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# Appraisal of clinical practice guidelines for the management of attention deficit hyperactivity disorder (ADHD) using the AGREE II Instrument: a systematic review

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## REVIEW TITLE AND BASIC DETAILS

### Review title
Appraisal of clinical practice guidelines for the management of attention deficit hyperactivity disorder (ADHD) using the AGREE II Instrument: a systematic review

### Review objectives
The aim is to explore the quality of and critically appraise recently published evidence-based clinical practice guidelines for the management of Attention Deficit Hyperactivity Disorder (ADHD)

### Keywords
ADHD, AGREE II instrument, Attention Deficit Hyperactivity Disorder, clinical practice guidelines, evidence, neurology, pediatrics, psychiatry, psychology, quality assessment

## SEARCHING AND SCREENING

### Searches
Data Sources include:-

• Guidelines International Network http://www.g-i-n.net/library/international-guidelines-library

• National Guidelines Clearinghouse http://www.guidelines.gov

• EBSCO - DynaMed Plus https://dynamed.ebscohost.com/

• National Institute for Health and Clinical Excellence http://www.nice.org.uk/

• Scottish Intercollegiate Guidelines Network http://www.sign.ac.uk/index.html

• US National Library of Medicine, National Institutes of Health (MEDLINE/ PubMed) http://www.ncbi.nlm.nih.gov/PubMed (for CPGs published as full-text articles)

• Google Scholar (free) http://scholar.google.com/ (for CPGs published as full-text articles) • Plus CPGs published by national and international specialized scientific societies/ associations relevant to ADHD (e.g. American Academy of Pediatrics, American Psychiatric Association, European Psychiatric Association, etc.).

Additionally, we will also conduct internet searches for CPGs published online only.

### Study design
Clinical Practice Guidelines

## ELIGIBILITY CRITERIA

### Condition or domain being studied
ADHD in children and adolescents. The inclusion or exclusion of adults will have been at the discretion of the Source CPG developers and age limits, co-morbidities, etc, should have been defined by them. We will assess how this was reported as part of our appraisal using the AGREE II Instrument.

### Population
The participants, including inclusion and exclusion criteria, should have been specified by the guideline developers and cannot be known until we begin the appraisal of the guidelines identified by our searches. We will include only CPGs with a section targeting children and adolescents. Relevant items of the AGREE II Instrument will be used to assess how well the scope of the CPG was reported.

### Intervention(s) or exposure(s)
The interventions included within the included CPGs will have been pre-defined by the CPG development group to match the individual requirements within the scope. We will only consider CPGs that include the comprehensive management of ADHD. The criteria of the AGREE II Instrument will be used to assess how well the included interventions were reported and presented. Identified key target interventions include diagnosis and assessment (i.e. parent, carer, teacher, or patient complaints, history and physical examination, psychological tools, differential diagnosis, and investigations) and treatment (i.e. psychosocial interventions, pharmacological treatment, comorbidities, parents/ carers and home, monitoring, special cases, transition of care from childhood to adulthood, complementary medicine, and treatment of complications of pharmacological treatment)

### Comparator(s) or control(s)
Comparator(s) and control groups with inclusion and exclusion criteria may or may not have been pre-defined by the CPG development group. Comparators would not usually be defined when multiple interventions are included in the recommendations of the CPG.

### Context
Primary, Secondary and Tertiary healthcare facilities that provide care for patients with ADHD

In addition to School-based and Home-based healthcare services.

## OUTCOMES TO BE ANALYSED

**Main outcomes** 1 change

(1) To standardize evidence-based assessment and management of ADHD including Early diagnosis and intervention of ADHD and Multi-modal interventions for ADHD.

(2) To improve patient target outcomes and safety (e.g. symptoms of ADHD, academic performance, social relationships, parent-child interactions and family stress, and risk for serious accidental injury).

*Measures of effect*
Not applicable.

**Additional outcomes** 1 change

(1) To decrease variation of practice.

(2) To improve patient-related adverse health outcomes that co-occur with ADHD (e.g. substance abuse disorder and smoking, sleep difficulties/disorders, physical injuries, etc.).

*Measures of effect*
Not applicable.

## DATA COLLECTION PROCESS

### Data extraction (selection and coding)

Five reviewers including one CPG methodologist will independently screen the titles and abstracts of all searched documents and determine the ones for full-text review and eligible CPGs for ADHD. Disagreements will be resolved through discussion and consensus with the reviewers. The same five reviewers will search the internet for CPGs published online only. Information relevant to rating of each of the 23 items on the AGREE II Instrument will be extracted from included CPGs by utilizing the online tool (MY AGREE Plus) that is freely available and accessible from the AGREE Enterprise website (http://www.agreetrust.org/). The authors will then independently score every item on a 1-7 scale based on how well each CPG addresses the listed questions and the AGREE criteria. An additional validation of the included CPGs will be conducted for inclusion of systematic reviews in the evidence-based with their category whether Cochrane systematic reviews or others.

### Risk of bias (quality) assessment

The AGREE II Instrument addresses the reporting of CPGs. It does not assess aspects of study design quality such as appropriateness of the methods used or trustworthiness of the recommendations. We are not aware of any validated instrument for assessing risk of bias of CPGs. Some of the items on the AGREE II checklist are relevant to the detection of potential sources of bias (e.g. bias due to under-representation of some stakeholders in the development process - items 4 and 5, reporting bias - items 9-12, bias due to conflict of interest/independence of funding bodies - items 22 and 23).

## PLANNED DATA SYNTHESIS

### Strategy for data synthesis

Descriptive statistics will be generated and presented in tabular format to summarize the characteristics of the CPGs eligible for inclusion. Once all seven AGREE appraisers have scored each item on the AGREE II, they will hold a meeting to discuss discrepancies between scores and address any obvious discrepancies and errors. For every included CPG, we will use the 'My AGREE PLUS' (http://www.agreetrust.org/my-agree/) to record scores and to keep online records of individual appraiser's scores. For every single CPG, a standardized quality score will be calculated for each of the six domains of the AGREE II Instrument, using the equation presented in the AGREE II User's Manual. In summary, standardized domain scores will be calculated by summing up all the appraisers' scores of the individual items in a domain and by scaling the total as a percentage of the maximum possible score for that domain. This calculation is automatically generated on the My AGREE PLUS platform. The overall quality of the included CPGs in each domain of the AGREE II will be presented through the two overall assessments included in the instrument. Since the six domains of the AGREE II are independent, standardized domain quality scores will not be aggregated.

### Analysis of subgroups or subsets

The references section of included CPGs will be reviewed and assessed for inclusion of 'Systematic Reviews' in the evidence-base of these CPGs (especially the Cochrane systematic reviews).

## REVIEW AFFILIATION, FUNDING AND PEER REVIEW

### Review team members

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### Review affiliation

The Saudi ADHD Society, Riyadh, Saudi Arabia

### Funding source

The unified ADHD Clinical Practice Guidelines Project is the strategic project 7.2 of the Saudi ADHD Society for the period 2017-2019. The Saudi ADHD Society is a registered non-profit under licence 474 from the Saudi Ministry of Labor and Social Development, and the project received the Ministry approval (No. 52476) on 5/8/1438.The project is entirely funded by the Saudi ADHD Society.No funding received from any pharmaceutical or industrial company

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## TIMELINE OF THE REVIEW

### Review timeline

Start date: 04 March 2017. End date: 30 November 2017

### Date of first submission to PROSPERO

12 September 2018

### Date of registration in PROSPERO

24 November 2017

## CURRENT REVIEW STAGE

### Publication of review results 1 change

The intention is to publish the review once completed.The review will be published in English

Amer YS, Al-Joudi HF, Varnham JL, Bashiri FA, Hamad MH, Al Salehi SM, et al. (2019) Appraisal of clinical practice guidelines for the management of attention deficit hyperactivity disorder (ADHD) using the AGREE II Instrument: A systematic review. PLoS ONE 14(7): e0219239. https://doi.org/10.1371/journal.pone.0219239

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0219239#sec006

### Stage of the review at this submission

| Review stage | Started | Completed |
|---|---|---|
| Pilot work | ✓ | ✓ |
| Formal searching/study identification | ✓ | ✓ |
| Screening search results against inclusion criteria | ✓ | ✓ |
| Data extraction or receipt of IP | ✓ | ✓ |
| Risk of bias/quality assessment | ✓ | ✓ |
| Data synthesis | ✓ | ✓ |

### Review status

The review is completed.

## ADDITIONAL INFORMATION

### Additional information 1 change

This review is being undertaken as part of the planning for the CPG adaptation project utilizing the ADAPTE methodology for the Unified CPG for ADHD Project of the Saudi ADHD Society.

### PROSPERO version history

- Version 1.2 published on 22 Oct 2019
- Version 1.1 published on 24 Oct 2018
- Version 1.0 published on 05 Oct 2017

### Review conflict of interest

None known

### Country

Saudi Arabia

### Medical Subject Headings

Attention Deficit Disorder with Hyperactivity; Humans

### Disclaimer