Identification, Diagnosis & Treatment of Adolescent Attention Deficit / Hyperactivity Disorder

A Package for First Contact Health Providers

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Identification, Diagnosis & Treatment of Adolescent Attention Deficit / Hyperactivity Disorder

A Package for First Contact Health Providers

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**Introduction**
This package is provided as an overview of attention deficit / hyperactivity disorder (ADHD) in adolescents and how first contact health providers can identify and address this issue in an effective, clinically relevant and best evidence-driven manner.

The package is divided into two parts:

1) **Overview**
   An informational overview to help first contact health providers understand how to identify, diagnose and treat ADHD in adolescents.

2) **Toolkit**
   A toolkit for first contact health providers containing useful resources for assessing and treating ADHD in adolescents.

Throughout this package hyperlinked text is highlighted in [blue underline](#) that, when clicked, will link to either a resource within the package or to an external website where additional information can be found.

This program offers the health care provider a comprehensive, sequential and rational framework for addressing adolescent ADHD. Each health care provider will be able to extract from this program those components that they can best apply in their own practice setting. By building on the information presented in this course and by utilizing those components of the toolkit that best meet the realities of their practice each health care provider can customize their approach to the treatment of the young person with ADHD.

For health care practices in which there exist family care teams, different providers can use the various components of the toolkit, with the team leader being responsible to ensure integrated monitoring of ongoing care.

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**Primary health care providers can appropriately deliver effective treatment for ADHD to adolescents. Here’s how…**

**Key steps**
1. [Identification of youth at risk for ADHD](#)
2. [Useful methods for screening and diagnosis of ADHD in the clinical setting](#)
3. [Treatment template](#)
4. [Suicide assessment](#)
5. [Safety and contingency planning](#)
6. [Referral flags](#)
Step 1. Identification of youth at risk for ADHD

Child and Adolescent Mental Health Screening Questions

Historical factors:
1. Parent has a history of a mental disorder (including substance abuse/dependence)
2. Family has a history of suicide
3. Youth has a childhood diagnosis of a mental disorder, learning difficulty, developmental disability, behavioural disturbance or school failure
4. There has been a marked change in usual emotions, behaviour, cognition or functioning (based on either youth or parent report)

One or more of the above answered as YES, puts child or youth into a high risk group. The more YES answers, the higher the risk.

Current situation:
1. Over the past few weeks have you been having difficulties with your feelings, such as feeling sad, blah or down most of the time?
2. Over the past few weeks have you been feeling anxious, worried, very upset or are you having panic attacks?
3. Overall, do you have problems concentrating, keeping your mind on things or do you forget things easily (to the point of others noticing and commenting)?

If the answer to question 1 is YES – for adolescents, consider a depressive disorder and apply the KADS evaluation and proceed to the Identification, Diagnosis and Treatment of Adolescent Depression.

If the answer to question 2 is YES – consider an anxiety disorder, apply the SCARED evaluation and proceed to the Identification, Diagnosis and Treatment of Child or Youth Anxiety Disorders

If the answer to question 3 is YES – consider ADHD, apply the SNAP evaluation and proceed to the Identification, Diagnosis and Treatment of Child or Youth ADHD.

Remember that some cases of anxiety and depression may demonstrate positive scores on the concentration component of the SNAP. If no hyperactivity components are identified on the SNAP review for ADHD please assess for depression and anxiety using KADS and SCARED.

Next steps:
- If patient is positive for depression and either Anxiety or ADHD and the patient is an adolescent, continue to apply the KADS protocol for Depression.
• If positive for Depression, treat the depression and following remission review for presence of continued Anxiety Disorder or ADHD.
• If positive for Anxiety Disorder at that time, refer to specialty mental health services for specific anxiety disorder psychotherapy (CBT) and continue SSRI medication treatment.
• If positive for ADHD at that time, add a psychostimulant medication following the protocol in the ADHD module or refer to specialty mental health services.

Fast Facts about Adolescent Attention Deficit / Hyperactivity Disorder

• No other psychiatric diagnosis in children and adolescents receives as much attention from the media and is surrounded by as much controversy as ADHD.
• ADHD is a neurodevelopmental psychiatric disorder with onset in childhood that impairs social, academic and occupational functioning in children and adolescents. It may continue into adulthood.
• The prevalence of ADHD in Canada is approximately 5–10 percent, in youth.
• Adolescents with ADHD are at greater risk than their peers for poorer academic and occupational achievement. Substantial numbers of young people with ADHD have a learning disability.
• Longitudinal outcome studies of youths with ADHD show increased rates of teen pregnancies, divorce, substance misuse/abuse and other interpersonal difficulties.
• ADHD is associated with other serious mental disorders such as: Substance Abuse/Dependence, Conduct Disorder, and Oppositional Defiant Disorder.
• Youth diagnosed with ADHD are more prone to physical injury and accidental poisoning.
• Adolescents with ADHD have higher rates of traffic accidents.
• Early and persistent treatment with effective therapies including medications, psychoeducation and/or behavioural intervention may significantly improve the outcomes of youth with ADHD.
Identification of Youth at Risk for ADHD

First contact health providers are in an ideal position to identify youth at risk of ADHD. The following table has been compiled from scientific literature and is presented in a format that can be efficiently used by a health provider to identify those young people who should be periodically monitored for onset of ADHD.

ADHD disorder in Youth, Risk Identification Table

<table>
<thead>
<tr>
<th>Significant risk effect</th>
<th>Moderate risk effect</th>
<th>Possible “group” identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A diagnosis of ADHD in childhood</td>
<td>1. Exposure to severe environmental factors (i.e., lead contamination, prenatal exposure of alcohol and cigarette, birth trauma, low birth weight, head injuries).</td>
<td>1. School failure or learning difficulties</td>
</tr>
<tr>
<td>2. Family history of ADHD</td>
<td>2. Psychosocial adversity such as maternal depression, paternal criminality, chaotic home environment, and poverty.</td>
<td>2. Socially isolated from peers, behavioural problems (including gang activity, legal problems) – accident prone (including traffic violations, accidents)</td>
</tr>
<tr>
<td>3. Family history of mental disorders (affective, anxiety, tics, or conduct disorder)</td>
<td>3. Substance misuse and abuse (early onset of use including cigarette and alcohol)</td>
<td>3. Bullying (victim and/or perpetrator)</td>
</tr>
</tbody>
</table>

What to do if a youth is identified as at risk?

Educate about risk
ADHD tends to run in families. If there is a family history of ADHD in either parent, it is not inevitable but it may occur in one or more of the children. If it occurs, the sooner it is diagnosed and effectively treated, the better. It is better to check out the possibility that problems may be ADHD-related than to ignore symptoms if they occur. Primary care health professionals who provide services to families are well placed to educate parents about potential risks for ADHD in their children. Family members (youth included) should be made aware of their familial risk for mental disorders the same way they are made aware of their family risk for other disorders (e.g.: heart disease, breast cancer, etc.). Access additional resources about ADHD for parents.

Obtain and record a family history of mental disorder
Primary health care providers should take and record a family history of mental disorders (including substance abuse) and their treatment (type, outcome) as part of their routine history for all patients. This will help identify young people at risk on the basis of family history.

Agree on a “clinical review” threshold
The young person with ADHD does not feel unwell. Similar to a person with hypertension, they do not feel “sick”. However, they may be experiencing their environment as negative to them, and they may have significant functional problems, such as school difficulties, academic underachievement, troublesome interpersonal relationships with family members and peers, low self-esteem, demoralization, frequent accidents or substance abuse. The appearance of any of these problems in a young person known to be at risk should trigger an urgent clinical review.

Arrange for a standing “mental health check-up”
The mental health check-up could be a 15-minute office/clinical visit every 3 to 6 months during the teen years in which a clinical screening for ADHD is considered, depending on risk profile or current difficulties. The “SNAP-IV Teachers and Parents Rating Scale 18-item” can be a useful tool. More information about these tools and the links to access them are provided in the Useful Methods for Screening and Diagnosis section below.

Another useful approach is to ask the young person or parent to bring in the youth’s school reports. Check for a pattern of declining grades, frequent lateness or frequent absences. In young people with ADHD, teachers’ comments that note frequently that: homework is usually not completed; there are concentration problems; the youth is overly active or inattentive, etc. There may also be reports of behavioural problems or even school suspensions. These patterns may indicate ADHD.

Confidentiality and understanding that treatment is by informed consent
Part of the education about risk should include a discussion about confidentiality and informed consent to treatment for both the young person and the parents. This information may make it easier for the young person to access care if they become distressed as they may be more comfortable sharing their problems with the practitioner if confidentiality is assured. For parents, knowing what they can expect in terms of being informed about their child may help them feel more comfortable about how treatment will occur if it becomes necessary.

Step 2. Useful methods for screening and diagnosis of ADHD in the clinical setting
An overall mental health screening should be part of general health visits. The ADHD-specific screening has to be especially directed to youths showing a difficult temperament, impulsivity, highly active or underachieving at school, but not limited to these clinical presentations. Be aware that inattention symptoms tend to be subtler in girls. Girls with ADHD may also exhibit fewer symptoms of hyperactivity than boys. Also, from a developmental perspective, the presentation of ADHD symptoms may change over time. As they grow and develop, adolescents
may appear to be less hyperactive while they continue to experience inner restlessness, impulsivity and inattention.

As teenagers generally visit health care providers infrequently, screening could be applied to both high risk and usual risk youth at scheduled clinical contacts. Teen visits for contraception or sexual health issues provide an excellent opportunity to screen for mental health problems. However most teens will not present de novo to a family doctor with ADHD symptoms, as there is usually a history of childhood onset.

A recommended clinician monitoring tool for ADHD is the “SNAP-IV Teacher and Parent 18 items Rating Scale”. This is a norm-referenced checklist found in the toolkit below that is designed to determine if symptoms of ADHD are present. This checklist can be completed by a parent / caregiver / educator / youth and can be used by a healthcare provider to perform an assessment.

When using this tool ensure that you provide the young person, their parents and teacher(s) with feedback on their results!

Other common disorders can be seen during adolescence, and two that should be screened for (either independently or as co-morbid with ADHD) are Anxiety Disorders and Major Depressive Disorder. It is also highly recommended to screen for suicidal risk as a part of every mental health check up.

The following clinical tools will allow you to do the screening effectively and efficiently:

- The Kutcher Adolescent Depression Screen (KADS) is a 6-item screen for depression.
- The 18-item Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A).
- The Tool for Assessment of Suicide Risk (TASR) is a useful template for assessing suicide risk.

The clinical tools above can be filled out by the clinician at the time of interview with the young person and are available in a number of different languages.

The 6-item KADS (Kutcher Adolescent Depression Scale), the Tool for Assessment of Suicide Risk (TASR) and the 18-item K-GSADS-A (Kutcher Generalized Social Anxiety Disorder Scale for Adolescents) may be used by clinicians, without written permission from the author, provided that they are used appropriately for clinical purposes and/or education. They are under copyright and cannot be modified, otherwise altered, or distributed, or sold, or used for any other purpose.

Clinicians who wish to use the KADS, K-GSADS-A or TASR in their work are free to apply it using the directions accompanying the scale. Clinicians who would like training on the KADS, K-GSADS-A, and the tool for assessing teen suicide risk (TASR) are encouraged to contact the office of the Dalhousie University and IWK Health Centre at (902) 470-6598.
Copies of the KADS, K-GSADS-A and TASR are available free of charge at [www.teenmentalhealth.org](http://www.teenmentalhealth.org).

**Diagnosis of ADHD in Adolescence**

Attention Deficit / Hyperactivity Disorder (ADHD) is a neurodevelopmental psychiatric disorder with onset in childhood that impairs social, academic, and occupational functioning in children, adolescents, and adults. ADHD affects 5 – 10% of youth. Approximately 65% of children with ADHD continue to meet diagnostic criteria during adolescence. In adulthood, the prevalence of ADHD is about 3 – 5%.

Diagnostically, young people with ADHD exhibit **persistent, substantial and impairing** symptoms in the following domains: **Inattention; Hyperactivity; Impulsivity**.

The disorder **must** onset prior to age seven and **must** be evident across two or more functional domains such as home, school, or in the community.

Any adolescent may show inattention, distractibility, impulsivity, or hyperactivity at times, but the adolescent with ADHD shows these symptoms and behaviours more frequently, persistently and severely than other youth of the same age or developmental level. Again, these symptoms and behaviours must be present in two or more settings (e.g.: school and home) and cause significant functional impairment. Symptoms of ADHD that occur in one setting only or that do not cause functional impairment are not ADHD.

ADHD will usually require health provider intervention, while normal neurodevelopmental changes in cognition or behaviour (such as impulsive decision making, increased over-activity) are usually of short duration (less than a couple of weeks), occur sporadically and are likely to resolve spontaneously or be substantially ameliorated by social support or environmental modification alone. It is normal for teenagers to make occasional impulsive decisions that lead to negative outcomes. This is not ADHD.

In assessing mental health problems, it is essential to differentiate between signs and symptoms that arise as an expected (or normal) response to circumstances or developmental changes in normal adolescents, from those that may signal the onset of a mental disorder.

Consider this differentiation using the model below of “Distress versus Disorder”.
Distress

- Usually associated with an event or series of events (often stress related)
- Functional impairment is usually mild
- Transient – will usually ameliorate with change in environment or removal of stressor
- Professional intervention not usually necessary
- Can be a positive factor in life – person learns new ways to deal with adversity and stress management
- Social supports such as usual friendship and family networks help
- Counseling and other psychological interventions can help
- Medications should not usually be used

Disorder

- May be associated with a precipitating event, but usually may onset spontaneously. Sometimes an event (such as a traffic accident) may lead to a clinical assessment that identifies presence of ADHD.
- Functional impairment may range; mild – severe
- Long lasting or may be chronic, environment may modify but not ameliorate
- External validation (syndromal diagnosis: DSM*/ICD*)
- Professional intervention is usually necessary
- May increase adversity due to its effect on creation of negative life events (e.g., ADHD can lead to academic underachievement and dropping out)
- May lead to long term negative outcomes (substance abuse, troublesome interpersonal relationships, low self-esteem, etc.)
- Social supports and specific psychological interventions (counseling, psychotherapy) are often helpful
- Medications may be needed but must be used properly

* DSM: Diagnostic and Statistical Manual
* ICD – International Classification of Diseases

Diagnosis of Attention Deficit / Hyperactivity Disorders is currently made using DSM IV-TR criteria. There are 3 subcategories of ADHD, these are:

1. Predominantly Inattentive subtype (comprising about 20 - 30% of children and adolescents with ADHD) - manifesting as daydreaming, distractibility and difficulty focusing on a single task for a prolonged period.

2. Predominantly Hyperactive-Impulsive subtype (5 – 10%) - manifesting as situational inappropriate and excessive motor activity such as fidgeting, excessive talking, impulsive actions and restlessness.

3. Combined Inattentive / Hyperactive subtype (60 – 70%) – manifesting as a combination of the above.
There are no biological tests that are diagnostic of ADHD. Diagnosis of ADHD is reliant on a careful clinical assessment of signs and symptoms and clinical history. Clinicians will need to carry out the evaluation over more than one visit. Often two to three visits are needed. There is no great hurry in making the diagnosis or initiating pharmacological treatment. It is better to take the time and make sure all pertinent material has been covered than to rush through the process and miss important information.

It is essential not to confuse normal adolescent behaviours with ADHD. Youth with ADHD exhibits signs and symptoms that are substantially more intense, frequent and persistent than similar signs and symptoms found commonly in their age group. These youth must meet diagnostic criteria. If you are not sure that the young person has ADHD it is reasonable to try Non-specific Interventions (described below) and monitor over time. A consultation with a specialty service can help in “threshold cases”. Remember that recent onset substance abuse can mimic symptoms of ADHD. The young person presenting with ADHD type symptoms without them being present in childhood may well be abusing substances. ALWAYS ASSESS FOR SUBSTANCE ABUSE.

Some of the clinical findings in the adolescent (ages 13 - 19 years) are*:

- Easily distracted from tasks they do not want to perform;
- Feelings of inner restlessness;
- Frequently the teen with ADHD will stop short on task behaviours (for example: they may begin washing the car and stop part of the way through to go play a game with their friends), making it difficult to be successful at activities that demand prolonged sustained attention, such as homework;
- They will often appear very forgetful and frequently will fail to complete simple tasks at home and at school;
- They tend to be fidgety;
- Socially they may have difficulties in interpersonal relationships and may have more frequent “breakups”;
- Impaired temper control, or impulsive decisions making;
- They engage in “risky” behaviour, are at higher risk for traffic accidents and are often considered by adults to “lack maturity” compared to others of the same age;
- If the young person has not been diagnosed and treated, they may exhibit signs of demoralization due to what they perceived to be negative comments or “nagging” from parents, teachers, other adults and peers. This demoralization should not be confused with depression;
- Teens with ADHD may get involved with youth who are focused on drug use and possibly criminal behaviours;
- Early school leaving may be seen, particularly if a learning disability is present but has not been identified and remediated.

* These must be persistent, substantial and impairing!
Occasionally, ADHD type symptoms may be part of the presentation of post-traumatic stress disorder (PTSD). Consider this as a diagnostic possibility in the youth with ADHD symptoms but no childhood history of ADHD, and for whom a significant traumatic event has recently occurred.

Clinical Screening for ADHD in the Primary Care Setting
Clinical screening can be effectively and efficiently conducted by primary care providers – who are often the first point of contact for concerned parents, or school authorities, and who may know the youth and family well. Conducting this brief screening question may allow you to recognize if further ADHD investigation is needed or not.

Who to screen?
- Youth presenting with symptoms of inattention, hyperactivity, impulsivity, academic underachievement, or behaviour problems.
- Youth with numerous complaints about their behaviour from teacher or parents which are not easily explained by a known physical illness and which vary in duration, frequency and intensity over a long period of time.
- Youth at Risk. See the [ADHD disorder in Youth, Risk Identification Table](#) in this document.

The following screening questions can be included in clinic/office registration materials to be completed by parents or patients before visits or in the waiting room before the evaluation screening. These tools are provided in the toolkit and clinicians can reproduce them for their clinical use.

**ADHD Screening Tool: Parent Version: (place an X in the box if “yes”)**

- [ ] Does your teenager usually not finish things that he or she starts?
- [ ] Is your teenager not able to pay attention to things for as long as other teenagers?
- [ ] Does your teenager fidget or move around much of the time, even when he/she knows she should not?
- [ ] Is your teenager impulsive or does he/she act without thinking much of the time?
- [ ] Is your teenager’s behaviour causing him/her problems at home and at school?
- [ ] How long have you experienced these difficulties? (must be 6 months or longer)

**ADHD Screening Tool: Youth Version: (place an X in the box if “yes”)**

- [ ] Are you able to finish most things that you start within the time others expect?
- [ ] Do you have trouble paying attention to things that are not that interesting to you?
- [ ] Do you fidget or feel you have to move around much of the time?
- [ ] Do you often do things without thinking?
- [ ] Are you having problems at home or school related to your behaviour or because of trouble paying attention?
- [ ] How long have you experienced these difficulties (must be 6 months or longer)? Have these difficulties been there for a long time (six months or longer)?
If the screening questions above identify three or more positive answers, enquire about **SUBSTANCE MISUSE / ABUSE** (especially marijuana). Remember that youth with ADHD may be more likely to use a variety of substances, so the presence of substance misuse/abuse does not mean the youth does not have ADHD. In complex situations (such as substance abuse and ADHD), specialist consultation is suggested. Following on, it is reasonable to move ahead to a focused history and diagnostic assessment using the SNAP-IV Teacher and Parent 18-item Rating Scale as follows. Special attention should be given to assessing school performance and behaviour at home and at school.

**Diagnosis of ADHD in Adolescents using the SNAP-IV**

The **SNAP-IV Teacher and Parent 18-item Rating Scale** is a norm-referenced checklist that is designed to determine the presence of ADHD symptoms. The SNAP-IV can be used by:

- any physician assessing a young person for ADHD
- a parent or other caregiver
- an educator for youth
- a healthcare provider performing an assessment

One method of evaluating the SNAP-IV is to look at subscale scores. Subscale scores on the SNAP-IV are calculated by summing the scores on the items in the specific subset (e.g., Inattention) and dividing by the number of items in the subset (e.g., 9). The score for any subset is expressed as the Average Rating Per Item. The 5% cutoff scores for teachers and parents are provided. Compare the Average Rating Per Item score to the cut-off score to determine if the score falls within the top 5%. Scores in the top 5% are considered significantly different from “usual”.

To meet **DSM-IV** criteria for ADHD, there must be at least 6 responses of "Quite a Bit" or "Very Much" (scored 2 or 3) to either the 9 inattentive items (1-9) or 9 hyperactive-impulsive items (10-18), or both on the SNAP-IV 18 item Rating Scale. In addition to the SNAP-IV score, a young person with a diagnosis of ADHD must also meet the following criteria:

- **Symptoms that caused impairment were present before age 7 years**
- **Impairment from the symptoms is present in two or more settings (e.g., school, work, home)**
- **There must be clear evidence of clinically significant impairment in social, academic or occupational functioning**
- **The impairment must not be primarily due to any other factors or conditions (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorders, or a Personality Disorder).**

Depending on the domains affected, ADHD can be predominantly inattentive type; predominantly hyperactive-impulsive type; or combined type. Using a rating scale such as this alone, however, may not be sufficient in and of itself to diagnose ADHD, since the diagnosis of ADHD should be based on a thorough clinical assessment. A complete history and appropriate physical examination, if indicated, are necessary for diagnosis and clinical intervention. Ensure that the youth meets the DSM-IV-TR criteria for ADHD before proceeding to treatment.
If a SNAP-IV Teacher and Parent 18 items Rating Scale score of 12 or higher is found during screening the following are suggested:

1. Screen for depression- use the Kutcher Adolescent Depression Screen (KADS)
2. Discussion about important issues/problems in the youth’s life/environment. Complete or use the Teen Functional Activities Assessment (TeFA) to assist in determining the impact of the ADHD on the teen functioning.

The SNAP-IV 18 item plus a thorough clinical assessment is sufficient to make and ADHD diagnosis as this clinical tool contains all of the DSM-IV TR criteria for ADHD.

Don’t get overwhelmed!
Yes, there are a number of clinical tools and they address important issues in diagnosis and treatment of adolescent ADHD. However a full assessment of ADHD can be completed in three or four 15-minute office visits using the suggested framework below. Some clinicians may prefer to integrate the details found in the tools into their assessment interviews rather than using the tools separately. If there is concern about ADHD with or without psychiatric co-morbidity including suicide risk, then these screening tools could be used at each visit.

Screening for Suicide Risk
Although suicide occurs more frequently in youth with a mental disorder, and suicidal risk should always be on a clinician’s radar, most young people with ADHD will not attempt or complete suicide. In addition to usual clinical experience there are a number of other factors to consider when deciding to apply a more intensive assessment of suicidal risk for a youth during assessment for ADHD. These factors are:

1. History of suicide attempt or self-harm
2. Presence of Depression or significant depressive symptoms (particularly hopelessness)
3. Family history of suicide
4. Family history of a mental disorder especially mood disorders

If one or more of the above factors is identified as positive, or if a clinician is otherwise concerned a detailed review of suicide risk using the Tool for Assessment of Suicide Risk in Adolescents (TASR-A) as a guide is indicated. More information is available in the Suicide Assessment section.
Clinical Approach to Possible Adolescent ADHD in Primary Care*

**Step I**

**Visit One**

- Consider risk factors (page 6)
- Apply screening tool (page 12)
- Complete Teens Functional Assessment (TeFA, page 24)
- Complete SNAP-IV

If risk factors are substantial or if two or more positives answers on either the Parent or Adolescent Version of the Screening Tool or TeFA suggests dysfunction due to ADHD like symptoms - Use Psychotherapeutic Support for Teens (PST) and Stress Reduction Prescription (WRP), see page 21 - proceed to step 2 in 1 - 2 weeks Provide SNAP-IV to parents and teachers (school contact can be through parents if feasible). Complete SNAP-IV 18. Provide information about ADHD and its treatment. Obtain informed consent to allow discussion with the school.

**Step II**

**Visit Two**

SNAP-IV 18 item, TeFA
Use PST and WRP

If few less than 3 positive answers on The Parent or Adolescent version of the Screening tool - consider other possible explanations for signs/symptoms such as: environmental stressors, Oppositional Defiant Disorder, Conduct Disorder, Learning Disorder. Use PST (see page 29) and WRP (see page 21) and monitor again in a month and repeat STEP I and review other possible psychiatric conditions.

**Step III**

**Visit Three**

SNAP-IV 18, TeFA
Use PST and WRP

If SNAP-IV 18 > 18 (or a mean score of greater than 1) and TeFA shows decrease in function - continue with PST and WRP strategies - proceed to step 3 within a week. Review SNAP-IV 18 from parents and teachers for scores as above. Discuss ADHD and its treatment and encourage “google search”.

If SNAP-IV 18 < 18 (or a mean score of greater than 1) and shows no decrease in function – continue with PST and WRP strategies and monitor again in a month– advise to call if feeling worse or problems escalate.

If SNAP-IV 18 remains > 18 (or a mean score of greater than 1) and TeFA shows decrease in function – proceed to diagnosis (review DSM-IV-TR criteria) and treatment

If SNAP-IV 18 < 18 (or a mean score of greater than 1) and TeFA shows no decrease in function – continue with PST and WRP strategies - monitor again with SNAP-IV 18 and TeFA in one month – advise to call if suicide thoughts or acts of self-harm occur or if problems escalate

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*Identification, Diagnosis & Treatment of Child and Adolescent Attention Deficit / Hyperactivity Disorder
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* Each tool above is found in the toolkit.

** Providing parents and young people with evidence based information about ADHD and treatment options is essential. There is much misinformation and disinformation about ADHD widely available in the public domain – not only on anti-ADHD websites such as those supported by Scientology or purveyors of products and programs, but also in the main stream media. It is very important that parents and young people engage with information that is incorrect, biased or deliberately misleading and that they do so in an informed and supported manner. Your assistance in this activity is important. One useful resource for parents and youth to help them better understand and evaluate what they read and hear about is Evidence Based Medicine (versions for parents and youth) that can be accessed at www.teenmentalhealth.org.

It may be useful to set aside an additional visit with the parents and child to more fully discuss ADHD and its treatments. Ideally, this should occur prior to the initiation of treatment.

**REMEMBER.** Treatment of ADHD is not an emergency. Take your time and make sure of the diagnosis and that the parents and young person are informed and understand of the disorder and its treatment.

Any assessment of a mental health problem in a teenager should include a review of factors that may require immediate speciality or emergency intervention. These include suicide ideation or the presence of psychosis. See the ADHD Toolkit for details.

**Co-morbidity in ADHD**

A brief, focused assessment of common co-morbidities in ADHD is useful. Approximately 30-50% of people with ADHD have other psychiatric disorders. Information from the parent can help identify Oppositional Defiant Disorder (ODD), Conduct Disorder (CD) or a learning disorder (diagnostic criteria below). A discussion with the teacher or guidance counsellor will be necessary to both obtain an independent assessment of behaviours at school and to address the possibility of a learning disability.

**Oppositional Defiant Disorder (ODD)** ([Oppositional Defiant Disorder DSM-IV-TR diagnostic criteria](#))

**Conduct Disorder (CD)** ([Conduct Disorder DSM-IV-TR diagnostic criteria](#))

**Learning Disorder (LD)** ([Learning Disorder DSM-IV-TR diagnostic criteria](#))

When patients with ADHD meet DSM-IV-TR criteria for a second disorder, the clinician should develop a treatment plan to address each of these as well (such as ODD or CD), in addition to the ADHD. However, the ADHD should be treated first as clinically the co-morbid disorder often demonstrates improvement as the ADHD improves. In primary care practice, it is reasonable to begin treatment for the ADHD symptoms and refer the child or youth for more intensive
behavioural or family interventions to specialty services if they are available. Most youth with ADHD co-morbid with ODD, CD or LD will require specialty mental health care. In such cases the primary care provider should be part of the treatment team.

If a learning disability is suspected, then a referral for educational psychological testing should be made and the clinician should contact the youth’s teacher or school counselor to ensure that educators are aware of this issue as remedial learning strategies can often be put into place before a full learning assessment has been conducted. Ensure that you have obtained informed written consent to contact the school from the youth and if indicated, the parents as well. In some school jurisdictions, requests for psychoeducational testing must originate from or be supported by the parents or official guardian. A sample letter requesting psychoeducational testing from the school is found in the ADHD Toolkit.
Step 3. Treatment Template

Treatment of the young person with ADHD will require liaising with the school. This will usually involve the guidance counselor and one or more teachers. In high school, teacher involvement may be more challenging than in primary or junior high. Teachers will need to be recruited to fill in the SNAP and as the young person will have more than one teacher it is advisable that two or three different teachers be involved.

Co-ordination with the school is critical so that a single point contact should be established. Ideally, the point of contact should be a guidance counselor or a student services provider (such as a social worker) if such a person is available.

It is important to ensure that appropriate consent is obtained to permit the sharing of information between the school and the health providers. The young person, parents and educators must also be made aware of the limits of confidentiality. Discussions regarding these issues should be written into the clinical record and if at all possible, written summaries of the discussion should be made available to all participants.

Treatment of adolescent ADHD includes both specific and non-specific interventions depending on its severity. Specific interventions are evidence-based treatments for ADHD and include: medications and structured psychotherapies such as Behaviour Therapy (BT). Non-specific factors include activities which decrease stress, improve structure and general well-being plus supportive psychological interventions (PST) given by the health provider.

When initiating treatment it is necessary to start by educating the patient and caregiver about both the disorder and the treatment. This should be done over two visits, about a week apart, with the time between visits spent by the patient and parent and care provider in self-study and research. To initiate the self-study, direct them to the websites in section Suggested Websites and encourage them to search wherever they want (e.g. to “Google” ADHD) and then bring a list of the questions and concerns to the next visit for further discussion.

When providing information about a mental disorder:

1) Determine what the youth and caregivers know already – about the disorder and the treatment.
2) Identify areas of misinformation and provide correct information.
3) Identify gaps in knowledge and provide information.
4) Be knowledgeable, realistic, clear and helpful.
5) Provide written materials to take away. Useful resources for GPs (in the ADHD Toolkit).
6) Address the issue of addiction if treating with medications. Many teens/parents think that taking medicines will lead to addiction. Few adolescents will bring this issue up spontaneously – so you need to bring up this issue with them. It is also helpful to know what substances they may be using, as these can have harmful interactions with prescription medications. Useful information on the NIDA website about addiction and medications.
7) Discuss in advance the expected outcomes including the risk, benefits and length of treatments in relation with ADHD (i.e., behavioural and medications).
8) Discuss how taking medicine will impact their lifestyle (eg: substances that interact with medication, idiosyncratic reactions to alcohol use; side effects).

Non-specific Interventions
Recent neuro-biological research has provided more clues about how a variety of environmental manipulations may change brain functioning in those domains known to be associated with control of mood and stress, such as: serotonin systems, dopamine systems, noradrenaline systems, neurotropic factors (particularly brain derived neurotropic factor); and endorphin systems. While the exact value of these remains uncertain at this time, clinical consensus suggests that they may have some beneficial effects and are not harmful. They also provide the patient and the family with a useful focus for treatment activities.

These non-specific interventions include:

1) **Exercise** – particularly a minimum of 30 minutes of vigorous aerobic exercise daily. Discuss ways they could incorporate this in their existing routine (e.g. walking to school or work, joining a school program, going running with friend or family member). Exercise prior to sitting down for homework is a good idea. So providing half an hour of exercise time before homework time should be encouraged. Try to avoid physical activity within 2 hours of bedtime. For youth with ADHD, organized sports that stress individual prowess (such as track and field, swimming, skating) may be preferred to sports that demand long and sustained concentration (such as baseball).

2) **Sleep** – teens need 9 to 10 hours of sleep per night to function optimally. Most teens get only 7 to 8 hours per night, due to staying up late and having to wake up early for school. Encourage teens to set their bedtime earlier with the goal of getting 9 hours of sleep. Go over sleep hygiene recommendations (see page 25) to make it easier for them to fall asleep at night as well as emphasizing the need to try and keep the same routine even on weekends and holidays. Ask them to try this for a few weeks and see if they feel any difference.

3) **Strategies and tools for organization** – If a youth has problems remembering tasks such as what they need to get ready for school in the morning, it can be helpful to tape lists to mirrors and doors. If the teenager has problems with time management,
calendars, agendas, timers or alarms can be beneficial. Establishing a daily routine may help them anticipate what to expect and be prepared.

4) **Social Support** – encourage positive peer and family interactions - particularly associated with safe and pleasurable activities, such as involving the adolescent in organized sport activities. Discourage unhealthy peer interactions!

5) **Nutrition** – a healthy diet and eating regular meals is important. Skipping meals, particularly breakfast can increase stress. Caffeine and sugar-rich drinks (coffee, soda, energy drinks) can cause anxiety symptoms and agitation. Avoiding sugar and aspartame and following a modified Omega 3 rich diet may be useful, although nutritional treatments have not proven to be beneficial for youth with ADHD. Overall, a balanced diet, regular meals and limited alcohol use is recommended for health.

6) **Music and Movement** – particularly calm music, to help them to keep concentrated on their tasks.

7) **Avoid drugs** (including all “recreational drugs”; if of legal drinking age, use alcohol in moderation and understand that alcohol use can lead to increased impulsivity).

Applying the strategies above in the absence of medication or psychotherapy will not be sufficient treatment for ADHD. However, prescribing the above wellness strategies may be helpful to improve the overall outcome.

**Eat Breakfast!**
Breakfast may be the most important meal of the day, and studies show that eating a healthy breakfast may decrease stress and improve performance at school and work. Suggestions: Yogurt plus fruit (berries, bananas, peach, etc.), granola bar, wholegrain cereal/toast, milk.

**Engaging the School**
It is essential to engage the school when addressing ADHD in an adolescent. This engagement is important for the following reasons:

1. Diagnosis (symptoms of ADHD) is present in the school setting. Information from the youth’s teachers is essential for diagnostic purposes. This includes the completion of the SNAP-IV.
2. Treatment of ADHD requires monitoring of outcomes in various domains, including the school. This requires the completion of the SNAP-IV at various times during the treatment process.
3. Some adjustments in classroom activities, courses or learning engagement styles may be needed to optimize the chances for academic success. This requires the input of teachers and guidance counsellors.

Once a positive diagnosis of ADHD is made, (also see Clinical Approach to Possible Adolescent ADHD in Primary Care) it is time to contact the school. Prior to contacting the school, ensure
that the youth (and when appropriate, the parent/guardian) an informed written consent has been obtained. Although schools may differ in their contact protocols, it is useful to enlist the assistance of the youth or parent or caregiver in identifying the appropriate contact person at the school. Usually this will be a member of the senior administrative team, such as a Vice-Principal or a guidance counsellor. Depending on the school’s policy, the youth or the parent or caregiver may also have to give consent to the school to speak with the physician. Ensure that this issue is clarified and has been appropriately addressed prior to speaking with the school representative.

It is important to ensure that there is a single contact person in the school for all issues related to addressing the interventions planned. Ideally, the school contact person will arrange to have the SNAP-IV completed as appropriate and will communicate with the youth’s teachers. In some cases it may be necessary to meet with the school contact person (and others as indicated) to ensure that the intervention plan is clear and all issues have been considered. Schools usually have a protocol to follow when medical interventions are underway and it is important to be well informed about how this protocol is applied and what role the practitioner will have in its application.

Schools and school contacts will differ in their familiarity with addressing ADHD. It is important to take a little more time at the beginning to ensure all parties are comfortable with what needs to be done, as over time this collaborative relationship will become more established and simpler to navigate.

**Worry Reducing Prescription (WRP)**

It is useful to provide the young person with a simple outline developed in collaboration with them (and the caregiver, if appropriate) that clearly specifies what self-regulatory activities they could pursue during the diagnostic and treatment phases of their contact with their health provider. The Worry Reducing Prescription (WRP) is a useful and time efficient tool for managing stress that can be used to help the young person identify and plan their daily activities. It is embedded below and also provided in the Clinician’s Toolkit. In practice, the clinician can review the WRP with the patient, complete the form and then review it at the next office visit.
Worry Reducing Prescription
There are many things that you can do to help decrease stress and improve your mood. Sometimes these activities by themselves will help you feel better. Sometimes additional help (such as psychotherapy or medications) may be needed. This is your prescription for what you can do to help decrease stress and feel better. For each activity “write in” your plan (include what you will do, how often and with whom).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Plan (what, how often, other supports)</th>
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</thead>
<tbody>
<tr>
<td>Exercise</td>
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<tr>
<td>Eating Well</td>
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<tr>
<td>Sleep</td>
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<td>Problem Solving</td>
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<tr>
<td>Planning / Organizing</td>
<td></td>
</tr>
<tr>
<td>Social Activity</td>
<td></td>
</tr>
</tbody>
</table>

Enrolling the Help of Others
If the young person has a supportive family, then family members could be involved in helping with worry reducing strategies. Other significant people in the young person’s life may also be able to play a role (e.g. teacher, school counsellor, coach, neighbour, etc.) It is a good idea to ask the young person about who else can help out and, whenever possible, get the family involved. Always inquire about school performance. Some young people with ADHD may need extra educational interventions or a modified academic load, and school stress can make ADHD worse. Discussion with a school counsellor (with permission from the patient) is recommended.
Remember that parental or caretaker involvement is recommended during the assessment and treatment of ADHD in an adolescent. Whenever possible, information about the teen’s emotional state and functioning should be obtained from the parent or caretaker. It is not uncommon for teens and parents or caretakers to have different opinions about the mental state and activities of the young person. When this occurs, joint discussion of the issue will be necessary for clarification and optimal intervention planning. However, it is essential to ensure that appropriate confidentiality is being maintained during this process.

Confidentiality is important but it has its limits. Abuse and acute risk of harm to self or others needs to be identified as issues that cannot be kept confidential. Drug use must be discussed with the youth and an appropriate decision pertaining to the degree of drug involvement must be clarified in terms of at what point the drug use becomes drug misuse/abuse that requires informing others in collaboration with the youth.

Assessment and Monitoring of Functioning
Functional impairment is an essential component of an ADHD diagnosis. In young people, a functional assessment across four domains is an essential component of treatment monitoring. Functional improvement is a necessary target for treatment outcome.

The four functional domains that need to be addressed are:

1. School  Grades, teacher relationships, attendance
2. Home   Parental/sibling relationships, home activities
3. Work   Job performance, job relationships
4. Friends Peers, intimate relationships, sexual activity

The Teen Functional Assessment (TeFA) has been developed to assist the primary care provider in the evaluation of each of these components. It is embedded below and also provided in the clinicians Toolkit.

Clinicians can copy and use the TeFA without written permission from the author. Some clinicians may choose to incorporate the essential features of the TeFA into their standard patient monitoring interviews rather than using the tool itself.
Teen Functional Assessment (TeFA)

The TeFA is a self-report tool. It is meant to be completed by the patient and should take no more than three minutes to complete for most adolescents. The health care provider can use the information obtained on the TeFA to probe for further information – especially in those areas where the young person noted “worse” or “much worse than usual” and in those domains that the teen identifies as either self or parental worry.

This form is meant to let your health provider know about how you are doing. All information you give is confidential. Please write your answers to the items on the form.

For each of the following categories, write down one of the following options in the space provided – “much better than usual”; “better than usual”; “about the same as usual”; “worse than usual”; “much worse than usual”.

Over the last week how have things been at:

School: __________________________________________
Home: __________________________________________
Work: __________________________________________
Friends: __________________________________________

Write down the two things in your life that either worry you the most or are causing you the most problems.

1) __________________________________________
2) __________________________________________

Write down the two things about you that cause your parents or other adults to be concerned about you or that you think might concern them if they knew about these things.

1) __________________________________________
2) __________________________________________
Sleep Assessment
Sleep is often disturbed in youth with ADHD and sleep problems can be a side effect of medication treatment. Therefore it is a good idea to assess sleep during the assessment and before treating.

A useful method for assessing quality and quantity of sleep in an adolescent is by asking the following simple questions:

- What time do you get in bed?
- Do you have trouble falling asleep?
- How long does it take you to fall asleep?
- Once you fall asleep, do you sleep throughout the night?
- What time do you wake up?
- Do you feel rested when you wake up?
- Do you feel tired during the day?
- Do you nap during the day?

Sleep Hygiene
Good sleep hygiene is an important part of healthy development for all young people. Youth with ADHD often require greater attention to sleep hygiene due to the disturbances of sleep commonly seen with ADHD. Here are a few helpful sleep hygiene suggestions.

- Set a reasonable bedtime for both week and weekend days
- Get some exercise after school or before homework but not in the hour before going to bed
- No caffeine containing drinks (such as cola, coffee, tea, etc.) after dinner
- 30 to 45 minutes of quiet time (no video games and no TV) prior to going to sleep
Psychosocial Interventions

**Psychoeducation:** Following a confirmed diagnosis, education about ADHD (causes, impacts, management) is an important part of all work with children, youth and their parents. Youth can benefit from learning about ADHD, about effective self-management, and about self-advocacy. The [Kelty Mental Health Resource Centre](https://www.kelty.ca) provides a listing of websites, books, videos, and support groups that can be provided to youth and their families as part of the psychoeducational process.

**Behavioural Therapy (BT):** Standard ADHD disorder treatment guidelines recommend the use of behavioural therapy (BT) as first-line interventions for children and adolescents with ADHD disorders. Refer this intervention to the patient if BT is available in their community. If formal behavioural therapies are difficult to access, parents and youth might still benefit from behaviourally-based strategies described in some of the psychoeducational material, or from behaviourally-oriented parent groups (e.g., Triple-P Positive Parenting Program) or from ADHD/LD parent support groups.

Many youth with mild symptoms and minimal impairment have shown improvement with BT alone, and may not require medication intervention. In many locations, these interventions are not easily available, or the teen/caregiver may choose not to accept a recommendation for this treatment. For some, cost may be an important factor if this treatment modality is only available through private services.

If waiting lists for these therapies are long, the psychotherapies are not available, or the psychotherapies are not fully effective, treatment may need to be implemented with medications, wellness enhancing activities and [Psychotherapeutic Support for Teens](https://www.kelty.ca). Importantly, evidence suggests that BT may have additional positive effects when combined with a medication treatment in severe ADHD disorders.

**Educational Supports:** Adolescents with ADHD frequently perform better in structured settings while disorganized, chaotic homes or classrooms tend to exacerbate the symptoms. Encouraging teachers to provide a less stimulating environment and/or referral of parents to parental training programs or parent support groups, if these are available, may be of help. Potential support options include:

- School-based supports and accommodations (see appendix for a sample supports and accommodations letter).
- Referral for psychoeducational evaluation if learning disabilities are suspected (see appendix for a sample referral letter).
- Learning disabilities organisations provide many supports that might be of benefit to adolescents and their families. Visit the [Learning Disabilities Association of BC site](https://www.ldabc.ca).
- Tutoring for academic skills and organisational skills can be useful for some youth.

**Psychotherapy:** Although psychotherapy is not a first-line treatment for ADHD per se, many youth with ADHD have additional challenges and secondary impacts that might be the targets...
for psychotherapy. Families of youth with ADHD are sometimes impacted as well, so family therapy or support might also be indicated for some.

**Experiences to help build success:** Involvement in sports, in employment, in pursuits that involve academic strength, and in positive recreational and social activities can all be beneficial for youth with ADHD.

Adolescents with ADHD frequently perform better in structured settings while disorganized, chaotic homes or classrooms tend to exacerbate the symptoms. Encouraging teachers to provide a less stimulating environment and/or referral of parents to parental training programs or parent support groups, if these are available, may be of help.

Remember that although suicidal ideation and suicide attempts are not as common in ADHD disorders when compared to depression, they may occur, and should be monitored in any treatment modality.

**An Important Clinical Point:**

Medications should not be used to treat young people who do not meet diagnostic criteria for ADHD. They should be used only for treating clear cut diagnosis of ADHD. If you are not sure if it is an ADHD diagnosis, it is reasonable to institute wellness-enhancing activities and stress-reducing strategies and monitor. Do not rush into medication prescribing, but use the medications for which there is good scientific evidence indicating its need.

Also refer to [Engaging the School](#).
Psychotherapeutic Support for Teens (PST): Practical Pointers for Primary Care Health Providers Treating the Adolescent with ADHD

This tool provides clinicians with guidelines/suggestions that they can use to direct their clinical interactions with teens. It includes some basic cognitive behavioural and interpersonal therapy strategies, as well as some core counselling techniques.

Approach

- Be friendly but not a friend
- Create a supportive space
- Establish confidentiality and limits of confidentiality (self-harm, danger to others, etc) and be very CLEAR about these

Be Present-Focused

- Help identify the most important problems occurring now

Be Problem-Oriented

- Help develop and apply practical solutions to ongoing problems

Provide Education

- Provide education about ADHD and education about its treatment
- Engage the youth in searching for information. There is an astonishing amount of misinformation on the “net”. Have them bring in what they read and discuss.
- You can also refer them to the Resources for Families

Coping Skills

- Youth have both helpful and unhelpful ways of dealing with stress. Review usual coping strategies and reinforce positive strategies and provide alternate positive strategies.
- Review wellness strategies for stress management above (healthy eating, regular activity, good sleep, making list of chores, labeling drawers, organizing things) and make a plan for how to make them work.

Cognitive Strategy

- The adolescent with ADHD needs to learn how to feel and think better about themselves, as well as to identify and build on their strengths, cope with daily problems, and control their attention as well as their impulsivity.
- To help them with self-esteem use positive affirmations about their strengths.
- Use reminders in places to help them “stop and think” (e.g., count to three before answering, write the question down and ask at the proper time), also encourage “stop now and plan”. This is most beneficial when you are teaching support people (i.e., parents) how to use this techniques with their youth, therefore including parents as a key member of the treatment!
**Behavioural Strategy**

- One of the goals is to provide the adolescent with positive consequences for behaving in appropriate ways – emphasize the use of positive and immediate rewards (i.e., establish a home token economy). The simple logic is that you can increase the frequency of desired behaviour (e.g. tidy up their room, doing homework) by providing rewards when such behaviour occurs; other behavioural strategies are: anticipate future misconduct, use time out as a neutral space when the adolescent is experiencing high levels of emotion to promote the decrease of the affect and allow copying/solving problems.

- Simple behavioural interventions that you as a primary care health provider can establish in your office are: Help the adolescent to establish a schedule and routine, organize items that are needed every day, use homework and notebook organizers (bring up the importance of writing down assignments), help parents to create and carry out rules. Help the parents to learn strategies!

**Medication Intro**

- Provide rationale for using medication, what they can expect, and education about medication.
- Explain how medication works and give information about potential side effects.
- Provide time line for titration of medication and treatment response.

**Be Realistic**

- Discuss expectations and potential obstacles in treatment course.
- ADHD symptoms have best chance of improving when youth and family are both aware of ADHD and there is agreement with the treatment plan.
- The goal with treatment of ADHD is to achieve remission (i.e., reduce symptoms and improve functioning).

**Be Responsive**

- Be available for urgent matters within office hours (this depends on individual practitioners’ preference and can include phone, email or text messaging).
- Schedule frequent brief face to face visits at times that do not conflict with school (15-20 minutes).
- Monitor and support teen wellness activities (exercise, sleep, healthy diet, etc.).
- Ensure access to professional care during the off hours for emergencies and review crisis plan with teen and parents (as appropriate).
Further Guidelines to Create a Supportive Environment

Remember to apply these guidelines within a supportive, active listening environment. This includes the following:

- Compassionate and non-judgmental attitude, but be real
- Active listening: eye contact, verbal (“ah hum”, “go on”), and non-verbal (head nod) clues to listening engagement
- Clarification (“help me understand”, “could you explain what you were thinking about that”, etc.)
- Emotional identification (“seems as if you are feeling frustrated”, etc.)
- Do not understand the young person too quickly – you are likely to be wrong
- If you do not know what they are talking about – ask
- If you do not know an answer to a question – admit it and tell them how you will find out

Initiating Pharmacological Treatment for ADHD

Before any medications are prescribed, the individual (and/or parents) diagnosed with ADHD needs to understand the specific advantages and disadvantages of the proposed medications. Treatment needs to be individually tailored to best meet the requirements of a particular patient over the course of that patient’s day and also needs to be reviewed regularly and reformulated to match with the patient’s changing needs.

Once you have conducted an assessment, diagnosed ADHD, started the non-specific interventions and both parties agree on the use of medication, then you are ready to begin medication treatment. Remember, treatment of ADHD is not an emergency. Prepare the ground before you begin. This will help avoid adherence difficulties later. The first thing to do is to obtain baseline measurements of symptoms and physical complaints as this will allow you to provide a more accurate clinical and functional follow up as well as ongoing monitoring of the presence and severity of symptoms and any treatment emergent adverse events.

Baseline measurement should include:

- Complete blood count (CBC)
- Height; Weight; Blood pressure; and Pulse rate
- SNAP-IV 18 items Rating Scale
- TeFA (Teen Functional Assessment)
- KSES-A (Kutcher Side Effects Scale for ADHD Medication)
- Inquire with the caregiver regarding the history of heart diseases (patient & family)

Medications for ADHD fall into two categories: Stimulants and Non-Stimulants. Stimulants have been successfully used for many decades, yet much misinformation (including much disinformation) about them persists.
Facts about stimulants

- Stimulants used for ADHD do not cause addiction! Tolerance may develop occasionally in some patients.
- Medications should not be used just to improve grades or quiet classroom behaviour. Medications should be used to treat ADHD.
- Stimulant treatment of ADHD in childhood does not contribute to future substance abuse. Research shows the opposite to be true. Stimulant treatment for ADHD significantly decreases the risk for future substance abuse.
- Overall, stimulants are a safe treatment. However if there is a past history or family history of heart disease or a family history of sudden death a cardiology consultation should be obtained prior to initiating treatment.
- Treatment monitoring should include at least bi-annual height and weight determinations
- Long-term treatment with stimulant medications at proper doses is associated with significantly improved outcomes across multiple domains of functioning,
- “Drug holidays” are not needed unless there are substantive decreases in growth or weight trajectories.
- The use of long acting once daily dosing preparations may be easiest for the patient and family to use and will improve compliance with treatment.

Issues to Consider When Monitoring ADHD Pharmacological Treatment

<table>
<thead>
<tr>
<th>First</th>
<th>Do no harm. This does not mean—do not treat. This means do a proper risk benefit relationship analysis of the situation. Ensure the evaluation of these risks and benefits has been fully discussed with the patient and their family.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second</td>
<td>Make sure the patient has ADHD. This means that the diagnostic criteria are clearly met and that there is clear-cut functional impairment. Medications should not be used to treat inattentive symptoms; they should be reserved for the treatment of ADHD.</td>
</tr>
<tr>
<td>Third</td>
<td>Check carefully for other psychiatric symptoms that might suggest a different disorder. For example, does the patient have a depressive state that looks like ADHD? Remember, inattention or hyperactivity symptoms do not always mean ADHD. Always check for the presence of learning disorder.</td>
</tr>
<tr>
<td>Fourth</td>
<td></td>
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</tbody>
</table>
Check for risk factors of substance abuse, history of drug or alcohol abuse in the patient or parent as well other close relative. If the patient has these risks they may be at greater risk for misuse of the medication or “drug diversion” (the use of prescription drugs for recreational purposes). In this case sustained-release preparations or non-stimulants may help to mitigate the risk.

**Fifth**

Take a full sleep history. It is essential to determine if the patient has insomnia or anxiety prior to the use of stimulants in order to be able to differentiate between symptoms or medication side effects. See [Sleep Assessment](#).

**Sixth**

Measure the patient’s current somatic symptoms, paying careful attention to such items as restlessness, agitation, irritability and the like—before treatment begins. A side effects scale (see [Side Effects section](#)) should be used.

**Seventh**

Measure the presence of depression symptoms and pay special attention to suicide risk. The [KADS](#), a self-report scale, is easy to use and validated in this population can provide both baseline and treatment outcome information. If the patient may have Depression, refer to [Identification, Diagnosis and Treatment of Adolescent Depression](#).

Remember that ADHD medications may occasionally increase suicidal ideation so it is very important for the risk–benefit analysis to determine if suicidal ideation is present at baseline.

**Eighth**

Provide comprehensive information about the illness and the various treatment options to the patient and family. Appropriate literature should be available in the practitioner’s office and a list of good websites to which the patient and their family can be directed. Remember, the pharmacotherapy of ADHD is not emergency medical treatment. There is time for substantial research followed by frank and open discussion with the patient and family.

**Ninth**

After a medication is chosen make sure the patient and family is provided with appropriate information about possible side effects (both behavioural and somatic) and the expected timelines to improvement. Ideally this should be in written form and if there are concerns about litigation, have the patient and family sign one form and keep it in the patient record. Also, make a note in the record as to the discussions and decision.

**Tenth**

After doing the necessary laboratory workup, start with a small test dose of the medication, preferably given at a time when the teen is with a responsible adult who knows about the test dose and who can contact you if there is a problem. Following that, begin treatment with a low
dose and ask the patient and parent to monitor for side effects daily. Remember to provide a phone number where you or another clinician can be reached if any problems develop. Arrange to see the patient within a week of initiating treatment.

**Eleventh**

Titrate the dose as appropriate (see the diagram below) and measure outcomes side effects systematically. When titrating the dose it is important to use the SNAP-IV 18 item and aim for a score of $< 1$.

**Twelfth**

Invoke a similar approach to patient care as done in research studies, including frequent face-to-face contact early in the course of therapy, the development of a trusting and supportive relationship, efforts to measure response objectively and subjectively, and careful elicitation of side effects, overall tolerance, ongoing concerns, and satisfaction with treatment.

This approach represents good clinical care that is consistent with the “careful monitoring” advocated by Health Canada and the FDA and other organizations. This approach will not necessarily totally ameliorate the occurrence of behavioural side effects but it may cut down their prevalence and will help to quickly identify side effects when they occur, allowing appropriate intervention.
ADHD medications are grouped into two major categories: stimulants and non-stimulants. Decide whether the patient will benefit by receiving a stimulant or a non-stimulant medication. Here are some points to guide the decision:

### Stimulants
- Are highly effective
- Have been available for decades
- Have been very well studied
- Safe when prescribed to healthy patients and under medical supervision

### Non-Stimulants
- Are a good alternative for youth who do not respond well to stimulant medications and are highly effective
- Are indicated for youth at risk for substance abuse
- Are a good option for youth who have other conditions along with ADHD such as Anxiety Disorders or Tic Disorders
- Should be considered if problematic side effects arise with stimulants.

### Are available in two different release forms:

#### Short - intermediate release preparations
Requires the administration of repeated doses during the day, more adverse effects have been related to these as well as stigma associated with taking these medications at school.
- Ritalin® (methylphenidate) 5, 10, 20 mg
- Ritalin® SR (methylphenidate) 20 mg
- PMS or Ratio methylphenidate (methylphenidate) 5, 10, 20 mg
- Dextedrine (dextroamphetamine sulphate) 5, 10, 15 mg

#### Extended release preparations
Are preferred over short-acting medications, patients tend to have better compliance and are less likely to be diverted. However they are more expensive, not all Canadian public and private medication insurance plans cover them.
- *Adderall XR* (mixed salts amphetamine) 5, 10, 15, 20, 25, 30 mg
- *Biphentin* (methylphenidate) 10, 15, 20,30, 40, 50,60, 80 mg
- *Concerta* (methylphenidate) 18, 27, 36, 54 mg
- *Novo-Methylphenidate ER-C* (methylphenidate)
- *Vyvanse* (lisdexamfetamine dimesylate) 20, 30, 40, 50, 60 mg

#### *Strattera* (Atomoxetine) 10, 18, 25, 40, 60, 80, 100 mg cap.
Is the only non-stimulant medication that is approved to treat children / adolescent with ADHD.

*Are considered as first line treatment for ADHD
There are other medications that can be tried as ADHD treatment including tricyclic antidepressants (Imipramine or Desipramine) or bupropion (Wellbutrin). Clonidine is also sometimes used. It is recommended these medications be reserved for use by specialized mental health services.

“N of 1” Model to Assist in Evaluating the Response to Methylphenidate

There is a type of clinical protocol that is especially useful in those cases in which the patient or parent has serious concerns about the value of pharmacological treatment for ADHD. The protocol is based on Methylphenidate rapid onset and offset pharmacodynamics. Following a 3-day baseline assessment of symptoms (SNAP-IV 18) a standard dose of methylphenidate standard release (10mg P.O. T.I.D) is given alternatively with placebo, each over an alternating 3-day period for a total of 12 days. Measurement of symptoms (SNAP-IV 18) and side effects (KSES-A) should be obtained on a daily basis.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
<th>Day 8</th>
<th>Day 9</th>
<th>Day 10</th>
<th>Day 11</th>
<th>Day 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>No medication</td>
<td>10 mg/bid</td>
<td>10 mg/bid</td>
<td>10 mg/bid</td>
<td>Placebo medication</td>
<td>10 mg/bid</td>
<td>10 mg/bid</td>
<td>10 mg/bid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If the results suggest a medication effect then the optimal dosage should be reached as it is indicated below. Once it has been reached we suggest switching to a methylphenidate extended released form.
Initiating and Continuing Methylphenidate Treatment

Reaching the optimal therapeutic daily dose may take two weeks or more if dose adjustment occurs weekly. If adequate symptom control has not been reached at a total daily dose of 60 mg of methylphenidate specialist consultation is indicated.

- Start low and go slow.
- Begin at 5 mg in the morning and 5 mg four to five hours later and 5 mg at dinner, preferably 30 – 45 min before meals and maintain for one week.
- Measure outcomes using SNAP-IV 18 items and KSES-A.
- If symptoms are not under optimal control, increase to 10 mg in the morning and 10mg four to five hours later and 10mg at dinner and maintain for one week.
- Measure outcomes using SNAP-IV 18 items and KSES-A.
- If symptoms are not under optimal control, increase to 15 mg in the morning, 15 mg four to five hours later 15mg at dinner and maintain for one week.
- Measure outcomes using SNAP-IV 18 items and KSES-A.
- If symptoms are not under optimal control, increase to 20 mg in the morning, 20 mg four to five hours later and 20mg at dinner and maintain for one week.
- Measure outcomes using SNAP-IV 18 items and KSES-A.
- Continue this stepped titration to a SNAP-IV score of less than or equal to 1 to a maximum total daily dose of 60 mg, measuring outcomes every week following the step increase.
- If at any time during this stepped upward titration side effects become a problem while symptoms are not showing substantial improvement, increase the time between increases from one week to two weeks and continue the steps.
- If side effects limit dose increases to optimize symptom control, refer to specialty services or change to Atomoxetine.

*Once substantive symptom improvement as per the SNAP-IV 18 and parent plus teacher report has been obtained; discontinue upwards titration and use as the daily target dose.

When the total daily dose has been determined using the standard release form of methylphenidate, consider switching the medication to a long acting form, such as: Biphentin, Concerta, Novo-Methylphenidate ER-C (methylphenidate) given in a single daily morning dose at the approximate equivalent amount of the initial daily Ritalin dose. This strategy may be preferred to a multiple daily dosing of Ritalin standard release particularly if the teen is taking the medication at school.

If it is decided to switch from Methylphenidate to Atomoxetine for other reasons than side effects, the recommended approach is to add Atomoxetine (as shown below) until ADHD symptoms improve and then stop Methylphenidate.

* The PST based supportive rapport model should be used at every visit as a framework within which the interaction between the clinician and teenage patient can be structured.
Alternatively; if all parties prefer, a long acting form of methylphenidate can be started at the lowest available dose and titrated upwards weekly until optimal symptoms improvement in the context of minimal side effects is achieved. If this approach is taken, it is essential that outcomes and side effects be evaluated at least twice each week using the SNAP – IV 18 and the Side Effects scale. Parents (or caregivers) can complete this form. Remember that the SNAP – IV 18 should be completed twice weekly by teachers as well. These forms should be brought to each appointment where the physician can review them.

Stimulants can be misused. However abuse of stimulants is not a significant concern in adolescents without a history of alcohol or drug abuse. Young people with histories of alcohol or drug abuse require careful evaluation and monitoring when prescribed stimulants to ensure that they are taking the medication as prescribed and avoiding drug diversion (the use of prescription drugs for recreational purposes or providing it to others). Some adolescents may feign ADHD symptoms, to obtaining psychostimulant drugs either to sell them or help them study more effectively or simply use them as party drugs.

Sustained-release preparations or non-stimulants may help to mitigate some of the diversion potential. If a child or adolescent has a history of drug or alcohol abuse, or if a parent or other person with access to the medication has a history of or is currently abusing drugs or alcohol, the use of atomoxetine should be considered.

Using a Long Acting Methylphenidate Preparation

As noted above, there are a number of different long acting stimulant treatment options available and there is no “a priori” reason to choose one option over another. It is advised that the physician use one compound preferentially. This will give them good experience with the “real life” effects of the medication. This is preferred to using many different medications at random.

Described below is a suggested approach to the use of the long acting methylphenidate Concerta®. The choice of Concerta® for this example does not suggest or imply preference for use amongst the various options available.

Concerta® has both an immediate release as well as a controlled release component with a combined duration of action of about 10 – 12 hours. The recommended starting dose is 18 mg once daily in the morning (at breakfast) with a weekly dose titration to a target daily dose of 54 mg. Should significant symptomatic improvement occur at daily doses less than 54 mg, continue with the dose that resulted in the improvement observed. Remember to evaluate outcomes using the SNAP-IV 18 and the side effects scale at least twice each week.

Some clinicians report that Concerta® therapeutic effects may wear off in the early evening. In such cases, adding 5 or 10 mg of standard methylphenidate may be a useful intervention. This dose can be given at dinner.
Initiating and Continuing Non-Stimulant (Atomoxetine) Treatment

The therapeutic effects of atomoxetine may take weeks to be appreciated. Atomoxetine (Strattera) should be taken for 6–8 weeks before deciding whether it is effective or not. Many people respond to atomoxetine who don’t respond to stimulants. Its advantage over stimulants for the treatment of ADHD is that it has less abuse potential than stimulants.

- Start low and go slow.
- Begin with 0.5mg/kg/d in the morning and maintain for a period of 1–2 weeks.
- Measure outcomes using SNAP-IV 18 items (aiming for a score of less than or equal to 1) and KSES-A.
- Increase to 0.8mg/kg/d in the morning and maintain for a period of 1–2 weeks.
- Measure outcomes using SNAP-IV 18 items and KSES-A.
- If at any time during this stepped upward titration side effects become a problem while symptoms are not showing substantial improvement, increase the time between increases from 2 to 4 weeks and continue the steps.
- If side effects limit dose increases to optimize symptom control, refer to specialty services.
- If symptoms are not under optimal control, increase to 1.2mg/kg/d in the morning and maintain for a period of 1–2 weeks.
- Measure outcomes using SNAP-IV 18 items and KSES-A.
- If symptoms are not under optimal control with 1.2mg after maintaining it for at least 6 weeks refer to specialty service.

*Once substantive symptom improvement as per the SNAP-IV 18 and parent plus teacher report has been obtained; discontinue upwards titration and use as the daily target dose.

Although infrequent, Health Canada and the FDA have warned about an increased risk of suicidal thinking in children and adolescents being treated with Strattera (Atomoxetine). Like other psychiatric medications, Strattera may increase thoughts of suicide or suicide attempts in children and teens. The primary care provider should document suicidal thoughts or attempts at each visit. The teens and the parents should be informed if they have suicidal thoughts or behaviours they should contact the primary care provider and the medication should be reassessed.
Outcomes and side effects should be monitored regularly during treatment*. The following treatment process chart is suggested as a guideline. For treatment outcome evaluation, use the SNAP-IV (18 items) and the TeFA. For side effects assessment use the Kutcher Side Effects Scale for ADHD Medication (KSES-A) as illustrated in the Side Effects section.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Baseline</th>
<th>Day 1*</th>
<th>Day 3*</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Week 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNAP-IV</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>TeFA</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>KSESS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

* For stimulants only

Another Way to Monitor Treatment Outcomes
Some clinicians like to use the Clinical Global Impression Scale (CGI) to monitor outcomes. This scale can be used in evaluating treatment for any mental disorder. It is embedded below and also found in the ADHD Toolkit.

Clinical Global Impression – Improvement Scale (CGI)
Compare how much the patient has improved or worsened relative to a baseline state at the beginning of the treatment?

0 = Not assessed  
1 = Very much improved  
2 = Much improved  
3 = Minimally improved  
4 = No change  
5 = Minimally worse  
6 = Much worse  
7 = Very much worse

Side Effects
Treatment emergent adverse effects (side effects) are those problems that arise during medication treatment and are caused by the medication. Side effects can include physical, emotional or behavioural problems. In order to best evaluate side effects a systematic baseline assessment of common problems should be conducted using a combination of structured and semi-structured evaluations.

Semi-structured: A useful question that may elicit side effects is “Have there been changes in your body that you think may be a side effect?”

Structured: A useful side effects scale that could be used at every clinic visit is found below.
Kutcher Side Effects Scale For ADHD Medications

**KUTCHER SIDE EFFECTS SCALE FOR ADHD MEDICATIONS**

Name:                                                                 Age:                                                                 Date:  
Medication:                                                              Dose:                                                                 

Circle the number which best describes how the patient has experienced each of the following possible side effects over the past week.

<table>
<thead>
<tr>
<th>Subjective side effects</th>
<th>Never</th>
<th>Somewhat</th>
<th>Constantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorexia</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Weight loss</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nausea</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Vomiting</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fearful</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Emotional lability</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Irritable</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sadness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Restlessness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Headaches</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Trouble sleeping</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Rash</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Acne</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dykinesia</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Tics</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other movements</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other:</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Objective side effects (to be determined from the appropriate clinical examination)

<table>
<thead>
<tr>
<th>BP sitting</th>
<th>Notes:</th>
<th>BP standing</th>
<th>Notes:</th>
<th>Pulse rate</th>
<th>Notes:</th>
<th>Weight</th>
<th>Notes:</th>
<th>Height</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
You have reached the recommended dosage—now what?
There will be three possible outcomes—each with a different intervention strategy.

**ALWAYS CHECK ADHERENCE TO MEDICATION TREATMENT AS BELOW!!**

<table>
<thead>
<tr>
<th>One</th>
<th>Outcome</th>
<th>Strategy</th>
</tr>
</thead>
</table>
|       | Patient not better or only minimally improved. SNAP-IV 18 items > 18 and little or no functional improvement.                                                                                             | • Increase medication gradually (methylphenidate to a maximum daily dose of 60mg or atomoxetine to a maximum daily dose of 1.2mg/kg) and refer to specialty child/adolescent mental health services*  
  • Continue weekly or biweekly monitoring and all other interventions until consultation occurs |
| Two   | Patient moderately improved. SNAP-18 < 18. Some functional improvement (50-60% as determined from the TeFA)                                                                                               | • If medication is well tolerated, increase slightly (methylphenidate to a maximum daily dose of 60mg or atomoxetine to a maximum daily dose of 1.2mg/kg) and continue monitoring and interventions for two to four weeks then reassess. If no substantial improvement then refer*.  
  • If medication is not well tolerated or increase not tolerated continue at current dosage with monitoring and intervention for two more weeks then reassess. If no substantial improvement then refers for specialty mental health treatment*. |
| Three | Patient substantially improved. SNAP-18 <18 and noticed functional improvement.                                                                                                                           | • Continue medication at current dosage  
  • Gradually decrease monitoring and interventions visits to once every two weeks for two months and then monthly thereafter  
  • Educate patients/caregivers about need to continue medications and how to identify relapse if it occurs  
  • ADHD is a chronic disorder and treatment may need to be on-going for years.  
  • Agree on “well checks” (for example, once every three to six months) and how to identify relapse if it occurs |

* If you have prior experience prescribing psychostimulants and you are comfortable you may choose to try another stimulant other than methylphenidate before referring the patient to a mental health service.
Checking Adherence to Medication Treatment

Monitoring medication adherence can be difficult. It may be useful to predict the likelihood of medication non-compliance in advance; however, treatment adherence can be difficult, especially with adolescents. Openly recognizing that it is probable that the patient may miss one or more doses of medications is not only consistent with reality, but it allows the patient to miss the occasional dose without guilt, and to return to medication use without seeking permission to do so.

There are three methods that can be used to monitor and assess treatment adherence.

1) Enquire about medication use from the adolescent patient. Using such prompts as: “How have things been going with taking the medicine?” Or “As we talked before, it is not uncommon to forget to take your medicine sometimes. How many times since we last talked do you think you may have not taken your medicine?” It is important not to admonish the adolescent who self-identifies occasional medication non-adherence. Simply acknowledge the difficulty in remembering and ask if there is anything you can help them with to improve their remembering. If the compliance with medications is poor it is important to address the issue openly, trying to understand what the reasons for the adherence difficulties may be. Once these have been identified they can be collaboratively addressed.

2) Enquire about medication use from the teen’s parents. Some teens and parents may choose to have the parents dispense the medication. However, dispensing is not the same as taking. So, even if the parents are dispensing the medication, it is important to ask the young person about medication use as described in method one above.

3) A pill count may sometimes be useful. Simply ask the young person or parent to bring the pill bottle to each appointment. However, an empty pill bottle does not equal treatment adherence. So, even in this situation it is important to ask the teen about medication use as described in method one above.

Duration of Treatment

Duration

ADHD treatment (behavioural and psychopharmacology) may need to be ongoing for years.

Currently, there exists insufficient substantive research to allow for good evidence-driven guidelines for the duration of ongoing treatment. Given the data (including clinical experience)
currently available, the following suggestions can be reasonably made if stopping medication has been decided:

1. Do not discontinue medication during times of increased stress (such as examinations at school).
2. Advise adherence to mental wellness activities that include appropriate diet, exercise, and sleep hygiene; discuss risks of substance use.

**Follow-up**
See the patient and the caregiver frequently (usually weekly or biweekly) after beginning treatment to monitor response and side effects. Once the individual's condition is stabilized, follow-up visits will be regular but less frequent. Clinical and side effects assessment should be conducted at each visit to monitor the effectiveness of treatment. This must include functional and not just symptomatic improvement. The patient and family should be informed if they are experiencing any unusual side effects or dramatic change in ADHD symptoms they should contact primary care provider for reassessment.

The frequency of follow-up visits is quite variable and will be dictated by the patient's characteristics, convenience, provider experience, and use of psychotherapy or other associated interventions.

If a patient does not show symptom improvement while on an adequate treatment regime evaluate the following:

1. Compliance with treatment
2. Onset of recent substance abuse
3. Onset of recent stressors that challenge the patient’s ability to adapt
4. Emergence of an alternative diagnostic possibility (such as: schizophrenia, bipolar disorder)

Referral to a mental health specialist is indicated if relapse occurs despite adequate ongoing treatment.

**Step 4. Suicide Assessment**
In young people, unrecognized and untreated mental illness, especially depression – is the single strongest risk factor for suicide. Suicide risk is increased if the following factors are additionally present.

- Family history of suicide
- Substance abuse
- History of impulsivity
- **Hopelessness**
- Legal difficulties
- A previous suicide attempt
• Access to lethal means (such as firearms)

Suicide is more common in males, while self-harm attempts are more common in females.

Suicide assessment should occur whenever severe ADHD, anxiety/panic, depression or psychosis is suspected and at specific points during treatment. Particular attention to suicide risk during treatment and monitoring of depression should occur if:

• A major life stressor occurs
• A friend, family member or acquaintance commits suicide
• A public figure commits suicide
• The media reports on a successful suicide

In these situations, exploration of the impact of the occurrences on suicide risk in your patient must be part of the monitoring and intervention visit.

**Tool for Assessment of Suicide Risk in Adolescents (TASR-A)**

Dr. Kutcher and Dr. Chehil have developed a clinically useful tool that can assist the health provider in the evaluation of suicide risk. The Tool for Assessment of Suicide Risk in Adolescents (TASR-A) can be found following the link and also provided in the clinical toolkit. Clinicians can copy and use the TASR-A without written permission from the authors provided that they are used appropriately for clinical purposes and/or education.

The TASR-A has been developed for use by physicians and health providers with expertise in assessment and treatment of young people with depressive disorder. The TASR-A is copyrighted and cannot be used for any other purposes other than that noted above without the expressed written consent of the authors.

Health providers who would like to attend a training session on the clinical use of the TASR-A and suicide assessment in young people can contact the Office of the Chair at (902) 470-6598 or www.teenmentalhealth.org for further information.

**Assessing Suicide Risk**

Suicide risk should be assessed at baseline and throughout the treatment period. Particular attention to suicide risk should be paid if any of the items identified as risk enhancers noted above occur. Not all young people who have decided to commit suicide will admit to their plan when asked so no suicide assessment is completely preventive of suicide. However, the assessment of suicidal ideation and suicidal plans will often identify young people who are at increased suicide risk and appropriate interventions (including hospitalization if suicide plans are in place) can be instituted.
**Suicide ideation**
- Ask about ideas of dying, not wanting to live and of death by suicide
- Ask about feeling hopeless – A DEPRESSED YOUNG PERSON WHO FEELS HOPELESS IS AT INCREASED RISK

**Suicide plan**
- If the youth admits to suicidal ideation or hopelessness ALWAYS ask about suicide plan

If in your clinical judgement the young person is at high risk for suicide, this is a medical emergency. In such a case the young person must be taken by a responsible adult for immediate assessment. Please ensure that a copy of your assessment plus information on how to contact you is made available for the mental health specialist conducting the emergency consultation. Many clinicians find that personal contact of the assessing clinician prior to the assessment will facilitate a more useful consultation.

Young people with persistent suicidal ideation and frequent self-harm attempts should be referred to specialty mental health services for ongoing treatment.
Step 5. Safety and Contingency Planning
The patient’s safety is of paramount importance. Safety concerns trump all other considerations. The following are some suggestions for helping the teen being treated to stay safe. If the first contact health care provider is concerned about safety, mental health consultation should be obtained (see below).

Emergency Contact Cards – this consists of emergency contact numbers (for example: mental health services, emergency youth mental health services, emergency room service, etc.). Often this is written on a “wallet card” that can be carried by the young person at all times. Other methods such as electronically saved messages can also be used.

Rapid Health Provider Availability – often suicide and other safety issues arise in the context of stressful events. Allowing the young person or their caregiver to have easy access to a first contact health care provider (for example: by phone) can be a useful strategy. Clinical experience suggests that most young people or their caregivers rarely overuse this access.

Help Phone – while crisis telephone “hot-lines” have not been demonstrated to reduce suicide rates, they can be a valuable resource for young people in crisis. The young person should be provided with the phone number for the appropriate service in their area.

No Suicide Contract – this intervention although popular amongst some clinicians has not demonstrated effect on suicide rates. Its use is not recommended.

Step 6. Referral Flags
Referral of the teen with ADHD to specialty mental health services can occur at three different points. The following referral points are suggestions only. Each first contact care provider must identify their personal comfort level with treatment and management of adolescent ADHD and act accordingly. These suggestions are:

Emergency Referral (prior to treatment initiation by first contact care provider):
- Patients who report suicidal ideation or plans (at the time of assessment or during medication treatment)
- Acute psychosis (presence of delusions and/or hallucinations)

Urgent Referral (treatment may be initiated but referral should be made concurrently):
- Symptoms severe and function significantly deteriorated (severe ADHD)
- Persistent suicidal ideation with no intent or suicide plan
- Patients who have any other major psychiatric condition as: psychosis; bipolar disorder (mania); schizoaffective disorder, Tourette’s syndrome or chronic motor or vocal tics.

Usual Referral:
- Referral for Behavioural Therapy, if available.
- Patients who do not show symptoms of improvement despite adequate doses and adherence to medication.
- Patients who demonstrate significant growth (weight or height) difficulties.
- Patients with complex or potentially problematic physical conditions (eg: heart disease, liver disease).
- Patients who demonstrate significant side effects (eg: palpitations, changes in blood pressure) during treatment.
Suggested Websites

Resources for clinicians

- Attention Deficit Disorder Association: http://www.add.org/?page=ADDA_support_resourc
- American Academy of Child and Adolescent Psychiatry - www.aacap.org
- Canadian ADHD Resource Alliance: http://www.caddra.ca/cms4/
- Sun Life Financial Chair in Adolescent Mental Health – www.teenmentalhealth.org
- Community Healthcare and Resource Directory (CHARD) - http://info.chardbc.ca
- Healthy Living Toolkits, families and health professional versions, contain information, resources, and tools to help children and youth with mental health challenges develop healthy living habits http://keltymentalhealth.ca/toolkits.
- Child and Adolescent Needs and Strengths (CANS) http://www.praedfoundation.org/About%20the%20CANS.html

Resources for families

- About.com ADD/ADHD: http://add.about.com/
- A Family AD/HD Resource: http://w3.addresources.org/
- American Academy of Child and Adolescent Psychiatry: http://www.aacap.org/cs/adhd_a_guide_for_families/resources_for_families_adhd_a_guide_for_families
- Attention Deficit Disorder Resources: http://www.addresources.org
- Centre for ADD/ADHD Advocacy, Canada http://www.caddac.ca/cms/page.php?2
- Children and Adults with Attention Deficit Disorder: http://www.chadd.org
- Learning Disabilities association of British Columbia: http://www.ldabc.ca/
- Kelty Mental Health Resource Centre: http://www.bcmhas.ca/supportcentre/kelty/default.htm
- The disorder named ADHD: http://www.help4adhd.org/documents/WWK1.pdf
- Collaborative Mental Health Care - http://www.shared-care.ca/toolkits-adhd
- Healthy Living Toolkits, families and health professional versions, contain information, resources, and tools to help children and youth with mental health challenges develop healthy living habits http://keltymentalhealth.ca/toolkits.
Selected References


ADHD Toolkit

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- Child and Adolescent Mental Health Screening Questions
- Risk Identification Table
- ADHD Screening Parent Version
- ADHD Screening Adolescent Version
- SNAP – IV Teacher and Parent 18 - items Rating Scale
- Worry Reducing Prescription (WRP)
- Six Item Kutcher Adolescent Depression Scale (6-KADS)
- Teen Functional Assessment (TeFA)
- Parenting overview
- Kutcher Side Effect Scale for ADHD Medication (KSES-A)
- 18-item Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A)
- Tool for Assessment of Suicidal Risk in Adolescent (TASR-A)
- Clinical Global Impression (CGI)
- Medication Algorithm
- Sample letter Requesting Psychoeducational testing
- Sample letter regarding School support and accommodation
- DSM-IV TR Criteria: ADHD; Oppositional Defiant Disorder; Conduct Disorder; Learning Disorder
Child and Adolescent Mental Health Screening Questions

Historical factors:
1. Parent has a history of a mental disorder (including substance abuse/dependence)
2. Family has a history of suicide
3. Youth has a childhood diagnosis of a mental disorder, learning difficulty, developmental disability, behavioural disturbance or school failure
4. There has been a marked change in usual emotions, behaviour, cognition or functioning (based on either youth or parent report)

One or more of the above answered as YES, puts child or youth into a high risk group. The more YES answers, the higher the risk.

Current situation:
1. Over the past few weeks have you been having difficulties with your feelings, such as feeling sad,blah or down most of the time?
2. Over the past few weeks have you been feeling anxious, worried, very upset or are you having panic attacks?
3. Overall, do you have problems concentrating, keeping your mind on things or do you forget things easily (to the point of others noticing and commenting)?

If the answer to question 1 is YES – for adolescents, consider a depressive disorder and apply the KADS evaluation and proceed to the Identification, Diagnosis and Treatment of Adolescent Depression.

If the answer to question 2 is YES – consider an anxiety disorder, apply the SCARED evaluation and proceed to the Identification, Diagnosis and Treatment of Child or Youth Anxiety Disorders.

If the answer to question 3 is YES – consider ADHD, apply the SNAP evaluation and proceed to the Identification, Diagnosis and Treatment of Child or Youth ADHD.

Remember that some cases of anxiety and depression may demonstrate positive scores on the concentration component of the SNAP. If no hyperactivity components are identified on the SNAP review for ADHD please assess for depression and anxiety using KADS and SCARED.

Next steps:
- If patient is positive for depression and either Anxiety or ADHD and the patient is an adolescent, continue to apply the KADS protocol for Depression.
• If positive for Depression, treat the depression and following remission review for presence of continued Anxiety Disorder or ADHD.
• If positive for Anxiety Disorder at that time, refer to specialty mental health services for specific anxiety disorder psychotherapy (CBT) and continue SSRI medication treatment.
• If positive for ADHD at that time, add a psychostimulant medication following the protocol in the ADHD module or refer to specialty mental health services.

**MOA’s Child and Adolescent Mental Health Screening**

- **Child & Youth General Mental Health Screening Questionnaire**
  - If Answer is “Yes” to Question 1: "Over the past few weeks have you been having difficulties with your feelings, such as feeling sad, blue or down most of the time?"
  - Give the patient the KADS to complete while waiting to see the doctor.

- If Answer is “Yes” to Question 2: "Over the past few weeks have you been feeling anxious, worried, very upset or are you having panic attacks?"
  - Give the patient and caregiver (e.g., parent, guardian) Screening question for anxiety and SCARED while waiting to see the doctor.

- If Answer is “Yes” to Question 3: "Overall, do you have problems concentrating, keeping your mind on things or do you forget things easily (to the point of others noticing and commenting?)"
  - Give the patient and caregiver (e.g., parent, guardian) ADHD screening question and the SNAP-IV (18 item) while waiting to see the doctor.

Attach a copy of TASSR-A to the clinical file if an adolescent answered YES to any of the General Mental Health Screening Questions (To be filled out by the clinician).

Since comorbidity is frequently found, some children or adolescents and/or their caregivers may respond YES to more than one question. If that is the case, provide them with the screening questions or clinical tools regarding each question.
### ADHD disorder in Youth, Risk Identification Table

<table>
<thead>
<tr>
<th>Significant risk effect</th>
<th>Moderate risk effect</th>
<th>Possible “group” identifiers (these are not causal for ADHD but may identify factors related to adolescent onset ADHD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A diagnosis of ADHD in childhood</td>
<td>1. Exposure to severe environmental factors (i.e., lead contamination, prenatal exposure of alcohol and cigarette, birth trauma, low birth weight, head injuries).</td>
<td>1. School failure or learning difficulties</td>
</tr>
<tr>
<td>2. Family history of ADHD</td>
<td>2. Psychosocial adversity such as maternal depression, paternal criminality, chaotic home environment, and poverty.</td>
<td>2. Socially isolated from peers, behavioural problems (including gang activity, legal problems) – accident prone (including traffic violations, accidents)</td>
</tr>
<tr>
<td>3. Family history of mental disorders (affective, anxiety, tics, or conduct disorder)</td>
<td>3. Substance misuse and abuse (early onset of use including cigarette and alcohol)</td>
<td>3. Bullying (victim and/or perpetrator)</td>
</tr>
</tbody>
</table>
ADHD Screening Parent Version

ADHD Screening Tool: Parent Version: (place an X in the box if “yes”)

☑ Does your teenager usually not finish things that he or she starts?
☑ Is your teenager not able to pay attention to things for as long as other teenagers?
☑ Does your teenager fidget or move around much of the time, even when he/she knows she should not?
☑ Is your teenager impulsive or does he/she acts without thinking much of the time?
☑ Is your teenager’s behaviour causing him/her problems at home and at school?
☑ Have these symptoms been consistently present for 6 months or longer?

ADHD Screening Adolescent Version

ADHD Screening Tool: Youth Version: (place an X in the box if “yes”)

☑ Are you able to finish most things that you start within the time others expect?
☑ Do you have trouble paying attention to things that are not that interesting to you?
☑ Do you fidget or feel you have to move around much of the time?
☑ Do you often do things without thinking?
☑ Are you having problems at home or school related to your behaviour or because of trouble paying attention?
☑ Have these difficulties been there for a long time (six months or longer)?
SNAP – IV Teacher and Parent 18 - item Rating Scale

Name: ___________________________ Sex: ___________ Age: ___________
Date: __________________________
Completed by: _____________________

For each item, select the box that best describes this child. Put only one check per item.

<table>
<thead>
<tr>
<th>Inattention</th>
<th>Not at all 0</th>
<th>Just a Little 1</th>
<th>Quite a Bit 2</th>
<th>Very much 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Often has difficulty sustaining attention in tasks or play activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Often does not seem to listen when spoken to directly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Often does not follow through on instructions and fails to finish schoolwork, chores, or duties</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Often has difficulty organizing tasks and activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Often is distracted by extraneous stimuli</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Often is forgetful in daily activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hyperactivity</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Often fidgets with hands or feet or squirms in seat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Often leaves seat in classroom or in other situations in which remaining seated is expected</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Often runs about or climbs excessively in situations in which it is inappropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Often has difficulty playing or engaging in leisure activities quietly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Often is &quot;on the go&quot; or often acts as if &quot;driven by a motor&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Often talks excessively</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impulsivity</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Often blurts out answers before questions have been completed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Often has difficulty awaiting turn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Often interrupts or intrudes on others (e.g., butts into conversations/games)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sum of Items for Each Scale</th>
<th>Average Rating Per Item for Each Scale</th>
<th>Teacher 5% Cut-off</th>
<th>Parent 5% Cut-off</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average score for ADHD-Inattention (sum of items 1-9/# of items)</td>
<td>2.56</td>
<td>1.78</td>
<td></td>
</tr>
<tr>
<td>Average score for ADHD-Hyperactivity-Impulsivity (sum of items 10-18/# of items)</td>
<td>1.78</td>
<td>1.44</td>
<td></td>
</tr>
<tr>
<td>Average score for ADHD-Combined (sum of items 1-18/# of items)</td>
<td>2.00</td>
<td>1.67</td>
<td></td>
</tr>
</tbody>
</table>

The 4-point response is scored 0-3 (Not at All=0, Just A Little=1, Quite a Bit=2, and Very Much=3). Subscale scores on the SNAP-IV are calculated by summing the scores on the items in the specific subset (e.g., Inattention) and dividing by the number of items in the subset (e.g., 9). The score for any subset is expressed as the Average Rating Per Item. The 5% cutoff scores for teachers and parents are provided. Compare the Average Rating Per Item score to the cut-off score to determine if the score falls within the top 5%. Scores in the top 5% are considered significant.
Worry Reducing Prescription (WRP)
It is useful to provide the young person with a simple outline developed collaboratively with them (and caregiver if appropriate) that clearly specifies what self-regulatory activities they should pursue during the diagnostic and treatment phases of their contact with their health provider. The Worry Reducing Prescription (WRP) is a useful and time efficient tool for managing stress that can be used to help the young person identify and plan their daily activities. It is embedded below and provided in the Clinician’s Toolkit as well. In practice, the clinician can review the WRP with the patient, complete the form and then review it at the next office visit.

Worry Reducing Prescription
There are many things that you can do to help decrease stress and improve your mood. Sometimes these activities by themselves will help you feel better. Sometimes additional help (such as psychotherapy or medications) may be needed. This is your prescription for what you can do to help decrease stress and feel better. For each activity “write in” your plan (include what you will do, how often and with whom).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Plan (what, how often, other supports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise</td>
<td></td>
</tr>
<tr>
<td>Eating Well</td>
<td></td>
</tr>
<tr>
<td>Sleep</td>
<td></td>
</tr>
<tr>
<td>Problem Solving</td>
<td></td>
</tr>
<tr>
<td>Planning / Organizing</td>
<td></td>
</tr>
<tr>
<td>Social Activity</td>
<td></td>
</tr>
</tbody>
</table>

Enrolling the Help of Others
If the young person has a supportive family, then family members could be involved in helping with worry reducing strategies. Other significant persons in the young person’s life may also be able to play a role (e.g. teacher, school counsellor, coach, neighbour, etc.) It’s a good idea to ask the young person about who else can help out and whenever possible get the family involved. Always inquire about school performance. Some young people with ADHD may need extra educational interventions or a modified academic load, and school stress can make ADHD worse. Discussion with a school counsellor (with permission from the patient) is recommended.
**Parenting Overview**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Love and Affection</td>
<td>• Spending quality time with the child individually; demonstrating physical affection; words and actions convey support and acceptance</td>
</tr>
<tr>
<td>Stress Management</td>
<td>• Parents learn how to manage their own stress and try not to let their stress drive relationships with their children</td>
</tr>
</tbody>
</table>
| Strong Relationships            | • Demonstrate positive relationships with a spouse or partner and with friends  
                                        | Good modeling with individuals not related is especially relevant in that it can encourage a heavily stigmatized child/youth to reach out to others and establish their own health/balanced social network in preparation for adulthood |
| Autonomy/Independence           | • Treat child with respect and provide environment to promote self-sufficiency                                                                                                                                |
| Education/Learning              | • Promote and model lifelong learning and encourage good educational attainment for the child                                                                                                               |
| Life Management                 | • Provide for the needs of the child and plan for the future.  
                                        | Teach comprehensive life skills, especially for youth; avoid enabling and instead focus on youth’s strengths, gradually targeting what could be improved upon in terms of personal hygiene, interpersonal skills, cooking, cleaning, organization and goal setting |
| Behaviour Management            | • Promote positive reinforcement and punish only when other methods have failed and then consistent with the severity of the negative behavior and not in a harsh manner                                             |
| Self Health                     | • Model a healthy lifestyle and good habits                                                                                                                                                                   |
| Spirituality                    | • Provide an appropriate environment in which spiritual or religious components can be addressed                                                                                                |
| Safety                          | • Provide an environment in which your child is safe, monitor your child’s activities; friends; health                                                                                            |

Six Item Kutcher Adolescent Depression Scale (6-KADS)

The Kutcher Adolescent Depression Scale (KADS): How to use the 6-item KADS

The KADS was developed to assist in the public health and clinical identification of young people at risk for depression. It was created by clinicians and researchers expert in the area of adolescent depression and the application of various scales and tools in clinical, research and institutional settings. Work on the KADS was conducted in samples of secondary school students, in clinical settings and in clinical research projects.

There are three different KADS scales: the 6-item, the 11-item and the 18 item. The 16 item is designed for clinical research purposes and is not available on the Sun Life Financial Chair in Adolescent Mental Health website.

The 11-item KADS has been incorporated into the Cheri-Kutcher Youth Depression Diagnosis and Monitoring Tool. This tool is designed for use in clinical settings in which health providers treat young people who have depression.

Researchers interested in using the KADS can contact the office of the Sun Life Chair at (502) 470-6589 or Dr. Kutcher directly by email at skutcher@ualberta.ca.

The 6-item KADS is designed for use in institutional settings (such as schools or primary care settings) where it can be used as a screening tool to identify young people at risk for depression or by trained health care providers (such as public health nurses, primary care physicians) or educators (such as guidance counselors) to help evaluate young people who are in distress or who have been identified as possibly having a mental health problem.

The tool is a self-report scale and is meant to be completed by the young person following direction from the health provider, educator or other responsible person. The youth should be instructed that this tool will help the person conducting the assessment to better understand what difficulties they might be having and to assist the assessor in determining if the young person may have one of the more common emotional health problems found in adolescents—depression. The young person should be told that depending on the assessment of their problem identifies (the KADS plus the discussion with the assessor) the use of the KADS will help in the determination of next steps.

The KADS is written at approximately a grade six reading level and is useful in assessing young people ages 12 to 22. It has a sensitivity for depression of over 90 percent and a specificity for depression over 70 percent—putting it into the top rank of self-report depression assessment tools currently available. It is also much shorter than other available tools and unlike many others, is free of charge. It has been recommended for use in a number of expert reports including the National Institute for Clinical Evaluation (UK) and the GLAD-PC Guidelines (USA and Canada). The KADS has been translated into many different languages and is used globally.

KADS Scoring

The KADS is scored using a zero to three system with 'hardly ever' scored as a zero and “all of the time” scored as a three. A score of six or greater is consistent with a diagnosis of Major Depressive Disorder and should trigger a more comprehensive mental health assessment of the young person. The KADS will also often identify young people who suffer from substantial anxiety such as Panic Disorder and Social Anxiety Disorder but it has not been validated for that specific purpose.

Another use of the KADS is for monitoring of symptoms in the young person being treated for depression. This should ideally be done at each visit and the scores recorded and reviewed for evidence of improvement.

The last item on the KADS is very sensitive to suicide risk. Any young person scoring one or higher on the last item should have a more thorough suicide risk assessment. We suggest that this be conducted using the adolescent suicide risk assessment guide – the TASR – A. A copy of the TASR – A can be accessed on the clinical tools section of our website.

The KADS can be used by expert clinicians (such as child and adolescent mental health staff working in sub-specialty or academic settings) without additional training. Training in the use of the KADS for others is advised and can be arranged for groups of 10 or more by contacting the office of the Chair. Depending on the group, the duration of KADS training ranges from one to three hours.
6-ITEM Kutcher Adolescent Depression Scale: KADS

NAME: ________________________ DATE: ________________________

OVER THE LAST WEEK, HOW HAVE YOU BEEN "ON AVERAGE" OR "USUALLY" REGARDING THE FOLLOWING

1. Low mood, sadness, feeling blah or down, depressed, just can’t be bothered.
   □ [ ] □ [ ] □ [ ] □ [ ]
   a) Hardly Ever  b) Much of the time  c) Most of the time  d) All of the time

2. Feelings of worthlessness, hopelessness, letting people down, not being a good person.
   □ [ ] □ [ ] □ [ ] □ [ ]
   a) Hardly Ever  b) Much of the time  c) Most of the time  d) All of the time

3. Feeling tired, feeling fatigued, low in energy, hard to get motivated, have to push to get things done, want to rest or lie down a lot.
   □ [ ] □ [ ] □ [ ] □ [ ]
   a) Hardly Ever  b) Much of the time  c) Most of the time  d) All of the time

4. Feeling that life is not very much fun, not feeling good when usually would feel good, not getting as much pleasure from fun things as usual.
   □ [ ] □ [ ] □ [ ] □ [ ]
   a) Hardly Ever  b) Much of the time  c) Most of the time  d) All of the time

5. Feeling worried, nervous, panicky, tense, keyed up, anxious.
   □ [ ] □ [ ] □ [ ] □ [ ]
   a) Hardly Ever  b) Much of the time  c) Most of the time  d) All of the time

6. Thoughts, plans or actions about suicide or self-harm.
   □ [ ] □ [ ] □ [ ] □ [ ]
   a) Hardly Ever  b) Much of the time  c) Most of the time  d) All of the time

TOTAL SCORE: ________________________

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6 - item KADS scoring:

In every item, score:

a) Hardly Ever = 0
b) Much of the time = 1
c) Most of the time = 2
d) All of the time = 3

then add all 6 item scores to form a single Total Score.

Interpretation of total scores:

Total scores at or above 6 Suggest ‘possible depression’ (and a need for more thorough assessment).

Total scores below 6 Indicate ‘probably not depressed’.

Reference


Self-report instruments commonly used to assess depression in adolescents have limited or unknown reliability and validity in this age group. We describe a new self-report scale, the Kutcher Adolescent Depression Scale (KADS), designed specifically to diagnose and assess the severity of adolescent depression. This report compares the diagnostic validity of the full 16-item instrument, brief versions of it, and the Beck Depression Inventory (BDI) against the criteria for major depressive episode (MDE) from the Mini International Neuropsychiatric Interview (MINI). Some 309 of 1,712 grade 7 to grade 12 students who completed the BDI had scores that exceeded 15. All were invited for further assessment, of whom 161 agreed to assessment by the KADS, the BDI again, and a MINI diagnostic interview for MDE. Receiver operating characteristic (ROC) curve analysis was used to determine which KADS items best identified subjects experiencing an MDE.

Further ROC curve analyses established that the overall diagnostic ability of a six-item subscale of the KADS was at least as good as that of the BDI and was better than that of the full-length KADS. Used with a cut-off score of 6, the six-item KADS achieved sensitivity and specificity rates of 92% and 71%, respectively—a combination not achieved by other self-report instruments. The six-item KADS may prove to be an efficient and effective means of ruling out MDE in adolescents.
Identification, Diagnosis & Treatment of Child and Adolescent Attention Deficit / Hyperactivity Disorder
A Package for First Contact Health Providers - © MacCarthy and Kucher, 2011

The Kuchter Adolescent Depression Scale (KADS)

Sarah Brooks, MD

Many self-rated instruments that are often used to measure depression in adolescents (12-18 years) have limited or unknown reliability, validity, and sensitivity to change over time in this age group (Brooks & Kucher, 2001). This is unfortunate because self-report scales have the potential to provide useful information quickly and cheaply. The self-rated depression scales most commonly used with adolescents include the 21-item Children’s Depression Inventory (Kovacs, 1992), the 21-item Beck Depression Inventory (BDI; Beck et al. 1961) and the 20-item adult and child versions of the Center for Epidemiology Depression Scale (CES-D; Fendrich et al. 1990; Radloff 1977). None of these scales have good discriminative validity in adolescents (Brooks & Kucher, 2001). Although several other self-report scales may be better in this respect—for example, the 18-item Depression Self-Rating Scale (DSRS; Barlow 1981), the 30-item Reynolds Adolescent Depression Scale (RADS; Reynolds 1987) and the 32-item Mood and Feelings Questionnaire (MFQ;Costello & Angold 1988), the sensitivity to change over time of the RADS is not particularly good (Reynolds & Coats 1986), and the sensitivity to change of the MFQ and DSRS does not appear to have been examined in adolescent samples.

Development of the KADS

In view of the need for a quickly administered, valid, sensitive-to-change, depression-rating scale for adolescents, Stanley Kucher devised a new self-report scale—the Kuchter Adolescent Depression Scale (KADS). His original version of the KADS contained 16 items, which collectively assessed the frequency of occurrence and/or the severity of 16 core symptoms of adolescent depression. This 16-item version has been tested in two studies (LeBlanc et al. 2002; Brooks et al. 2003), one of which enabled assessment of the sensitivity to change of each item. As described above, on the basis of the data from this study, a 11-item version of the scale was developed, optimized for monitoring treatment effects over time.

Testing the KADS

The psychometric properties of the 16 original items of the KADS were examined in a clinical sample of 105 adolescents enrolled in an 8-week, randomized, double-blind, placebo-controlled, pharmacotherapy trial for major depressive disorder. Subjects completed the 16-item KADS and were assessed by a clinician using the Children’s Depression Rating Scale–Revised (CDRS-R; Perriam & Mckoski 1996), the Clinical Global Impression of Severity scale (CGI-Severity), and the Global Asses-
Identification, Diagnosis & Treatment of Child and Adolescent Attention Deficit / Hyperactivity Disorder
A Package for First Contact Health Providers - © MacCarthy and Katcher, 2011

Compared to the other clinician-rated instruments used in this study (the CDIRS-R and the CAF), subjects’ total scores on the 11-item version of the KADS exhibited significantly greater mean changes from baseline to week 8. Total scores on the 11-item KADS also formed moderate to strong mean within-subject correlations with all of the clinician-rated scales. These results suggest that the 11-item KADS is both a sensitive and valid measure of changes in depression severity over time.

Applications
The 11-item version of the KADS presented here is optimised for monitoring outcomes in adolescents (12–17 years) who are receiving pharmacologic treatment for major depressive disorder. It is scored using a standardised and holistic terminology, and responses are scored on a simple 4-point scale. The scale can be completed and scored in 5 minutes. In each item, score: (a) = 0; (b) = 1; (c) = 2; and (d) = 3. Then add all 11 item scores to form a single Total Score. As interpretation of total scores there are no validated diagnostic categories associated with particular ranges of scores. All scores should be assessed relative to an individual patient’s baseline score (higher scores indicating worsening depression, lower scores suggesting possible improvement).

The short, simple format of the KADS should prove acceptable to patients and to clinicians alike. Mental health practitioners as well as pharmacological and university research professionals who wish to establish the efficacy of treatment for adolescent depression are likely to find this instrument very useful. (The 11-item KADS is available in both paper and electronic formats.)

The original 16-item version of the KADS may be of interest to researchers who wish to assess the frequency and severity of a wider range of core symptoms of adolescent depression. This scale is included as a supplement to this issue of the newsletter (CAPN 9(5) 2004). (It is currently available in paper format only.)

Sarah Brooks, MD, is a medical writer and research analyst, specializing in child and adolescent mental health. Dr. Brooks is currently working for the Department of Psychiatry at Dalhousie University.

References
### Kutcher Adolescent Depression Scale (11-Item)

Over the last week, how have you been "on average" or "usually" regarding the following items:

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. low mood, sadness, feeling blah or down, depressed, just can't be bothered.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>2. irritable, losing your temper easily, feeling pissed off, losing it.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>3. sleep difficulties - different from your usual (over the years before you got sick): trouble falling asleep, being awake in bed.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>4. feeling decreased interest in hanging out with friends being with your best friend: being with your boyfriend/girlfriend going out of the house; doing school work or work; doing hobbies or sports or recreation.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>5. feelings of worthlessness, hopelessness, letting people down, not being a good person.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>6. feeling tired, feeling fatigued, low in energy, hard to get motivated have to push to get things done, want to rest or lie down a lot.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>7. trouble concentrating, can't keep your mind on schoolwork or work, daydreaming when you should be working, hard to focus when reading, getting &quot;bored&quot; with work or school.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>8. feeling that life is not very much fun, not feeling good when usually (before getting sick) would feel good, not getting as much pleasure from fun things as usual (before getting sick).</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>9. feeling worried, nervous, panicky, tense, keyed up, anxious.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>10. physical feelings of worry like: headaches, butterflies, nausea, tingle, restlessness, diarrhea, shakes or tremors.</td>
<td></td>
</tr>
<tr>
<td>a) hardly ever</td>
<td></td>
</tr>
<tr>
<td>b) much of the time</td>
<td></td>
</tr>
<tr>
<td>c) most of the time</td>
<td></td>
</tr>
<tr>
<td>d) all of the time</td>
<td></td>
</tr>
<tr>
<td>11. Thoughts, plans or actions about suicide or self-harm.</td>
<td></td>
</tr>
<tr>
<td>a) no thoughts or plans or actions</td>
<td></td>
</tr>
<tr>
<td>b) occasional thoughts, no plans or actions</td>
<td></td>
</tr>
<tr>
<td>c) frequent thoughts, no plans or actions</td>
<td></td>
</tr>
<tr>
<td>d) plans and/or actions that have hurt</td>
<td></td>
</tr>
</tbody>
</table>

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Teen Functional Assessment (TeFA)

The TeFA is a self-report tool. It is meant to be completed by the patient and should take no more than three minutes to complete for most adolescents. The health care provider can use the information obtained on the TeFA to probe for further information – especially in those areas where the young person noted worse or much worse than usual and in those domains that the teen identifies as either self or parental worry.

*This form is meant to let your health provider know about how you are doing. All information you give is confidential. Please write your answers to the items on the form.*

For each of the following categories, write down one of the following options in the space provided – much better than usual; better than usual; about the same as usual; worse than usual; much worse than usual.

**Over the last week how have things been at:**

School ________________________________________________

Home ________________________________________________

Work ________________________________________________

Friends ______________________________________________

Write down the two things in your life that either worry you the most or are causing you the most problems.

1) ____________________________________________________

2) ____________________________________________________

Write down the two things about you that cause your parents or other adults to be concerned about you or that you think might concern them if they knew about these things.

1) ____________________________________________________

2) ____________________________________________________
Kutcher Side Effect Scale for ADHD Medication (KSES-A)

**KUTCHER SIDE EFFECTS SCALE FOR ADHD MEDICATIONS**

Name: 
Age: 
Medication: 
Dose: 
Date: 

Circle the number which best describes how the patient has experienced each of the following possible side effects over the past week.

<table>
<thead>
<tr>
<th>Subjective side effects</th>
<th>Never</th>
<th>Somewhat</th>
<th>Constantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorexia</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Weight loss</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nausea</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Vomiting</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fearful</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Emotional lability</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Irritable</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sadness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Restlessness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Headaches</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Trouble sleeping</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Rash</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Acne</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dyskinesia</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Tics</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other movements</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other:</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Objective side effects (to be determined from the appropriate clinical examination)

| BP sitting | Notes: | BP standing | | Pulse rate | | Weight | | Height |
|------------|--------|-------------|----|------------|----|--------|----|

Notes: ____________________________
Six Item Kutcher Adolescent Depression Scale (6-KADS)

The Kutcher Adolescent Depression Scale (KADS): How to use the 6-item KADS

The KADS was developed to assist in the public health and clinical identification of young people at risk for depression. It was created by clinicians and researchers expert in the area of adolescent depression and the application of various scales and tools in clinical, research and institutional settings. Work on the KADS was conducted in samples of secondary school students, in clinical settings and in clinical research projects.

There are three different KADS scales: the 6-item, the 11-item and the 16 item. The 16 item is designed for clinical research purposes and is not available on the Sun Life Financial Chair in Adolescent Mental Health website.

The 11-item KADS has been incorporated into the Chehalis-Kutcher Youth Depression Diagnosis and Monitoring Tool. This tool is designed for use in clinical settings in which health providers treat young people who have depression.

Researchers interested in using the KADS can contact the office of the Sun Life Chair at (502) 470-6586 or Dr. Kutcher directly by email at skutcher@dal.ca.

The 6-item KADS is designed for use in institutional settings (such as schools or primary care settings) where it can be used as a screening tool to identify young people at risk for depression or by trained health care providers (such as public health nurses, primary care physicians) or educators (such as guidance counselors) to help evaluate young people who are in distress or who have been identified as possibly having a mental health problem.

The tool is a self-report scale and is meant to be completed by the young person following direction from the health provider, educator or other responsible person. The youth should be instructed that this tool will help the person conducting the assessment to better understand what difficulties they might be having and to assist the assessor in determining if the young person may have one of the more common emotional health problems found in adolescents — depression. The young person should be told that depending what the assessment of their problem identifies the KADS plus the discussion with the assessor the use of the KADS will help in the determination of next steps.

The KADS is written at approximately a grade six reading level and is useful in assessing young people ages 12 to 22. It has a sensitivity for depression of over 50 percent and a specificity for depression of over 70 percent — putting it into the top rank of self-report depression assessment tools currently available. It is also much shorter than other available tools and unlike many others, is free of charge. It has been recommended for use in a number of expert reports including the National Institute for Clinical Evaluation (UK) and the GLAD-PC Guidelines (USA and Canada). The KADS has been translated into many different languages and is used globally.

KADS Scoring

The KADS is scored using a zero to three system with ‘hardly ever’ scored as a zero and “all of the time” scored as a three. A score of six or greater is consistent with a diagnosis of Major Depressive Disorder and should trigger a more comprehensive mental health assessment of the young person. The KADS will also often identify young people who suffer from substantial anxiety such as Panic Disorder and Social Anxiety Disorder but it has not been validated for that specific purpose.

The last item on the KADS is very sensitive to suicide risk. Any young person scoring one or higher on the last item should have a more thorough suicide risk assessment. We suggest that this be conducted using the adolescent suicide risk assessment guide — the TASR — A. A copy of the TASR — A can be accessed on the clinical tools section of our website.

The KADS can be used by expert clinicians (such as child and adolescent mental health staff working in sub-specialty or academic settings) without additional training. Training in the use of the KADS for others is advised and can be arranged for groups of 10 or more by contacting the office of the Chair. Depending on the group, the duration of KADS training ranges from one to three hours.
6-ITEM Kutcher Adolescent Depression Scale: KADS

NAME: ______________________ DATE: ________________

OVER THE LAST WEEK, HOW HAVE YOU BEEN "ON AVERAGE" OR "USUALLY" REGARDING THE FOLLOWING

1. Low mood, sadness, feeling blah or down, depressed, just can’t be bothered.
   
   □ □ □ □
   a) Hardly Ever   b) Much of the time   c) Most of the time   d) All of the time

2. Feelings of worthlessness, hopelessness, letting people down, not being a good person.
   
   □ □ □ □
   a) Hardly Ever   b) Much of the time   c) Most of the time   d) All of the time

3. Feeling tired, feeling fatigued, low in energy, hard to get motivated, have to push to get things done, want to rest or lie down a lot.
   
   □ □ □ □
   a) Hardly Ever   b) Much of the time   c) Most of the time   d) All of the time

4. Feeling that life is not very much fun, not feeling good when usually would feel good, not getting as much pleasure from fun things as usual.
   
   □ □ □ □
   a) Hardly Ever   b) Much of the time   c) Most of the time   d) All of the time

5. Feeling worried, nervous, panicky, tense, keyed up, anxious.
   
   □ □ □ □
   a) Hardly Ever   b) Much of the time   c) Most of the time   d) All of the time

6. Thoughts, plans or actions about suicide or self-harm.
   
   □ □ □ □
   a) Hardly Ever   b) Much of the time   c) Most of the time   d) All of the time

TOTAL SCORE: ________________

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6 - item KADS scoring:

In every item, score:

a) Hardly Ever = 0
b) Much of the time = 1
c) Most of the time = 2
d) All of the time = 3

then add all 6 item scores to form a single Total Score.

Interpretation of total scores:

Total scores at or above 6 Suggest ‘possible depression’ (and a need for more thorough assessment).
Total scores below 6 Indicate ‘probably not depressed’.

Reference


Self-report instruments commonly used to assess depression in adolescents have limited or unknown reliability and validity in this age group. We describe a new self-report scale, the Kutcher Adolescent Depression Scale (KADS), designed specifically to diagnose and assess the severity of adolescent depression. This report compares the diagnostic validity of the full 16-item instrument, brief versions of it, and the Beck Depression Inventory (BDI) against the criteria for major depressive episode (MDE) from the Mini International Neuropsychiatric Interview (MINI). Some 309 of 1,712 grade 7 to grade 12 students who completed the BDI had scores that exceeded 15. All were invited for further assessment, of whom 161 agreed to assessment by the KADS, the BDI again, and a MINI diagnostic interview for MDE. Receiver operating characteristic (ROC) curve analysis was used to determine which KADS items best identified subjects experiencing an MDE.

Further ROC curve analyses established that the overall diagnostic ability of a six-item subscale of the KADS was at least as good as that of the BDI and was better than that of the full-length KADS. Used with a cut-off score of 6, the six-item KADS achieved sensitivity and specificity rates of 92% and 71%, respectively—a combination not achieved by other self-report instruments. The six-item KADS may prove to be an efficient and effective means of ruling out MDE in adolescents.
phone number where you (yes, you) can be reached if any problems develop and arrange to see the patient within 3–4 days of initiating treatment.

11. Elevens—increase the dose slowly at no more than 3–5 day intervals until your initial therapeutic dose is reached (the expected minimally effective daily dose), then wait for the required 6–8 weeks at this dose to determine efficacy. Never prescribe medication without at least offering supportive psychotherapy using cognitive or interpersonal techniques of support. See the patient weekly and allow for telephone check-in whenever the dose is increased or between visits if concerns arise. Always check for and record possible adverse events at each visit (use the form that you used at baseline so that you can compare symptom changes over time) and assess improvement at Weeks 2, 4, 5 and 6.

12. Twelfth—take advantage of the placebo response (found to be high in most adolescent depression trials) That is, invite a similar approach to patient care as done in studies including frequent face-to-face contact early in the course of therapy, the development of a trusting and supportive relationship, efforts to measure response objectively and subjectively, and careful elicitation of side effects, overall tolerance, ongoing concerns, and satisfaction with treatment.

We believe that this represents good clinical care that is consistent with the “careful monitoring” advocated by the FDA and other organizations. This approach will not necessarily totally ameliorate the occurrence of behavioral side effects but it may cut down their prevalence and will help you quickly identify when they occur so that you can intervene. At the very least, this approach should cut down the temptation to simply “give a pill”, and in itself that would be a good thing.

Dr. Sam Kutcher is Professor of Psychiatry at Dalhousie University in Halifax, Nova Scotia, Canada and Editor of CAPN. Dr. David Gardiner is Associate Professor of Psychiatry and Pharmacology at Dalhousie University in Halifax, Nova Scotia, Canada. Dr. A. Wimblad is Adjunct Professor of Psychiatry and Assistant Professor of Pharmacy at Dalhousie University. He is a Clinical Pharmacologist specialized in pediatric pharmacology at the IWK Health Centre in Halifax, Nova Scotia, Canada.

The Kutcher Adolescent Depression Scale (KADS)

Sarah Brooks, MD

Many self-rated instruments that are often used to measure depression in adolescents (12–18 years) have limited or unknown reliability, validity, and sensitivity to change over time in this age group (Brooks & Kutcher, 2001). This is unfortunate because self-report scales have the potential to provide useful information quickly and cheaply. The self-rated depression scales most commonly used with adolescents include the 21-item Children’s Depression Inventory (Kovacs, 1992), the 21-item Beck Depression Inventory (BDI; Beck et al. 1961) and the 20-item adult and child versions of the Center for Epidemiology Depression Scale (CES-D; Pendergast et al. 1990; Radloff 1977). None of these scales have good discriminative validity in adolescents (Brooks & Kutcher, 2001). Although several other self-report scales may be better in this respect—for example, the 16-item Depression Self-Rating Scale (DSRS; Birleson 1981), the 30-item Reynolds Adolescent Depression Scale (RADAS; Reynolds 1987) and the 32-item Mood and Feelings Questionnaire (MFQ; Costello & Angold 1988), the sensitivity to change over time of the RADAS is not particularly good (Reynolds & Coan 1986), and the sensitivity to change of the MFQ and DSRS does not appear to have been examined in adolescent samples.

Development of the KADS

In view of the need for a quickly administered, reliable, sensitive-to-change, depression-rating scale for adolescents, Stanley Kutcher devised a new self-report scale—the Kutcher Adolescent Depression Scale (KADS). His original version of the KADS contained 16 items, which collectively assessed the frequency of occurrence and for the severity of 16 core symptoms of adolescent depression. This 16-item version has been tested in two studies (LeBlanc et al. 2002; Brooks et al. 2003), one of which enabled assessment of the sensitivity to change of each item. As described below, on the basis of the data from this study, a 11-item version of the scale was developed, optimized for monitoring treatment effects over time.

Testing the KADS

The psychometric properties of the 16 original items of the KADS were examined in a clinical sample of 106 adolescents enrolled in an 8-week, randomized, double-blind, placebo-controlled, pharmacotherapy trial for major depressive disorder. Subjects completed the 16-item KADS and were assessed by a clinician using the Children’s Depression Rating Scale—Revised (CDRS-R; Parnass & Moras 1996), the Clinical Global Impression of Severity scale (CGI-Severity), and the Global Assess-
Comparison of the other clinician-rated instruments used in this study (the CDLS-R and the CAF), subjects’ total scores on this 11-item version of the KADS exhibited significantly greater mean changes from baseline to week 8. Total scores on the 11-item KADS also formed moderate to strong mean within-subject correlation with all of the clinician-rated scales. These results suggest that the 11-item KADS is both a sensitive and valid measure of changes in depression severity over time.

Applications

The 11-item version of the KADS presented here is optimised for monitoring outcome in adolescents (12-17 years) who are receiving pharmacologic treatment for major depressive disorder. In items are worded using standard and colloquial terminology, and responses are scored on a simple 4-point scale. The scale can be completed and hand scored in 5 minutes. In every item, score: (a) = 0; (b) = 1; (c) = 2; and (d) = 3. Then add 11 item scores to form a single Total Score. As for interpretation of total scores there are no validated diagnostic categories associated with particular ranges of scores. All scores should be assessed relative to an individual patient’s baseline score (higher scores indicating worsening depression, lower scores suggesting possible improvement).

The short, simple format of the KADS should prove acceptable to patients and to clinicians alike. Mental health practitioners as well as pharmaceutical and university research professionals who wish to establish the efficacy of treatment for adolescent depression are likely to find this instrument very useful. (The 11-item KADS is available in both paper and electronic formats.)

The original 16-item version of the KADS may be of interest to researchers who wish to assess the frequency and severity of a wider range of depressive syndromes of adolescent depression. This scale includes a supplement to this issue of the newsletter (CAFN 9(5) 2004). It is currently available in paper format only.

Sarah Brooks, MD, is a medical writer and research analyst, specializing in child and adolescent mental health. Dr. Brooks is currently working for the Department of Psychiatry at Dalhousie University.

References


18-item Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A).

**Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A)**

**Section A: Fear and Avoidance**

<table>
<thead>
<tr>
<th>Item</th>
<th>Discomfort, Anxiety, Distress (0-3)</th>
<th>Avoidance (0-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initiating conversation with a member of the opposite sex</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Attending a party or other social gathering with people you don’t know very well</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Speaking up, answering questions in class/participating in class discussions</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Presenting in front of a small group or in a classroom setting</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Attending overnight group activities such as camps, school trips, etc.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Speaking to a store clerk, bank teller, etc.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Asking a stranger for directions</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Changing in a common locker room</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Showering in a common shower room</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Using a public toilet facility or urinating in public (score whatever is greater)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Telephoning to ask for information or to speak to someone you don’t know very well (score whatever is greater)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Entering a classroom or social group once the class or activity is already underway</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Initiating conversation with strangers</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Speaking with authority figures: i.e. teachers, counselor, principal, police officers, clergy, physician, etc.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Eating in public</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Going to a party alone</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Asking someone for a date</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Writing your name in public</td>
<td></td>
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</tbody>
</table>
Tool for Assessment of Suicide Risk: Adolescent Version (TASR-A)

Name: ___________________________  Chart #: ____________

<table>
<thead>
<tr>
<th>Individual Risk Profile</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family History of Suicide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance Abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Social Supports/Problematic Environment</td>
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</table>

<table>
<thead>
<tr>
<th>Symptom Risk Profile</th>
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<tbody>
<tr>
<td>Depressive Symptoms</td>
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<tr>
<td>Psychotic Symptoms</td>
<td></td>
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</tr>
<tr>
<td>Hopelessness/Worthlessness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anhedonia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger/Impulsivity</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Interview Risk Profile</th>
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<th>No</th>
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<tbody>
<tr>
<td>Suicidal Ideation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicidal Intent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicide Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to Lethal Means</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past Suicidal Behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Problems Seem Unsolvable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Command Hallucinations (Suicidal/ Homicidal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent Substance Use</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6 item KADS Score: ______

Level of Immediate Suicide Risk

High  ______
Moderate ______
Low    ______

Disposition: ____________________________

Assessment Completed by: __________________ Date: ____________

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Clinical Global Impression – Improvement Scale (CGI)

Compare how much the patient has improved or worsened relative to a baseline state at the beginning of the treatment?

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Not assessed</td>
</tr>
<tr>
<td>1</td>
<td>Very much improved</td>
</tr>
<tr>
<td>2</td>
<td>Much improved</td>
</tr>
<tr>
<td>3</td>
<td>Minimally improved</td>
</tr>
<tr>
<td>4</td>
<td>No change</td>
</tr>
<tr>
<td>5</td>
<td>Minimally worse</td>
</tr>
<tr>
<td>6</td>
<td>Much worse</td>
</tr>
<tr>
<td>7</td>
<td>Very much worse</td>
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</tbody>
</table>
Medication Monitoring Algorithm
Initiating and Monitoring Stimulants Medication in Children/ Youth

ADHD Diagnosis (DSM-IV criteria)

- Initiative PST/PO for at least 3 visits. SNAP-IV (18 items)>18, symptoms continue causing distress and CFA/TeFA shows decrease or no change in function. **Time to start medication!**

- Begin at 2.5mg – 5mg of methylphenidate in the morning, 2.5mg – 5mg 4 to 5 hours later and 2.5mg – 5mg at dinner for 1 week.

- Increase to 5mg – 10mg in the morning, 5mg – 10mg 4 to 5 hours later and 5mg – 10mg at dinner for 1 week.

- Continue at 7.5mg – 15mg in the morning, 7.5mg – 15mg 4 to 5 hours later and 7.5mg – 15mg at dinner for 1 week. If substantial side effects occur continue the dose and increase the time between dosages.

- If symptoms have not improved after 3 weeks of treatment, increase the dosage by 2.5mg – 5mg every week to a maximum of 30mg – 60mg.

- If you have reached the maximum doses and symptoms continue to cause distress and dysfunction **REFER TO A MENTAL HEALTH SPECIALIST** or change to Atomoxetine.

If symptoms have substantially improved, consider switching to a long acting methylphenidate presentation.

Measure functioning using CFA/TeFA and side effects using sCKS in every visit.
Initiating and Monitoring Non-Stimulant Medication in Children/Adolescents

**ADHD Diagnosis (DSM-IV criteria)**

- Children (6-12)
- Adolescent (>12)

Use **PST/PO** and **WRP** throughout the treatment process.

**Initiate PST/PO for at least 3 visits. SNAP-IV (18 items) > 18, symptoms continue causing distress and CFA/TeFA shows decrease or no change in function**

**Time to start medication!**

Atomoxetine is indicated for children/adolescents presenting significant side effects with stimulant medication; for children/adolescents with ADHD and comorbid Anxiety disorder; or when the child or adolescent is at risk for misuse or abuse of stimulants.

**Measure functioning using CFA/TeFA and side effects using sCKS in every visit. sCKS in every visit**

- Begin at 0.5mg/kg/d of atomoxetine in the morning for 1 - 2 weeks.

- Increase to 0.8mg/kg/d of atomoxetine in the morning for 1 - 2 weeks.

- If symptoms are not under optimal control, continue to a maximum of 1.2mg/kg/d in the morning and maintain for a period of 1 – 2 weeks.

**If you have reached the maximum doses and symptoms continue to cause distress and dysfunction, REFER TO A MENTAL HEALTH SPECIALIST.**
SAMPLE LETTER REQUESTING PSYCHOEDUCATIONAL TESTING

Date:

Salutation:

Re: Patient name ____________ ; Request for psychoeducational testing

With the permission of ____________ patient name ____________, I am writing to request psychoeducational testing regarding the possibility of a learning problem concurrent with the diagnosis of ADHD.

I would be pleased to discuss this matter more fully with the appropriate school representative and with the individual who will do the assessment. I can be reached at: _______________ (telephone or by email address).

I look forward to hearing from you soon.

Sincerely;

Cc: Youth
SAMPLE LETTER REGARDING SCHOOL SUPPORTS AND ACCOMODATIONS

Date:

Salutation:

Re: patient name ; Request for School Support and Accommodation

With the permission of __________ patient name __________, I am writing to discuss possible issues of school support and accommodation arising from my recent assessment and concurrent with the diagnosis of ADHD.

I would be pleased to discuss this matter more fully with the appropriate school representative(s). I can be reached at: ________________ (telephone or by email address).

I look forward to hearing from you soon.

Sincerely;

Etc.

Cc: Youth
    Parent/guardian
**DSM-IV TR criteria**

**DSM-IV-TR. Primary Inattentive type symptoms**

A. At least 6 of the 9 symptoms of inattention listed below must have persisted for at least 6 months to a degree that is maladaptive and inconsistent with the patient’s developmental level.

   a. Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
   b. Often has difficulty sustaining attention in tasks or play activities
   c. Often does not seem to listen when spoken to directly
   d. Often does not follow through with instructions and often fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behaviour or failure to understand instructions)
   e. Often has difficulty organizing tasks and activities
   f. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (eg, schoolwork, homework);
   g. Often loses things necessary for tasks or activities (eg, school assignments, pencils, books, tools, toys)
   h. Often is easily distracted by extraneous stimuli (eg, toys, school assignments, pencils, books, tools)
   i. Often is forgetful in daily activities

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment are present before age 7 years

C. Symptoms must be present in 2 or more situations (eg, school, work, home).

D. The disturbance causes clinically significant distress or impairment in social, academic, or occupational function.

E. Behaviour does not exclusively occur during the course of pervasive developmental disorder, premenstrual dysphoric disorder, schizophrenia, or other psychotic disorder. No mood disorder, anxiety dissociative disorder, or personality disorder accounts for the behaviour.
DSM-IV-TR. Primary Hyperactivity / Impulsivity type symptoms

A) At least 6 of the 9 symptoms of hyperactivity (symptoms 1-6) and impulsivity (symptoms 7-9) listed below have persisted for at least 6 months to a degree that is maladaptive and inconsistent with the patient's developmental level.

Hyperactivity
a. Often fidgets with hands or feet or squirms in seat
b. Often leaves seat in classroom or in other situations in which remaining seated is expected
c. Often runs about or climbs excessively in situations in which it is inappropriate (in adolescents and adults, may be limited to subjective feelings of restlessness)
d. Often has difficulty quietly playing or engaging in leisure activities
e. Often on the go or often acts as if driven by a motor
f. Often talks excessively

Impulsivity
g. Often blurts out answers before questions have been completed
h. Often has difficulty awaiting turn
i. Often interrupts or intrudes on others (e.g., butts into conversations or games)

B) Some hyperactive-impulsive or inattentive symptoms that caused impairment are present before age 7 years
C) Symptoms must be present in 2 or more situations (e.g., school, work, and home).
D) The disturbance causes clinically significant distress or impairment in social, academic, or occupational function.
E) Behaviour does not exclusively occur during the course of pervasive developmental disorder, premenstrual dysphoric disorder, schizophrenia, or other psychotic disorder. No mood disorder, anxiety dissociative disorder, or personality disorder accounts for the behaviour.
**DSM-IV TR. Oppositional Defiant Disorder (ODD)**

Consists of a pattern of negativistic, hostile, and defiant behaviour lasting at least 6 months, during which four (or more) of the following behaviours are present:

- often loses temper
- often argues with adults
- often actively defies or refuses to comply with adults' requests or rules
- often deliberately annoys people
- often blames others for his or her mistakes or misbehaviour
- is often touchy or easily annoyed by others
- is often angry and resentful
- is often spiteful or vindictive

Each of the above is only considered diagnostic if the behaviour occurs more frequently than is typically observed in children of comparable age and developmental level and if the behaviour causes clinically significant impairment in social, academic, or occupational functioning.

Oppositional Defiant disorder is not diagnosed if the behaviours occur exclusively during the course of a Psychotic or Mood Disorder or if Conduct Disorder is diagnosed.

**Learning disorders**

A learning disorder is defined as difficulty in an academic area (reading, mathematics, or written expression). The child's ability to achieve in the specific academic area is below what is expected for the child's age, educational level, and level of intelligence. The difficulty experienced by the child is severe enough to interfere with academic achievement or age-appropriate normal activities of daily living. Learning disorders are sometimes called learning disabilities, or specific learning disabilities. Most children with learning disorders have normal intelligence. Types of learning disorders include the following:

- reading disorders (sometimes called dyslexia)
- mathematics disorder
- disorder of written expression
DSM-IV TR Conduct Disorder

The DSM-IV categorizes conduct disorder behaviours into four main groupings: (a) aggressive conduct that causes or threatens physical harm to other people or animals, (b) non-aggressive conduct that causes property loss or damage, (c) deceitfulness or theft, and (d) serious violations of rules. Conduct Disorder consists of a repetitive and persistent pattern of behaviours in which the basic rights of others or major age-appropriate norms or rules of society are violated. Typically there would have been three or more of the following behaviours in the past 12 months, with at least one in the past 6 months:

Aggression to people and animals
- often bullies, threatens, or intimidates others
- often initiates physical fights
- has used a weapon that can cause serious physical harm to others (e.g., a bat, brick, broken bottle, knife, gun)
- has been physically cruel to people
- has been physically cruel to animals
- has stolen while confronting a victim (e.g., mugging, purse snatching, extortion, armed robbery)
- has forced someone into sexual activity

Destruction of property
- has deliberately engaged in fire setting with the intention of causing serious damage
- has deliberately destroyed others' property (other than by fire setting)

Deceitfulness or theft
- has broken into someone else's house, building, or car
- often lies to obtain goods or favors or to avoid obligations (i.e., "cons" others)
- has stolen items of nontrivial value without confronting a victim (e.g., shoplifting, but without breaking and entering; forgery)