the Saudi Health System. Since it was tweaked to fit the local system and was based on accessible international guidelines, it was chosen for further assessment. The Saudi CPG paper, as well as the supplementary handbook, were reviewed by four assessors. For each item with a score of less than 6, assessors expressed their explanation in the comment section of the AGREE-II score sheet. Differences of opinion among assessors were handled by requesting individuals who had provided outlying scores to re-assess after a group discussion.

Phase 2: The protocol was sent to a group of experts in the field of Child and Adolescent Psychiatry and Behavioral Pediatrics to provide their input and review. Their input was collected over three weeks, followed by further meetings and assessment for the feedback by the committee.

F. Updating

The first version of this protocol was created in 2022. The protocol will be updated every five years or if any changes or updates are released by international/national protocols, pharmacotherapy references, or MOH formulary.

G. Conflict of Interest

This protocol was developed based on valid scientific evidence. No financial relationships with pharmaceutical, medical device, and biotechnology companies.

H. Funding

No fund was provided.

I. DISCLAIMER

This Clinical protocol is an evidence-based decision-making tool for managing health conditions. It is based on the best information available when writing and is to be updated regularly. This protocol is not intended to be followed as a rigid treatment protocol. It is also not meant to replace the clinical judgment of practicing physicians but is the only tool to help manage patients with ADHD. Treatment decisions must always be made individually, and prescribing physicians must customize care and tailor treatment regimens to patients' unique situations and health histories. Physicians should check the approved product monographs within their institution's formulary for dosage, special warnings, precautions for usage, contraindications, and monitoring of side effects and potential risks. When choosing treatment options, consider any constraints imposed by the institution's formulary. During the decision-making process for picking specific drugs within a recommended specialized class, prescribing physicians should consult their institution's formularies.

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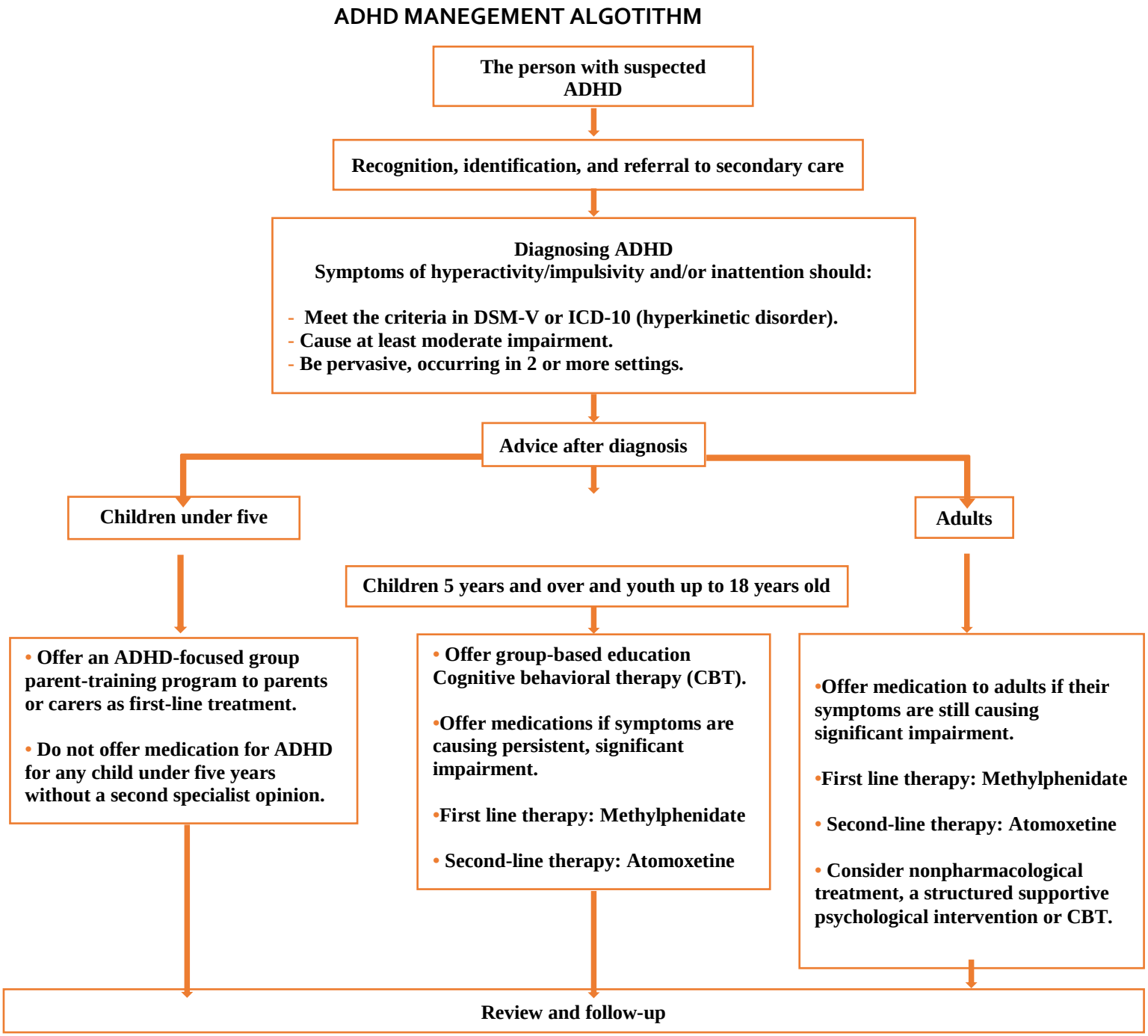
- Managing ADHD (Algorithm)



- ## Management of Attention Deficit Hyperactivity Disorder (ADHD)

A. Non-Pharmacological Management

Children under the age of 5:

ADHD-focused group parent-training programs are the first-line treatment for children under 5[10,11].

Children aged five and over and youth up to 18 years old

ADHD-focused group parent-training programs are the first-line treatment for children aged five and youth [10,11].

Parents and carers of children and youth with mild ADHD, comorbid oppositional defiant disorder, or conduct disorder might consider individual/group training programs.

Consider Cognitive Behavioural Therapy (CBT) for youth with ADHD who have responded well to pharmacological management; however, symptoms are still causing considerable impairment in at least one of the following domains:

- Social skills with peers
- Problem-solving difficulties
- Self-control skills
- Active listening skills

Adults:

Adults with ADHD who have made an informed decision not to take medication or who have difficulty adhering to medication due to tolerability or other factors should consider non-pharmacological treatment.

Provide a structured Cognitive Behavioral Therapy CBT, or supportive psychological intervention focused on ADHD and associate impairments with regular follow-up to determine whether medication is needed.

B. Pharmacological Management:

Baseline assessment

ADHD Patients should have a full assessment prior to starting their medication for ADHD [11], which should include:

1) A review to confirm they continue to meet the criteria for ADHD and need treatment.
2) A review of mental health and social circumstances, including but not limited to the presence of coexisting mental health and neurodevelopmental condition, and risk assessment for substance misuse and drug diversion.
3) A detailed review of physical health, including but not limited to height and weight, baseline pulse and blood pressure, a cardiovascular assessment if there is a family history

or other risk factors, and an electrocardiogram (ECG) if the treatment may affect the QT interval.

Consult for a pediatric cardiology specialist's approval before starting medication for ADHD if there is a history of congenital heart disease or previous cardiac surgery, history of sudden death in a first-degree relative under 40 suggesting a cardiac disease, other cardiogenic symptoms like; shortness of breath on exertion compared with peers, fainting on exertion or in response to fright or noise, palpitations that are rapid, regular, and start and stop suddenly… etc.

Consult for a pediatric hypertension specialist approval before starting medication for ADHD if blood pressure is consistently above the 95th centile for age and height.

Approved Pharmacological Agents in ADHD

Children under the age of 5:

Children under the age of five should receive ADHD-focused caregiver/parents training and environmental modification.

Pharmacological agents are not suggested or approved, although off-label use of immediate-release methylphenidate (Ritalin) can be considered in certain circumstances where non-pharmacological cases are unavailable or do not provide optimal symptom control. For dosing information, refer to table 2.

Children aged five and over and youth up to 18 years old.

The first-line agents are methylphenidates, both immediate and sustained release formulations. A 6-week trial at an adequate dose with limited response warrants a switch to another agent. If stimulants are not tolerated, contraindicated, or show slight improvement, third-line agents such as Atomoxetine and Clonidine can be considered. For dosing information, refer to table 2.

Adults:

Long-acting methylphenidates is the first-line treatment option [10,11]. If stimulants are not tolerated, contraindicated, or show slight improvement, Atomoxetine can be considered a second-line treatment option. For dosing information, refer to table 2.

Monitoring of Pharmacological Interventions

Comorbidity with ADHD is common; stimulants have shown overall efficacy in managing ADHD and associated impairments; however, they are inappropriate for children and adolescents with psychotic illnesses and substance use disorders.

Monitoring requirements (Table 1)

Medication	Monitoring
Methylphenidates A) Immediate-release preparations (e.g. Ritalin) B) Sustained-release preparations (e.g., Concerta)	1- Height should be measured every 3-6 months. 2- Weight should be measured every 3-6 months. 3- Height and weight should be plotted on a growth chart. 4- Monitor vitals, including heart rate and blood pressure, every 3-6 months. 5- Changes in the potential for drug misuse and diversion may come with changes in circumstances and age. In these situations, sustained-release methylphenidate or Atomoxetine may be preferred.
Atomoxetine	While on Atomoxetine, you should observe for: • Agitation and irritability • Suicidal thinking and self-harming behavior, or any unusual changes in behavior, especially during the initial months of treatment/ change in dose. • Switch to mania.
Clonidine Bupropion	Monitor heart rate and blood pressure at baseline, with every dose increase and every 3-6 months due to the risk of bradycardia.

Unadvisable use of antipsychotics in ADHD

Second-generation antipsychotics, such as Risperidone and Aripiprazole, have been widely used off-label for managing ADHD symptoms, especially in children younger than six years old. However, unfortunately, there is no data available from Saudi Arabia to quantify this use and address the related concerns. This increase in use could be hypothesized to be due to issues with the availability of approved pharmacological options or the lack of Saudi FDA approval of a wide range of stimulant and non-stimulant options that are otherwise evidence-based and supported for ADHD management.

There is no evidence to support the use of antipsychotics, especially in children with no underlying comorbidities such as ASD and severe behavioral challenges (NICE, 2020). Hence, the use of antipsychotics for managing ADHD should only be resorted to when the first- and second-line options of nonpharmacological and pharmacological management have been utilized. If antipsychotics are to be utilized, it is essential to discuss with the family the lack of evidence to support it, the possible side effects, and the importance of metabolic monitoring of the child on it. (Appendix CAMESA guideline).

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Management of Children older than five years, youth up to 18 years old, and adults with ADHD (Table 2)

Medication		Indication & Authorization	Dosage	Special Precautions
Stimulants	**Methylphenidates** A) Immediate-release preparations (e.g. Ritalin) B) Sustained-release preparations (e.g., Concerta)	**Authorized** <u>First-line for all age groups</u>	Low doses of immediate-release or sustained-release preparations should be used at first, per starting doses in the Saudi National Formulary (SNF) Sustained-release preparations should be given as a single dose in the morning. Concerta's average duration of action is 12 hours. Immediate-release preparations should be given in two or three doses (if needed). Dose titration: 1- Immediate release (Ritalin): 2- Starting dose is 5 mg PO BID and can be increased by 5-10 mg increments weekly, not to exceed 60 mg PO daily divided dose (BID or TID). 3- Sustained-release	1- In a child or youth whose blood pressure is consistently above the 95th centile for age and height, refer to a pediatric specialist before starting medication for ADHD. 2- consider the following strategies if weight loss is a clinical concern: • Taking medicine either with or after food, instead of before meals • Having additional meals or snacks early in the morning or late at night when the stimulant effects have worn off and consuming high-calorie foods of good nutritional value • Obtaining dietary advice • Taking a planned break from treatment 3- If a child or youth's height over time is adversely influenced by medication (that is, they have not reached the height expected for their age), consider a planned break in treatment over school holidays to allow 'catch-up' growth. 4- If psychotic symptoms emerge

			(Concerta): 4- The starting dose is 18 mg PO daily and can be increased by 18 mg increments weekly, not to exceed 54 mg daily for children and 72 mg daily for youth (13-18 years) and adults. When shifting from Immediate to sustained release: 1- Ritalin 5 mg PO q8h is equivalent to Concerta 18 mg. 2- Ritalin 10 mg PO q8h is equivalent to Concerta 36 mg. 3- Ritalin 15 mg PO q8h is equivalent to Concerta 54 mg. 4- Ritalin 20 mg PO q8h is equivalent to Concerta 72 mg.	while on stimulants, the medication should be withdrawn, and a full psychiatric assessment should be conducted. Atomoxetine could be considered as an alternative in such circumstances. 5- Although there is no evidence that methylphenidate raises the incidence of seizures, a neurological consultation is essential if there is a history of seizures, neurological conditions, or seizures that emerged after starting the medication. Dexamfetamine or Atomoxetine may be considered an alternative when a neurological specialist approves. 6- If tics emerged while on methylphenidate, the following distinctions should be made: • Whether the tics are stimulant-related. • Whether the tic-related impairment surpasses the benefits of the current treatment. In case of stimulant-related tics, options include: • Reduction of the dose of methylphenidate. • Changing to Atomoxetine or stop drug treatment. 7- Stimulants may worsen

				anxiety symptoms in individuals with a history of coexisting anxiety. This issue can be approached by either lowering the dose of the stimulant or adding an SSRI to manage anxiety. In addition, a switch to Atomoxetine may be effective. 8- Symptoms of aggression and suicidality but not completed suicide were reported with stimulants.

Medication		Indication & Authorization	Dosage	Special Precautions
Non-Stimulants	Atomoxetine	**Authorized** <u>Third-line for children over five and youth.</u> <u>Second-line in adults</u> Indicated when: 1- There is a contraindication to the use of stimulants. 2- There is a high risk of developing side effects. 3- With comorbid Tic disorder, Tourette's syndrome, anxiety disorders, Neurological contra-indications, and risk of Stimulant misuse. 4- If stimulants have been tried and showed no desirable effect at the maximum tolerated dose.	<u>In Children > 6 years of age and weighing up to 70kg:</u> • Start with 0.5 mg/kg/ day. Increase after 3-7 days to a target dose of 1.2 mg/kg/day. • The dose can be given once daily or in 2 divided doses; it should not exceed 1.4 mg/kg/ day or 100 mg/ day, whatever is less. <u>In children and youth where weight is over 70kg and in adults:</u> • Start with 40mg once daily and increase after 3-7 days to 80mg once daily or in divided doses. Maximum recommended dose is 100mg/ day. A trial of 6 weeks on a maintenance dosage should be allowed to determine the medication's effectiveness.	1- In the presence of arrhythmia, sustained resting tachycardia, or systolic blood pressure > 95th percentile (or a clinically significant increase) measured on two occasions, a referral to a pediatric specialist is needed. 2- In the presence of seizure exacerbation or the emergence of seizure activities secondary to the introduction of Atomoxetine, the medicine must be discontinued, and a referral to a pediatric neurology specialist is required. 3- Sexual dysfunction and dysmenorrhoea should be monitored as potential side effects of Atomoxetine. 4- A black box warning is associated with the use of Atomoxetine. There is a small risk of new-onset or increased suicidal thinking, especially during the initial phase of treatment.

Medication		Indication & Authorization	Dosage	Special Precautions
Other (OFF-label Drugs)	Clonidine	When there is no sufficient response to stimulants, Atomoxetine.	• Start with 0.1 mg daily. Then, increase by 0.1 mg weekly increments to reach a maximum dose of 0.4 mg PO daily in divided doses with the bigger dose at bedtime.	1- Informed consent should be obtained and documented. 2- Practice caution when prescribing the medication to an individual with cardiovascular diseases such as heart block and bradyarrhythmia. 3- Common adverse effects include constipation, dry mouth, headache, nausea, and postural hypotension. 4- Discontinuation should be gradual in 0.1 mg increments to avoid rebound hypertension.
	Bupropion	It can be used in adults as an off-label medication for ADHD if the approved medications were not tolerated or showed poor response.	• Extended-release Formulation 150 mg PO daily. Then, increase by 150 mg weekly with a target dose of 300-450 mg PO daily.	1- Avoid use in individuals with bulimia nervosa for the risk of bupropion lowering the seizure threshold. 2- Consult neurology in individuals with a seizure disorder for the risk of lowering the seizure threshold.

Review of medication and discontinuation

ADHD medication should be reviewed at least yearly, and a discussion with the person with ADHD (and their families and carers as appropriate) should be made to decide whether the medication should still be used [11].

The review should include a comprehensive assessment of the following:

- Preference of the patient and their family or carers as appropriate.
- Benefits, including how well the current treatment is working throughout the day.
- Adverse effects.
- Clinical need and whether medication has the optimized impact on education and/or employment.
- 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 conditions.
- Need for support and type of support if medication has been optimized, ADHD symptoms continue to cause significant impairment.

If an overall balanced assessment of benefits and harms indicates that this is appropriate, a trial period with drug discontinuation or dose reduction is considered. The reason should be recorded if a decision is made to continue taking the medication [11].

- **Appendix 1 (Vanderbilt Rating Scale – Parents version)**

D3	مقياس فاندربيت للتقييم- معلومات ولي الأمر

تاريخ اليوم : _____

اسم الطفل : _____

تاريخ الميلاد: _____

اسم ولي الأمر : _____ –

هاتف ولي الأمر : _____

تعليمات : يجب مراعاة ما يناسب عمر طفلك عند الإجابة على كل عبارة فيما يلي ، و أثناء تعبئة الاستمارة يُرجى مراعاة سلوكيات الطفل في أثناء الستة الأشهر الماضية ، ثم ضع دائرة حول رقم واحد فقط من الأرقام الموجودة بجانب كل عبارة ، والذي ترى انه يناسب طفلك ، مع ملاحظة أنه يجب الإجابة على كل العبارات باختيار رقم واحد فقط .

هل أُجري هذا التقييم في وقت كان فيه الطفل:

☐ يتناول جرعات دوائية ☐ لا يتناول جرعات دوائية ☐ لست متأكداً

الأعراض		أبداً	أحياناً	معظم الأحيان	طوال الوقت
.1	لا ينتبه لتفاصيل الأمور ويرتكب أخطاء ناتجة عن الإهمال، مثل الواجبات المدرسية.	0	1	2	3
.2	يجد صعوبة في التركيز المستمر على ما يجب عليه إنجازه (خاصة الواجبات المدرسية في الصف والمنزل).	0	1	2	3
.3	يبدو و كأنه لا يستمع حين يوجه له الكلام مباشرة.	0	1	2	3
.4	لا يتبع التعليمات ويفشل في إتمام الأنشطة (ليس بسبب الرفض أو عدم الفهم).	0	1	2	3
.5	يصعب عليه تنظيم المهام والأنشطة، مثل ترتيب غرفته وجدولة أوقات الدرس واللعب والنوم.	0	1	2	3
.6	يتجنب، يكره أو لا يرغب في بدء الأنشطة التي تتطلب منه مجهوداً ذهنياً مستمراً مثل حل واجبات المدرسة المنزلية.	0	1	2	3
.7	يفقد الأدوات و الأشياء الضرورية لإنجاز المهام أو الأنشطة (مثل الألعاب ، الواجبات ، الأقلام ، أو الكتب)	0	1	2	3
.8	يتشتت انتباهه بسهولة للضجيج أو أي مثيرات أخرى				
.9	ينسى نشاطاته اليومية ، مثل تبديل ملابسه قبل النوم وتنظيف اسنانه وترتيب حقيبته.	0	1	2	3
.10	يُعبّر عن ملله بيديه أو قدميه أو يتحرك كثيرا على الكرسي.	0	1	2	3
.11	يترك مكانه حينما يتوقع منه البقاء فيه (كما يحصل أثناء الطعام أو اجتماع الاسرة على برامج التلفاز).	0	1	2	3
.12	يركض أو يتسلق كثيراً في أوقات غير مناسبة حينما يجب أن يبقى جالساً.	0	1	2	3
.13	يواجه صعوبة عندما يُطلب منه اللعب بهدوء أو المشاركة في الألعاب بهدوء.	0	1	2	3
.14	دائم الحركة وكأنه يعمل بمحرك.	0	1	2	3
.15	يتكلم بكثرة.	0	1	2	3
.16	يتسرع بالإجابة قبل إتمام السؤال المطروح عليه.	0	1	2	3
.17	يصعب عليه انتظار دوره، قليل الصبر.	0	1	2	3
.18	يقاطع حديث الآخرين أو يقتحم أنشطتهم.	0	1	2	3
.19	يجادل الكبار.	0	1	2	3

D3	مقياس فاندربيلت للتقييم- معلومات ولي الأمر، تابع				
20.	يفقد أعصابه، (يصبح عصبيا لأمور لا تستوجب ذلك).	0	1	2	3
21.	يرفض الانصياع (اطاعة) لطلبات الكبار أو قوانينهم.	0	1	2	3
22.	يتعمد إزعاج الآخرين.	0	1	2	3
23.	يلوم الآخرين على أخطائه أو تصرفاته السيئة.	0	1	2	3
24.	حساس ويسهل مضايقته من قبل الآخرين.	0	1	2	3
25.	عصبي و مستاء.	0	1	2	3
26.	حقود ولديه رغبة بالانتقام.	0	1	2	3
27.	مستبد في تعامله ويهدد أو يخيف الآخرين.	0	1	2	3
28.	يبدأ بالمشاجرات البدنية.	0	1	2	3
29.	يكذب لينجو من المشاكل أو ليتجنب أي إدانات (مثلاً : يحتال على الآخرين).	0	1	2	3
30.	يتغيب عن المدرسة بدون إذن الأهل والمدرسة.	0	1	2	3
31.	عنيف جسدياً مع الآخرين.	0	1	2	3
32.	سبق له وأن سرق أشياء قيّمة (غالية الثمن).	0	1	2	3
33.	يتعمد تخريب ممتلكات الغير.	0	1	2	3
34.	سبق أن استخدم سلاحاً من الممكن أن يسبب أذى بالغاً (عصا ، سكين ، طوبة ، مسدس).	0	1	2	3
35.	قاسٍ مع الحيوانات	0	1	2	3
36.	سبق له وأن تعمد إشعال حريق بغرض الأذى.	0	1	2	3
37.	سبق له وأن اقتحم منزل شخص آخر أو مقر عمله أو سيارته.	0	1	2	3
38.	سبق له وأن بقي خارج المنزل ليلاً بدون إذن.	0	1	2	3
39.	سبق له وأن هرب من المنزل ليلاً.	0	1	2	3
40.	سبق له وأن أجبر أحدٍ ما على ممارسة نشاط جنسي معه.	0	1	2	3
41.	ينتابه الخوف والهم والقلق.	0	1	2	3
42.	يخاف من تجربة أشياء جديدة خشية ارتكاب الأخطاء.	0	1	2	3
43.	يشعر بعدم (أو دنو) قيمته أو أنه أقل من الآخرين.	0	1	2	3
44.	يلوم نفسه على المشاكل و يشعر بالذنب.	0	1	2	3
45.	يشعر بالوحدة و بأنه غير مرغوب أو غير محبوب، و يدّعي بأن "لا أحد يحبه".	0	1	2	3
46.	يشعر بالحزن والتعاسة أو الإحباط.	0	1	2	3
47.	خجول ويسهل إحراجه.	0	1	2	3

D3	مقياس فاندربيلت للتقييم- معلومات ولي الأمر، تابع					
	الأداء	ممتاز	جيد جداً	متوسط	يعاني من بعض الصعوبة	يعاني من صعوبة شديدة
48.	الأداء المدرسي العام	1	2	3	4	5
49.	القراءة	1	2	3	4	5
50.	الكتابة	1	2	3	4	5
51.	الرياضيات	1	2	3	4	5
52.	علاقته مع والديه	1	2	3	4	5
53.	علاقته مع إخوانه	1	2	3	4	5
54.	علاقته مع أقرانه	1	2	3	4	5
55.	مشاركته الأنشطة المنظمة (مثلاً : الفرق)	1	2	3	4	5

تعليقات :

للاستخدام المكتبي فقط :

عدد الأسئلة من 1- 9 التي احرزت 2 أو 3 نقاط: _____

عدد الأسئلة من 10- 18 التي أحرزت 2 أو 3 نقاط: _____

إجمالي النقاط التي أُحرزت في أسئلة الأعراض من 1-18: _____

عدد الأسئلة من 19- 26 التي أحرزت 2 أو 3 نقاط: _____

عدد الأسئلة من 27- 40 التي أحرزت 2 أو 3 نقاط: _____

عدد الأسئلة من 41- 47 التي أحرزت 2 أو 3 نقاط: _____

عدد الأسئلة من 48- 55 التي أحرزت 4 أو 5 نقاط: _____

متوسط نتيجة الأداء: _____

- **Appendix 2 (Vanderbilt Rating Scale – Teachers version)**

D4	مقياس فاندربيت للتقييم- معلومات المعلمين

اسم المعلم: _____

وقت الحصة : _____

اسم الفصل الدراسي / مدته: _____

تاريخ اليوم : _____

اسم الطفل : _____

الصف : _____

تعليمات : عند التقييم ، يجب مراعاة ما يناسب عمر الطفل الذي سيُشخص عند كل عبارة من العبارات التالية ، و كذلك يجب أن يعكس سلوك الطفل من آخر استمارة تقييم تم تعبئتها. يرجى ذكر عدد الأسابيع أو الشهور التي تمكنت فيها من تقييم السلوكيات : _____. ضع دائرة حول رقم واحد فقط من الأرقام الموجودة بجانب كل عبارة ، و الذي تراه يناسب التلميذ ، مع ملاحظة أنه يجب الإجابة على كل العبارات باختيار رقم واحد فقط

هل أُجري هذا التقييم في وقت كان فيه الطفل
☐ يتناول جرعات دوائية ☐ لا يتناول جرعات دوائية ☐ لست متأكداً

	الأعراض	أبداً	أحيانا	معظم الأحيان	طوال الوقت
1.	لا ينتبه لتفاصيل الأمور ويرتكب أخطاء ناتجة عن الإهمال، مثل الواجبات المدرسية.	0	1	2	3
2.	يجد صعوبة في التركيز المستمر على المهام والأنشطة.	0	1	2	3
3.	يبدو وكأنه لا يصغي حين يوجه له الكلام مباشرة .	0	1	2	3
4.	لا يتبع التعليمات و يفشل في إتمام الأعمال المدرسية، (ليس بسبب الرفض أو عدم الفهم).	0	1	2	3
5.	يصعب عليه ترتيب المهام والأنشطة، مثل ترتيب دُرجه و طاولته في الفصل.	0	1	2	3
6.	يتجنب ، يكره أو لا يرغب في بدء الأنشطة التي تتطلب منه التركيز الذهني المستمر مثل حل مسألة حسابية في الفصل.	0	1	2	3
7.	يفقد الأدوات و الأشياء اللازمة لإنجاز المهام أو الأنشطة مثل الواجبات المدرسية ، الأقلام ، أو الكتب).	0	1	2	3
8.	يتشتت انتباهه بسهوله مع المثيرات الخارجية				
9.	ينسى نشاطاته اليومية ، مثل إحضار الواجب معه إلى المدرسة.	0	1	2	3
10.	يُحرِّك عن ملله بيديه أو قدميه أو يتحرك كثيرا على الكرسي.	0	1	2	3
11.	يغادر مقعده في الصف أو في أي مكان يستلزم منه البقاء فيه.	0	1	2	3
12.	يركض أو يتسلق كثيراً عندما يتطلب منه الجلوس في مقعده.	0	1	2	3
13.	لديه صعوبة في المشاركة في الألعاب التي تتطلب الهدوء.	0	1	2	3
14.	دائم الحركة و كأنه يعمل بمحرك.	0	1	2	3
15.	يتكلم بكثرة.	0	1	2	3
16.	يتسرع بالإجابة قبل إتمام المعلم للسؤال.	0	1	2	3
17.	يصعب عليه أن ينتظر دوره.	0	1	2	3
18.	يقطع محادثات الآخرين أو يتطفل على أنشطتهم .	0	1	2	3
19.	يفقد أعصابه (يصبح عصبي لأسباب تافهة).	0	1	2	3
20.	يرفض الانصياع لطلبات أو قوانين الكبار.	0	1	2	3

D4	مقياس فاندربيلت للتقييم- معلومات المعلمين، تابع

اسم المعلم: _____

وقت الحصة : _____

اسم الفصل الدراسي / مدته: _____

تاريخ اليوم : _____

اسم الطفل : _____

الصف : _____

تابع الأعراض		أبداً	أحيانا	معظم الأحيان	طوال الوقت
21.	دائماً غاضب أو مستاء.	0	1	2	3
22.	حقود و يميل إلى الانتقام.	0	1	2	3
23.	يقسو ، يهدد ، أو يخيف الآخرين.	0	1	2	3
24.	يبدأ المشاجرات الجسدية .	0	1	2	3
25.	يكذب ليحصل على مكافأة أو ليتجنب أي عقوبات، مثلاً يحتال على الآخرين.	0	1	2	3
26.	عنيف جسدياً مع الآخرين.	0	1	2	3
27.	سبق له أن سرق أشياء قيّمة.	0	1	2	3
28.	يتعمد تخريب ممتلكات الغير.	0	1	2	3
29.	يشعر بالخوف و الاضطراب و القلق.	0	1	2	3
30.	خجول و يسهل إحراجه.	0	1	2	3
31.	يخاف من تجربة أشياء جديدة خشية ارتكاب الأخطاء.	0	1	2	3
32.	يشعر بعدم (دنو) قيمته أو أنه أقل منزلة من الآخرين	0	1	2	3
33.	يلوم نفسه على المشاكل و دائماً يشعر بالذنب.	0	1	2	3
34.	يشعر بالوحدة وبأنه غير مرغوب أو غير محبوب و يشكو من "أن لا أحد يحبه".	0	1	2	3
35.	يشعر بالحزن و التعاسة أو الإحباط.	0	1	2	3

الأداء الأكاديمي		ممتاز	جيد جداً	متوسط	يعاني من بعض الصعوبة	يعاني من صعوبة شديدة
36.	القراءة	1	2	3	4	5
37.	الرياضيات	1	2	3	4	5
38.	التحرير كتابة	1	2	3	4	5

الأداء السلوكي في الفصل		ممتاز	جيد جداً	متوسط	يعاني من بعض الصعوبة	يعاني من صعوبة شديدة
39.	علاقته بأقرانه	1	2	3	4	5
40.	اتباع التعليمات	1	2	3	4	5
41.	عرقلة الحصة	1	2	3	4	5
42.	انجاز المهام	1	2	3	4	5
43.	مهارات التنظيم	1	2	3	4	5

التعليقات :

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D4	مقياس قدرات للتقييم- معلومات المعلمين، تابع

الرجاء تسليم الاستمارة لـ : _____

العنوان البريدي : _____

_____

رقم الفاكس : _____

للاستخدام المكتبي فقط :

عدد الأسئلة من 1- 9 التي احرزت 2 أو 3: _____

عدد الأسئلة من 10- 18 التي أحرزت 2 أو 3: _____

إجمالي النقاط التي أُحرزت في أسئلة الأعراض من 1-18: _____

عدد الأسئلة من 19- 28 التي أحرزت 2 أو 3: _____

عدد الأسئلة من 29- 35 التي أحرزت 2 أو 3: _____

عدد الأسئلة من 36- 43 التي أحرزت 4 أو5: _____

متوسط نتيجة أسئلة الأداء : _____

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- ## Appendix 3 – Risperidone Monitoring Requirements

Monitoring Safety of Second-Generation Antipsychotics (SGA) in Children Based on the CAMESA Guidelines

Patient Name: _____ Gender: _____ DOB (YYYY/MM/DD): _____

SGA Medication: Risperidone (Risperdal) _____ Target Symptoms (e.g. tics, rage, psychosis): _____

Parameter		Pre-Treatment Baseline	1 Month	2 Month	3 Month	6 Month	9 Month	12 Month
General Information:								
Assessment Date (YYYY/MM/DD):								
Patient Age at Assessment:								
Daily Dose of risperidone:		mg	mg	mg	mg	mg	mg	mg
Physical Examination Maneuvers:								
Height (cm)								
Height percentile [1]	Round to nearest 5, 10, 25, 50, 75, 90, or 95 %ile							
Weight (kg)								

Weight percentile [1]	Round to nearest 5, 10, 25, 50, 75, 90, or 95 %ile							
BMI (kg/m²)[1]		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
BMI percentile [1]	Use CDC calculator to calculate value[1]							
Waist Circumference (at level of umbilicus) (cm)								
Waist Circumference percentile [2]	>90, **or** round to nearest 10, 25, 50, 75, or 90 %ile							
Systolic Blood Pressure (mm Hg)								
Systolic Blood Pressure percentile [3]	Provide range (<50, 50-90, 90-95, 95-99, or ≥99)							
Diastolic Blood Pressure (mm Hg)								
Diastolic Blood Pressure percentile [3]	Provide range (<50, 50-90, 90-95, 95-99, or ≥99)							
Neurological Examination:								

Neurological Exam completed?[4]							
Neurological Exam Normal or Abnormal?							

Laboratory Evaluations:								
Test	**Normal Values**							
Fasting Plasma Glucose[5]	≤ 6.1 mmol/L	**5**			**5**	**5,8**		**5, 7**
Fasting Insulin[6, 7]	≤ 100 pmol/L	**6**			**6**	**6,8**		**6, 7**
Fasting Total Cholesterol[7, 8]	< 5.2 mmol/L					**8**		**7**
Fasting LDL-C[7, 8]	< 3.35 mmol/L					**8**		**7**
Fasting HDL-C[7, 8]	≥ 1.05 mmol/L					**8**		**7**
Fasting Triglycerides[7, 8]	< 1.5 mmol/L					**8**		**7**
AST[7]						**7**		**7**
ALT[7]						**7**		**7**
Prolactin[9, 10]						**10**		**10**
Amylase[11]		**11**	**11**	**11**	**11**	**11**	**11**	**11**
Other (e.g. A1C, OGTT, etc.); ***Please List***								
Physician Initials:								

Notes:

1. Use CDC age and gender-specific growth charts at *http://www.cdc.gov/growthcharts/* to determine percentiles for height, weight & BMI.

CDC **BMI Calculator** is found at:
http://apps.nccd.cdc.gov/dnpabmi/Calculator.aspx?CalculatorType=Metric

2. Use http*://www.idf.org/webdata/docs/Mets_definition_children.pdf* (Tables 4 to 6 on pgs. 18-19) to determine age, gender, & ethnicity-specific percentiles for waist circumference.
3. Use http://pediatrics.aappublications.org/content/114/Supplement_2/555.full.pdf+html (Tables 3 to 4 on pgs. 558-9) to determine age, gender, & height specific percentiles for blood pressure.
4. Tools available for monitoring extrapyramidal symptoms include Abnormal Involuntary Movement Scale (AIMS), Simpson Angus Scale, Extrapyramidal Symptom Rating Scale, & Barnes Akathisia Rating Scale.
5. When fasting plasma glucose values are between 5.6 and 6.0 mmol/L, an oral glucose tolerance test (OGTT) should be performed.
6. When fasting insulin levels > 100 pmol/L, an OGTT should be performed. The normal reference range may vary between centers.
7. Testing is recommended in overweight or obese children.
8. If three-month screening laboratory tests are normal, the BMI has remained under the 85th percentile, & the waist circumference has remained under the 90th percentile, repetition of lab work for cholesterol, LDL-C, HDL-C, & triglycerides can be made on a yearly basis.
9. Assessment of prolactin levels should be completed according to protocol except when the patient is displaying clinical symptoms of hyperprolactinemia (i.e., menstrual irregularity, gynecomastia, or galactorrhea), in which case more frequent monitoring may be warranted. Risperidone has the greatest effect on prolactin.
10. The decision to measure prolactin at these time points may be based on the presence of clinical symptoms of hyperprolactinemia, such as menstrual irregularity, gynecomastia, or galactorrhea. If no symptoms of hyperprolactinemia are present, recommend monitoring of prolactin on a yearly basis.
11. It is recommended that amylase levels be checked when the patient presents with clinical symptoms of pancreatitis (i.e., abdominal pain, nausea, vomiting).

Dark Gray Shading = not recommended

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