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

A Package for First Contact Health Providers

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A GPSC Initiative

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Created by:

Stan Kutcher, MD, FRCPC, Sun Life Financial Chair in Adolescent Mental Health & Director, WHO Collaborating Center, Dalhousie University, (Halifax, NS)

Iliana Garcia-Ortega, MD, Psychiatrist Research Associate Sun Life Financial Chair in Adolescent Mental Health, Dalhousie University & IWK Health Centre (Halifax, NS)

External Observers:

Practice Support Program Child and Youth Mental Health Module Content Committee

Andy Basi, EdD, MBA, CHE, ART, Executive Lead, Practice Support Program (Vancouver, BC)

Charles Blackwood, MD

Christina Southey, MSc, Quality Improvement Advisor, Impact BC (Vancouver, BC)

Garey Mazowita, MD, FCFP, Clinical Professor, Department of Family Medicine, University of British Columbia, Head, Department of Family and Community Medicine, Providence Health Care

Gayle Read, Senior Mental Health Consultant, Ministry of Children and Family Development (Victoria, BC)

Jane Garland, MD, FRCPC, Clinical Professor, Department of Psychiatry, University of British Columbia, Clinical Head, Mood and Anxiety Disorders Clinic, British Columbia's Children's Hospital, (Vancouver, BC)

Jessica K. Bruhn, BA, BC Provincial Family Council Co-chair, Institute of Families for Child & Youth Mental Health (Vancouver, BC)

Judy Huska, RN, BScN, Executive Director Quality Improvement, Impact BC (Vancouver BC)

Kimberly McEwan, Phd, RPsych.

Liza Kallstrom, MSc, Content and Implementation Lead, Practice Support Program (Vancouver, BC)

Olga O'Toole, Child and Youth Mental Health Manager, Ministry of Children and Family Development (Vancouver, BC)

Olivia Sampson, MD (Vancouver, BC)

Robert Lampard, Ph.D., R. Psych, Ministry of Children and Family Development, Child & Youth Mental Health (Victoria, BC)

Sherry Bar, Research Officer, Primary Health Care, Ministry of Health (Victoria, BC)

Wilma Arruda, BSc., BEd, MD, FRCPC, Consulting Paediatrician, Co Medical Director, Child, Youth and Family Health, Vancouver Island Health Authority (Nanaimo, BC)

Rivian Weinerman, MD, FRCPC, Regional Head, Division of Collaborative Care, Department of Psychiatry, Vancouver Island Health Authority (Victoria, BC)

Sandy Wiens, Ministry of Child and Family Development (Victoria, BC)

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Introduction

This package is provided as an overview of attention deficit / hyperactivity disorder (ADHD) in children 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 information overview to help first contact health providers understand how to identify, diagnose and treat ADHD in children.

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

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 the diagnosis and treatment of children with 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.

Primary health care providers can appropriately deliver effective treatment for ADHD to children. Here's how…

Key steps

1. Identification of child at risk for ADHD
2. Useful methods for screening and diagnosis of ADHD in the clinical setting
3. Treatment template
4. Safety and contingency planning
5. 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 Children Attention Deficit / Hyperactivity Disorder

- No other psychiatric diagnosis in children receives as much attention from the media and is surrounded by as much controversy as ADHD.
- ADHD is a neurodevelopmental psychiatric disorder that impairs daily social and academic functioning in children.
- The prevalence of ADHD in Canada is approximately 5 – 8% in children.
- Children with ADHD are at greater risk than their peers for poorer academic achievement, fewer friends and lower self-esteem.
- Longitudinal outcome studies of youths with ADHD show increased rates of teen pregnancies, divorce and other interpersonal difficulties.
- ADHD is associated with other serious mental disorders such as: Learning Disability, Conduct Disorder, and Oppositional Defiant Disorder.
- Children diagnosed with ADHD are more prone to physical injury and accidental poisoning.
- Children with ADHD are more likely to score lower on achievement tests, repeat grades, suffer suspensions and have problems with school. As adolescents they more frequently drop out of school, develop drug and behaviour problems and have more 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 Children at Risk for ADHD

First contact health providers are in an ideal position to identify children 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 Children, Risk Identification Table

Significant risk effect	**Moderate risk effect**	**Possible "group" identifiers (these are not causal for ADHD but may identify factors related to childhood onset ADHD)**
1. A previous diagnosis of ADHD 2. Family history of ADHD 3. Family history of mental disorders (affective, anxiety, tics, or conduct disorder) 4. Psychiatric disorder: Oppositional Defiant Disorder, Conduct Disorder or a Learning Disorder	1. Exposure to severe environmental factors (i.e., lead contamination, prenatal exposure of alcohol and cigarette, birth trauma, low birth weight, head injuries). monitoring team 2. Psychosocial adversity such as maternal depression, paternal criminality, chaotic home environment, and poverty. 3. Substance misuse or abuse (early onset of use – including cigarettes and alcohol) 4. Close head injury (concussion)	1. School failure or learning difficulties 2. Socially isolated from peers or behavioural problems at home and at school – accident prone. 3. Bullying (victim and/or perpetrator)

What to do if a child 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 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 may have significant functional problems, such as school difficulties, academic underachievement, troublesome interpersonal relationships with family members and peers, low self-esteem, demoralization or frequent accidents. The appearance of any of these problems in a child at risk should trigger an urgent clinical review.

Arrange for a standing "mental health check-up"
The mental health check-up could be 15-minute office/clinical visits every 3 to 6 months during the childhood 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 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 child or parent to bring in the child's school reports. Check for a pattern of declining grades, frequent lateness, or discipline concerns. In young people with ADHD, teachers' comments frequently note that: homework is often not completed; there are concentration problems; the child 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 child and the parents. This information may make it easier for the child 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. All participants need to know that if the physician determines that there is a risk to self or others due to their mental condition (as defined in the appropriate local legislation), that an immediate psychiatric intervention that may include admission for care will be required.

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 children who are 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. Also, from a developmental perspective, the presentation of ADHD symptoms may change over time. Younger children tend to be more impulsive and hyperactive.

Children generally visit health care providers for specific aliments or for annual checkups. Screening should be applied to both high risk and usual risk child at scheduled clinical contacts. Child visits for vaccination or annual checkups are an excellent opportunity to screen for mental health problems.

A recommended clinician assessment and 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 and can be used by a healthcare provider to perform an assessment.

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

Common mental disorders seen during childhood are the anxiety disorders which can be appropriately treated in primary care. Other relatively common childhood mental disorders can be seen co-morbid with ADHD such as Oppositional Defiant Disorder, Conduct Disorder, and Learning Disorder. If ADHD is diagnosed it is important to also consider the possibility of one or more of these disorders. Their treatment usually requires specialty services and referral should be made while the ADHD treatment begins.

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

- The SNAP-IV Teacher and Parent 18-item Rating Scale is a norm-referenced checklist for determining the presence of ADHD symptoms.

Diagnosis of ADHD in Childhood

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 60% 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 child may show inattention, distractibility, impulsivity, or hyperactivity at times, but the child with ADHD shows these symptoms and behaviours more **frequently, persistently and severely** than other young persons of the same age or developmental level.

ADHD will usually require health provider intervention, while normal neurodevelopmental changes in cognition or behaviour (such as risk taking, increased over-activity) are usually of short duration (less than a couple of weeks) and are likely to resolve spontaneously or be substantially ameliorated by social support or environmental modification alone.

In assessing mental health problems, it is essential to differentiate between signs and symptoms that arise as an expected or normal response to circumstances (e.g., parents return to work, siblings born, house moving, changing school) or developmental changes in normal children of normal (e.g., increased emotional liability in puberty), from those that may signal the onset of a mental disorder.

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

Distress	Disorder
• Usually associated with an event or series of events (often stress related)	• 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 is usually mild	• Functional impairment may range; mild – severe
• Transient – will usually ameliorate with change in environment or removal of stressor	• Long lasting or may be chronic, environment may modify but not ameliorate
• Professional intervention not usually necessary	• External validation (syndromal diagnosis: DSM*/ICD*)
• Can be a positive factor in life – person learns new ways to deal with adversity and stress management	• Professional intervention is usually necessary
• Social supports such as usual friendship and family networks help	• May increase adversity due to its effect on creation of negative life events (e.g., ADHD can lead to academic underachievement and dropping out)
• Counseling and other psychological interventions can help	• May lead to long term negative outcomes (substance abuse, troublesome interpersonal relationships, low self-esteem, etc.)
• Medications should not usually be used	• 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 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 for ADHD. 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.

Psychosocial outlets are key for children with ADHD. Broadening a child's regular routine with the addition of an afterschool activity, as well as introducing behavioural intervention prior to starting pharmaceutical treatment planning, may benefit the child.

Refer to the section on Non-specific Interventions.

Some of the clinical findings in **early childhood** (ages 3 - 5 years) are*:

- The child has difficulty attending, except briefly, to many common interactive or solitary activities such as reading a storybook with their parent or a solitary quiet task such as colouring or drawing.
- The child is frequently "squirmy" and does not like to sit in one place for any length of time.
- The child often has difficulties with "settling" which are apparent during times such a naps or when going to bed.
- The child is described as very active, always on the go, and frequently bumping into things or getting hurt.
- Parents often refer to the child as "not listening" and "zippy" or "always running around".

Some of the clinical findings in **middle childhood** (ages 6 - 12 years) are*:

- The child may not persist very long with most tasks, particularly those they do not want to do such as read an assigned book, homework, or a task that requires concentration such as tidying a room or cleaning something.
- Parents frequently report that their child does not pay attention, does not listen to them, is very forgetful or disorganized.
- Parents and teachers describe the child as "overactive", "always on the go", "cannot sit still", acting out of turn, or blurting out an answer in class. These behaviours are more evident in situations where sustained attention and limited motor activity are expected, such as at the dinner table, in a place of religious worship, school classroom, etc.
- School reports often note that the child is "not living up to their academic potential".
- Frequently teachers will note that the child is "not a bad person but is disruptive to the class".
- Socially the child may have difficulties with peers based on their impulsivity or intrusiveness.
- Girls with predominantly inattentive subtype may be identified as daydreamers and may demonstrate academic difficulties based on inattention – especially in subjects requiring persistent concentration such as mathematics.
- In sports, the child will often be seen to lose attention in the game and may focus on situational irrelevant details of their environment (for example, the outfielder in

baseball attends to a rock in the grass and not to the ball that has just been hit into his area of play).

Remember, just because a child is very active does not mean that they have ADHD. Also, girls with ADHD may demonstrate predominantly inattentive and not hyperactive symptoms. It is essential to ensure that the symptoms the child is exhibiting meet diagnostic criteria for ADHD, are present across multiple settings (for example: at home; at school; in the playground) and are functionally impairing. Symptoms that are present in only one setting or that are not functionally impairing are not likely to be the result of ADHD.

* **These symptoms 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 child and family well. Conducting this brief screening question may allow you to recognize if further ADHD investigation is needed or not.

Who to screen?

- Child presenting with symptoms of inattention, hyperactivity, impulsivity, academic underachievement, or behaviour problems.
- Child 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.
- Child at Risk. See the ADHD disorder in Children, Risk Identification Table in this document.

Refer to the Child and Adolescent Mental Health Screening Questions in Step 1 of this document. These 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.

Diagnosis of ADHD in Childhood 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 clinician assessing a young person for ADHD. This checklist can also be completed by either a

parent or other caregiver or an educator for use by a healthcare provider in 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 :

- **Some symptoms that caused impairment were present before age 7 years**
- **Some 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 child meets the DSM-IV-TR criteria for ADHD before proceeding to treatment.

If a SNAP-IV Teacher and Parent 18 item Rating Scale score of 18 or higher is found during screening:

- Have a discussion about important issues/problems in the child's life/environment. Complete or use the **Child Functional Assessment (CFA)** to assist in determining the impact of the ADHD on the child's functioning.

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

Don't get overwhelmed!

An appropriate assessment of ADHD can be completed in three to four 15-minute office visits using the suggested framework below. Some clinicians may prefer to integrate the details found in the suggested tools into their assessment interviews rather than using the tools separately.

Clinical Approach to Possible Child ADHD in Primary Care*

Step I

Visit One**

Consider risk factors (page 6)
Apply screening tool (page 11)
Complete Child Functional Assessment (CFA)
Complete SNAP-IV

→ If risk factors are substantial **or** if three or more positives answers on either the Parent or Child Version of the Screening Tool **or** CFA suggests dysfunction due to ADHD like symptoms - Use the Psychotherapeutic Support for Children (PSC) and the Worry Reduction Prescription (WRP) (- 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. Provide information about ADHD and its treatment. Obtain informed consent to allow discussion with the school.

→ If fewer 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 the Psychotherapeutic Support for Children (PSC) and Worry Reduction Prescription (WRP) and monitor again in a month and repeat STEP I and review other possible psychiatric conditions.

Step II

Visit Two

SNAP-IV 18 item,
CFA
Use PST
and WRP

→ If SNAP-IV 18 ≥ 18 (or a mean score of greater than 1) and CFA shows decrease in function - continue with PST and WRP strategies - proceed to step 3 within a week. Review SNAP-IV 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.

Step III

Visit Three

SNAP-IV 18
TeFA
Use PST
and WRP

→ If SNAP-IV 18 remains ≥ 18 (or a mean score of greater than 1) and CFA shows functioning problems – proceed to diagnosis (review DSM-IV-TR criteria) and treatment after discussion of ADHD and treatment options**

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

* **Each tool above is found in the Child ADHD toolkit in the appendix.**

** **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 child are informed and understand the disorder and its treatment.

Co-morbidity in ADHD

A brief, focused assessment of common co-morbidities in ADHD should be part of the ADHD assessment. 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.

Specialized learning assessments are often available through the school and these can usually be initiated by the parent. In many cases, input from the primary care physician or primary health care team member can be useful as part of the learning assessment. Remember that when engaging with the school to obtain the proper informed consent from parent and/or assent from the child prior to discussions with the school.

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 young persons 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 child'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 parents. 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.

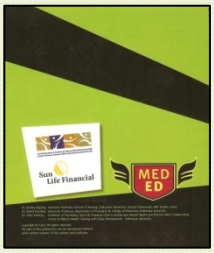
Step 3. Treatment Template

Treatment of child 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 (Behaviour Therapy (BT). Non-specific factors include those activities which decrease stress, improve structure and general well-being PLUS supportive psychological interventions. Use the Psychotherapeutic Support for Children/Caregivers (PSC) in this section of the document.

When initiating treatment it is necessary to start by educating the patient and caregiver both about 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/care provider in self-study and research. To initiate the self-study, direct them to of the websites in the Suggested Websites section 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 young person 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 Suggested Websites section of this document).**
6) Address the issue of **addiction** if treating with medications. Many young people and parents think that taking medicines will lead to addiction. Few people 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 about addiction and medications (link to NIDA website)**
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 (e.g., substances that interact with medication; side effects)



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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, 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 children with ADHD, organized sports that stress individual prowess (e.g., track and field, swimming, skating) may be preferred to sports that demand long and sustained concentration (e.g., baseball).

2) **Sleep** – Insufficient sleep can make anyone less attentive, but it can be highly detrimental for children with attention deficit disorder. On average a child age 6 to 12 years needs about 9 hours of sleep or more per night to function optimally. Many children get much less sleep than that, due to staying up late and having to wake up early for school. Encourage children and parents to set the bedtime earlier with the goal of getting 9 or more hours of sleep. Review sleep hygiene recommendations (see below) 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 child 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 child 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 better prepared.

4) **Social Support** – encourage positive peer and family interactions – particularly associated with safe and pleasurable activities, such as involving the child 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 (chocolate, 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 young persons with ADHD. Overall, a balanced diet, regular meals is recommended for health.

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

7) Avoid DRUGS – this includes nicotine and alcohol as well as all "recreational drugs"

8) Parenting – parenting a child with ADHD can be difficult. Helping parents understand that much of their child's behaviour is not due to wilful antagonism directed against the parent can be helpful. Encourage clear limit setting with appropriate consequences (not too harsh). Encourage setting aside time for parents to spend positive time with their child doing things that are not so impacted by the child's symptoms. For example, go hiking or play soccer rather than visiting a museum or a library. This does not mean not visiting a museum or library but being strategic about joint activities. A visit to a library after a period of brisk exercise is likely to be more successful than the library visit alone. Youth with ADHD are at higher risk for negative social outcomes, drug abuse and legal problems. Parents should be encouraged to take an interest in their child's friends and actively encourage their child's participation in positive and structured activities.

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 a child. This engagement is important for the following reasons:

1. Diagnosis (symptoms of ADHD are present in the school setting). Information from the child's teachers is essential for diagnostic purposes. This includes the completion of the SNAP-IV.
2. Treatment (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, (see see Clinical Approach to Possible Child ADHD in Primary Care in the previous section) it is time to contact the school. Prior to contacting the school, ensure that the child and the parent or guardian give informed written consent. Although schools may differ in their contact protocols it is useful to enlist the assistance of the parent or guardian in identifying the school contact person. Usually this will be a member of the senior administrative team, such as a Vice-Principal or a school counsellor. Depending on the school's policy, the parent or guardian 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 to have 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 child'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 for you to be informed about how this protocol is applied and what role you will have in its application.

Schools and school contact persons 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.

Stress Reducing Prescription (SRP)

It is useful to provide the child with a simple outline developed collaboratively with them and the caregiver that clearly specifies what self-regulatory activities they could pursue during the diagnostic and treatment phases of their contact with their health provider. The Stress Reducing Prescription (SRP) 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.

Stress 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).

Activity	Plan (what, how often, other supports)
Exercise	
Eating Well	
Sleep	
Problem Solving	
Planning / Organizing	
Social Activity	

Enlisting the Help of Others

Family members could be involved in helping the child with worry reducing strategies. Other significant persons in the child'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 child 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 and parent) is recommended.

Remember that parental or caretaker involvement is recommended during the assessment and treatment of ADHD in a child. Whenever possible, information about the child's emotional state and functioning should be obtained from the parent or caretaker. It is not uncommon for children 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.

Assessment and Monitoring of Functioning

Functional impairment is an essential component of an ADHD diagnosis. In children, a functional assessment across three domains is an essential component of treatment monitoring. Functional improvement is a necessary target for treatment outcome.

The three functional domains that need to be addressed are:

1. **School** Grades, teacher relationships, attendance
2. **Home** Parental/sibling relationships, home activities
3. **Friends** Peers, down time activities, intimate relationships (when appropriate)

The Child Functional Assessment (CFA) 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 CFA without written permission from the author. Some clinicians may choose to incorporate the essential features of the CFA into their standard patient monitoring interviews rather than using the tool itself.

Child Functional Assessment (CFA)

The CFA is a self-report tool, but in some cases it may require the caregiver to help. It is meant to be completed by the patient/caregiver and should take no more than three minutes to complete for most children. The health care provider can use the information obtained on the CFA 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 child/caregiver 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 then usual; much worse than usual. You can also give an example if you would like.

Over the last week how have things been at:

School _____

Home _____

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 or that you think might concern them if they knew about these things.

1) _____

2) _____

Sleep Assessment

Sleep is often disturbed in children with ADHD and also sleep problems can be a side effect of medication treatment. Therefore it is a good idea to assess sleep during the functional assessment and before treatment.

A useful method for assessing quality and quantity of sleep in a child is by asking the following simple questions to the caregiver:

- What time is the child getting in bed?
- Does the child have troubles falling asleep?
- How long does it take the child to fall asleep?
- Once the child falls asleep, does he/she sleep throughout the night?
- What time does the child wake up?
- Does the child have troubles to waking up?
- Is the child irritable or cranky most mornings?
- Does the child feel tired during the day?
- Does the child nap during the day?

Sleep Hygiene

Good sleep hygiene is an important part of healthy development for all children. Children 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

Standard ADHD disorder treatment guidelines recommend the use of behavioural therapy (BT), as first-line interventions for children and adolescents with ADHD disorders. In many locations, these interventions are not easily available, or the child or 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 Behavioural Therapy (BT) is available in the patient's community, refer this intervention to the child and caregiver.

Children with ADHD frequently perform better in structured settings while disorganized, chaotic homes or classrooms tend to exacerbate the symptoms. Encourage teachers to provide less stimulating environment and/or refer the parents to parental training programs or parent support groups if these are available.

Many youth with mild symptoms and minimal impairment have shown improvement with BT alone, and may not require medication intervention. However, if waiting lists for these therapies are long or these 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 Children/Caregivers. Importantly, evidence suggests that BT may have additional positive effects when combined with a medication treatment in severe ADHD disorders.

Important Clinical Points:

- **"The elephant is in the room."** Sometimes parents may disagree on how (or even if) their child should be treated. In this case it is essential to discuss their concerns separately from assessment of the child.
- **Medications should not be used to treat young people who do not meet diagnostic criteria for ADHD.** They should be used only for treating those with a 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 when needed.

Also refer to Engaging The School.

Psychotherapeutic Support for Children/Caregivers (PSC): Practical Pointers for Primary Care Health Providers Treating the Child with ADHD

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

Approach

- Establish a supportive relationship with the caregiver and child.
- Establish a collaborative approach with the caregiver – providing good treatment services for childhood ADHD requires a good working relationship with the caregiver.
- Include the child as is developmentally appropriate and address their perspective on social, family, academic functioning and feeling about self.

Be Present-Focused

- Focus on the current functioning of the child at home and school.
- Help caregivers let go on negative feeling about past interaction with their child. Focus on now, not on the past.
- Help alleviate caregiver's future-oriented worries by refocusing them on the current issues. A successful future is built on solving the problems of today!

Be Solution-Oriented

- Validate caregiver experience of stress/frustration.
- Help parents to identify what leads to successful outcomes.
- Help parents to advocate with the school to implement interventions that can help their child.

Provide Education

- Provide education about ADHD to both the caregiver and child.
- Help the caregiver understand that many behaviours are not wilful disobedience or laziness, and help them learn how to differentiate.
- Provide evidence-based information about ADHD including answering questions about ADHD and treatment.
- Refer them to the family resources links in the Suggested Websites section and suggest they research (i.e. "Google" the topic) followed by a future discussion.

Coping Skills

- Parenting a child with ADHD can be stressful. When stressed, parents may exhibit negative parenting behaviours such as: yelling, hitting, inappropriate punishment. Help parents understand that such responses, although common, do not help.
- Provide parents with practical suggestions such as time-out strategies and

positive reinforcement techniques. Refer the parents to resources for parent effectiveness training or parent counselling if they are available in the patient's community.

- Remind parents that many youth with ADHD grow up to be excellent at their work, in the arts, in sports and in their lives.
- Encourage parents to fit their child's skills to activities. For example, many children with ADHD have difficulty in highly structured team sports (i.e., baseball) but excel at more individual sports (i.e., swimming, tennis)
- Encourage parents to enrol their child in active, structured, pro-social community organizations (e.g., boys / girls clubs).

Cognitive Strategy

- Cognitive strategies that are sometimes useful for teens are largely ineffective with young children.
- Help caregivers better understand their emotional reaction to their child's behaviour.

Don't react, Parenting a child with ADHD is challenging!

What happened?

It's Thursday night, you're tired after a day of work. You sit with your child to supervise their homework, and find out that they have a math exam tomorrow and they didn't bring home any notes or book to study.

YOU GET ANGRY / FRUSTRATED!

Things like this have happened so many times before…

Don't react, "Stop and think".

Children with ADHD receive a tremendous amount of negative feedback. Criticism and nagging are not going to improve the actual situation.

Take time to breath and think!

How you can do it better…

There is not much that you can do tonight, but at least you can try not to make it worse. You can ask your child to recall what they have been reviewing in class and make some practice exercises together.

Next day, you can ask the teacher to give you the dates of any exams in advance and help your child to write them down on their agenda, as well as some reminders on days before the exam to help them remember to bring the books needed to prepare in advance.

Behaviour Strategy

- Children with ADHD do better in structured environments!
- Establish an organized household routine including meal times, school work and bedtime. This routine should be predictable, but flexible to the child's needs and should not be rigid.
- Help parents to: create simple systems of organization; develop a token economy at home; the use of charts is useful for children under age of 12 years.
- For more tips and information about parenting and behavioural intervention for children with ADHD, refer to the references for families

Token Economy is a behaviour modification technique that aims to increase desirable behaviour and decrcease undesirable behaviour with the use of tokens or small positive rewards at the moment of success, "displaying desirable behaviour".

The tokens (e.g., stickers, other small objects) are collected and later exchanged for a meaningful object or privilege (e.g., choice of meal for dinner, selection of a favorite book during bedtime story time). A token economy should not take the place of, but rather supplement other parenting techniques such as advice, support, etc. Rewards for children need to be more immediate than with adults. Waiting for the weekend to be rewarded for what the child does on Monday is not useful.

Medication Intro

- Provide rationale for using medication to caregivers including the potential benefits, as well as potential risks about the medication.
- Teach parents about how to give medication to children who may have trouble swallowing larger pills that cannot be sprinkled into food. Also discuss with caregivers the need to include the school in medication information if they need to be involved in administering during the school day, as is often the case with short acting medicines (i.e., Ritalin).
- Talk to the child in developmentally appropriate language about the rationale for using medicine. Answer any and all questions about fears or concerns.
- Talk to the child in developmentally appropriate language about side effects, such as upset stomach or constipation, and encourage them to talk to their caregiver should they experience any difficulties. Encourage caregivers to have a regular dialogue regarding side effects with their children, especially when beginning a new medication.
- Encourage parents to bring you information that is anti-medicine to be discussed with you so that misinformation or disinformation can be corrected.
- Remember to discuss the issue of addiction. Bring it up yourself if the caretaker or child does not do so.

Medications for ADHD are:

- Among the most effective treatment in all medicine
- Usually helpful to most children with ADHD
- Usually able to be used without significant side effects

Medications for ADHD are not:

- Addictive
- Destructive of the child's personality
- A crutch

Be Realistic

- Discuss with parents reasonable parenting expectations and the needs for ongoing support.
- Discuss expectations and potential obstacles in the treatment course.
- ADHD symptoms have the best chance of improving when child 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 child's wellness activities (exercise, sleep, healthy diet, etc.).

Further guidelines to create a supportive environment

Remember to embed these guidelines and suggestions 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 child diagnosed with ADHD and the parents or caregiver need to understand the potential benefits and potential risks of the proposed medications. There are a number of different medication options. The various options should be identified before a choice is made. 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
- ✓ CFA (Child Functional Assessment)
- ✓ KSES-A (Kutcher Side Effects Scale for ADHD Medication)
- ✓ Inquire about a 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 decreases rates of 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 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 may improve compliance with treatment.

Issues to Consider When Monitoring ADHD Treatment

First
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.
Second
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.
Third
Check carefully for other psychiatric symptoms that might suggest a different disorder. For example, does the patient have an anxiety state that looks like ADHD? Remember, inattention or hyperactivity symptoms do not always mean ADHD. Always check for the presence of a learning disorder.
Fourth
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 (the use of prescription drugs for recreational purposes) "drug diversion" (providing the medicine to others). 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) should be used.
Seventh

Measure the presence of depression symptoms and pay special attention to suicide risk.

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 their attention can be directed. Remember, the pharmacotherapy of ADHD is not an emergency medical treatment. There is time for substantial research followed by frank and open discussion about treatment options 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 child 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 other clinician can be reached if any problems develop and arrange to see the patient within a week of initiating treatment.

Eleventh

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

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, 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 side effects or other problems but it may cut down their prevalence and will help to quickly identify when they occur, allowing appropriate intervention.

ADHD medications are grouped into two major categories: stimulants and non-stimulants. Now you have to decide whether your patient will benefit by receiving a stimulant or a non-stimulant medication. Here are some points to help you make that 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

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
- Dexedrine (dextroamphetamine sulphate) 5, 10, 15 mg

Extended release preparations

Are preferred over short-acting medications, patients tend to have better compliance and the medicines are less likely to be diverted. However they are more expensive, not all insurance plans cover all of 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

Non-Stimulants

- Are highly effective and a good alternative for youth who do not respond well to stimulant medications
- 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.

***Strattera** (Atomoxetine) 10, 18, 25, 40, 60, 80, 100 mg cap.

Is the non-stimulant medication that is approved to treat children >6 years / adolescents with ADHD.

***Are considered as first line treatment for ADHD**

There are some 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 that 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's rapid onset and offset pharmacodynamics. Following a 3-day baseline assessment of symptoms (SNAP-IV 18) a standard dose of methylphenidate standard release (2.5mg P.O. T.I.D or 5.0 mg P.O., T.I.D. – depending on weight of the child) 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.

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12
No medication			2.5 0r 5 mg/tid	2.5 or 5 mg/tid	2.5 or 5 mg/tid	Placebo medication			2.5 or 5 mg/tid	2.5 0r 5 mg/tid	2.5 or 5 mg/tid

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 2.5 mg in the morning and 2.5 mg four to five hours later and 2.5 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 5 mg in the morning and 5 mg four to five hours later and 5 mg 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 7.5 mg in the morning, 7.5 mg four to five hours later 7.5 mg 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 10 mg in the morning, 10 mg four to five hours later and 10mg 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. Heavier children will be able to tolerate higher doses. Some children will not be able to tolerate doses above 30 mg per day.
- 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 child is taking the medication at school.

Some children who are taking a sustained release form of methylphenidate may require a small dose of regular methylphenidate in the late afternoon or at dinner time to help with ADHD symptoms during the evening.

For younger children who have problems with swallowing, Biphentin may be a consideration. Biphentin is a capsule – with little beads inside. This allows the medicine to be 'sprinkled' onto

soft foods. Another option is the methylphenidate transdermal patch (Daytrana), parents should be warned about the risk for contact dermatitis.

If a decision is made 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.

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 symptom 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 and the side effects scale. This can be completed by the parents/caregivers. Remember that the SNAP-IV should be completed twice weekly by teachers as well. These forms should be brought to each appointment where they can be reviewed by the clinician.

* The PSC based supportive rapport model should be used at every visit as a framework within which you can structure your interaction with your patient.

Stimulants can be misused. However abuse of stimulants is not a significant concern in patients 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** (using the medication recreationally 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 such a history of or is currently abusing drugs or alcohol, the use of atomoxetine should be considered.

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 2 weeks.
- Measure outcomes using SNAP-IV 18 items (aiming for a score of less than or equal to 18) and the KSES-A.
- Increase to 0.8mg/kg/d in the morning and maintain for a period of 2 weeks.
- Measure outcomes using SNAP-IV 18 items (aiming for a score of less than or equal to 18) and the KSES-A.
- Increase to 1 mg/kg/d in the morning and maintain for a period of 2 weeks.

- Measure outcomes using SNAP-IV 18 items (aiming for a score of less than or equal to 18) and the 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 2 weeks.
- Measure outcomes using SNAP-IV 18 items and the KSES-A.
- If symptoms are not under optimal control with 1.2mg after maintaining it for at least 6 weeks refer to speciality 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 behaviors 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 Toolkit.

Follow-up Table

Tool	Baseline	Day 1*	Day 3*	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
SNAP-IV	✓	✓	✓	✓	✓		✓				✓
TeFA	✓				✓		✓				✓
KSES	✓	✓	✓	✓	✓		✓				✓

* 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	4 = No change
1 = Very much improved	5 = Minimally worse
2 = Much improved	6 = Much worse
3 = Minimally improved	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.

Subjective side effects	Never	Somewhat		Constantly	
Anorexia	0	1	2	3	4
Weight loss	0	1	2	3	4
Abdominal pain	0	1	2	3	4
Dry mouth	0	1	2	3	4
Nausea	0	1	2	3	4
Vomiting	0	1	2	3	4
Fearful	0	1	2	3	4
Emotional lability	0	1	2	3	4
Irritable	0	1	2	3	4
Sadness	0	1	2	3	4
Restlessness	0	1	2	3	4
Headaches	0	1	2	3	4
Trouble sleeping	0	1	2	3	4
Drowsiness	0	1	2	3	4
Suicidal ideation	0	1	2	3	4
Rash	0	1	2	3	4
Acne	0	1	2	3	4
Dyskinesia	0	1	2	3	4
Tics	0	1	2	3	4
Other movements	0	1	2	3	4
Other:	0	1	2	3	4

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

BP sitting _____ Notes: _____
BP standing _____ _____
Pulse rate _____ _____
Weight _____ _____
Height _____ _____

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!!

One	Outcome	Strategy
	Patient not better or only minimally improved. SNAP-IV 18 items $\geq$ 18 and little or no functional improvement.	• Increase medication gradually (methylphenidate to a maximum daily dose of 60mg if tolerated or atomoxetine to a maximum daily dose of 1.2mg/k) if tolerated and refer to specialty child/adolescent mental health services***** • Continue weekly or biweekly monitoring and all other interventions until consultation occurs
Two	**Outcome**	**Strategy**
	Patient moderately improved. SNAP-18 < 18. Some functional improvement (50-60% as determined from the CFA)	• 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	**Outcome**	**Strategy**
	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.

Medication doses used in specialty mental health services may occasionally exceed those usually found in primary care. Physicians monitoring youth who have been treated by specialists should discuss medication dose requirements prior to initiating dose changes.

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. Openly recognizing that it is probable that the patient or caregiver may miss one or more doses of medications is not only consistent with reality, but it allows the patient or caregiver 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 caregiver and from the child. Use such prompts as "It is not uncommon to forget to provide the medicine sometimes." It is important not to admonish the caregiver who self-identifies occasional medication non-adherence. Simply acknowledge the difficulty in remembering and ask if there is anything you can help them to improve their remembering (i.e., using a chart).

2) Usually parents are the ones who 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 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 them 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 that if they are experiencing any unusual side effects or dramatic change in ADHD symptoms they should contact their 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. Safety and Contingency Planning

The patient's safety is of paramount importance. Safety concerns trump all other considerations. Here are some suggestions for helping the patient 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 child and caregiver at all times. Other methods such as electronically saved messages can also be used.

Rapid Health Provider Availability – allowing the child 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 – 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.

Step 5. Referral Flags

Referral of the child 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 child 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); Tourette's syndrome or chronic motor or vocal tics.
- Patients with concurrent Conduct Disorder; Opposition Defiant Disorder

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 Family Practice: http://www.aafp.org/afp/2002/0215/p726.html
- American Academy of Child and Adolescent Psychiatry - www.aacap.org
- American Academy of Pediatrics http://www.aap.org
- Canadian ADHD Resource Alliance: http://www.caddra.ca/cms4/
- National Institute of Mental Health http://www.nimh.nih.gov/health/topics/attention-deficit-hyperactivity-disorder-adhd/index.shtml
- 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/
- Help guide.org http://www.helpguide.org/mental/adhd_add_parenting_strategies.htm
- Kids Health.org: http://kidshealth.org/parent/medical/learning/adhd.html
- National Dissemination Center for Children with Disabilities (NICHCY) http://nichcy.org/families-community
- National Resource Center on AD/HD http://www.help4adhd.org/
- National Information Center for Children and Youth with Disabilities: http://www.kidsource.com/NICHCY/ADD1.html
- National Resource Centre on AD/HD http://www.help4adhd.org
- 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.

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ADHD Toolkit

Index

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.

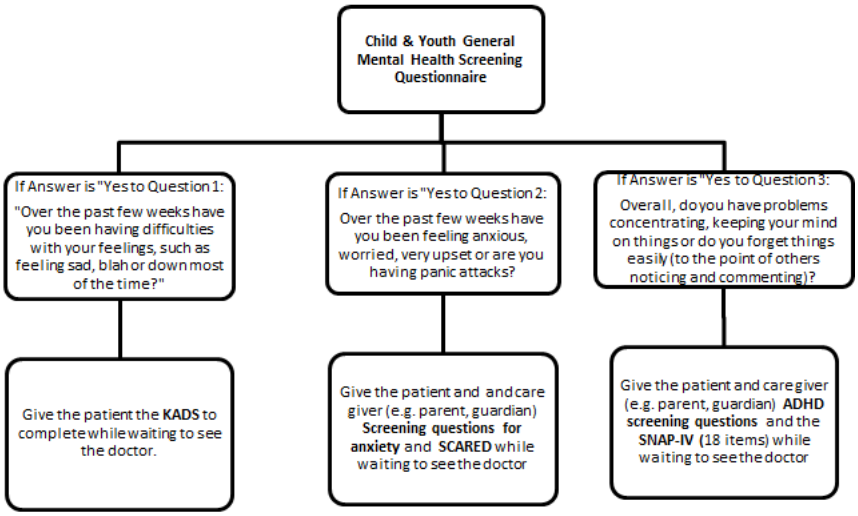
Remember that some cases of anxiety and depression may demonstrate positive scores on the concentration component of the SNAP. If no hyperactivity components are identified on the SNAP review for ADHD please assess for depression and anxiety using KADS and SCARED.

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



Attach a copy of TASR-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 Children, Risk Identification Table

Significant risk effect	**Moderate risk effect**	**Possible "group" identifiers** (these are not causal for ADHD but may identify factors related to childhood onset ADHD)
1. A diagnosis of ADHD in childhood 2. Family history of ADHD 3. Family history of mental disorders (affective, anxiety, tics, or conduct disorder) 4. Psychiatric disorder: Oppositional Defiant Disorder, Conduct Disorder or a Learning Disorder	1. Exposure to severe environmental factors (i.e., lead contamination, prenatal exposure of alcohol and cigarette, birth trauma, low birth weight, head injuries). 2. Psychosocial adversity such as maternal depression, paternal criminality, chaotic home environment, and poverty. 3. Substance misuse or abuse (early onset of use – including cigarettes and alcohol) 4. Close head injury (concussion)	1. School failure or learning difficulties 2. Socially isolated from peers, behavioural problems (including gang activity, legal problems) – accident prone (including traffic violations, accidents) 3. Bullying (victim and/or perpetrator)

ADHD Screening Parent Version

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

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

ADHD Screening Child Version

ADHD Screening Tool: Child 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:_____

For each item, select the box that best describes this child. Put only one check per item.		Not at all **0**	Just a Little **1**	Quite a Bit **2**	Very much **3**
Inattention					
1	Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities				
2	Often has difficulty sustaining attention in tasks or play activities				
3	Often does not seem to listen when spoken to directly				
4	Often does not follow through on instructions and fails to finish schoolwork, chores, or duties				
5	Often has difficulty organizing tasks and activities				
6	Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework)				
7	Often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)				
8	Often is distracted by extraneous stimuli				
9	Often is forgetful in daily activities				
Hyperactivity					
10	Often fidgets with hands or feet or squirms in seat				
11	Often leaves seat in classroom or in other situations in which remaining seated is expected				
12	Often runs about or climbs excessively in situations in which it is inappropriate				
13	Often has difficulty playing or engaging in leisure activities quietly				
14	Often is "on the go" or often acts as if "driven by a motor"				
15	Often talks excessively				
Impulsivity					
16	Often blurts out answers before questions have been completed				
17	Often has difficulty awaiting turn				
18	Often interrupts or intrudes on others (e.g., butts into conversations/games)				
		Sum of Items for Each Scale	Average Rating Per Item for Each Scale	Teacher 5% Cut-off	Parent 5% Cut-off
Average score for ADHD-Inattention (sum of items 1-9/ # of items)				2.56	1.78
Average score for ADHD-Hyperactivity-Impulsivity (sum of items 10-18/ # of items)				1.78	1.44
Average score for ADHD-Combined (sum of items 1-18/ # of items)				2.00	1.67

Completed by:_____

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 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 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).

Activity	Plan (what, how often, other supports)
Exercise	
Eating Well	
Sleep	
Problem Solving	
Planning / Organizing	
Social Activity	

Enrolling the Help of Others

Family members should 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.

Child Functional Assessment (CFA)

The CFA 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 then 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 or that you think might concern them if they knew about these things.

1) _____

2) _____

Parenting Overview

Love and Affection	• Spending quality time with the child individually; demonstrating physical affection; words and actions convey support and acceptance
Stress Management	• Parents learn how to manage their own stress and try not to let their stress drive relationships with their children
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

**Modified from Epstein, R. What Makes a Good Parent? Scientific American Mind. November/December. 2010: 46 – 49.*

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

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.

Subjective side effects	Never	Somewhat		Constantly	
Anorexia	0	1	2	3	4
Weight loss	0	1	2	3	4
Abdominal pain	0	1	2	3	4
Dry mouth	0	1	2	3	4
Nausea	0	1	2	3	4
Vomiting	0	1	2	3	4
Fearful	0	1	2	3	4
Emotional lability	0	1	2	3	4
Irritable	0	1	2	3	4
Sadness	0	1	2	3	4
Restlessness	0	1	2	3	4
Headaches	0	1	2	3	4
Trouble sleeping	0	1	2	3	4
Drowsiness	0	1	2	3	4
Suicidal ideation	0	1	2	3	4
Rash	0	1	2	3	4
Acne	0	1	2	3	4
Dyskinesia	0	1	2	3	4
Tics	0	1	2	3	4
Other movements	0	1	2	3	4
Other:	0	1	2	3	4

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

BP sitting _____
BP standing _____
Pulse rate _____
Weight _____
Height _____

Notes: _____
_____
_____
_____
_____

Clinical Global Impression –Improvement Scale (CGI)

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	4 = No change
1 = Very much improved	5 = Minimally worse
2 = Much improved	6 = Much worse
3 = Minimally improved	7 = Very much worse

Medication Monitoring Algorithm

Initiating and Monitoring Stimulants Medication in Children/ Youth

ADHD Diagnosis (DSM-IV criteria)

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

- 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!**

Use PST/PO and WRP throughout the treatment process.

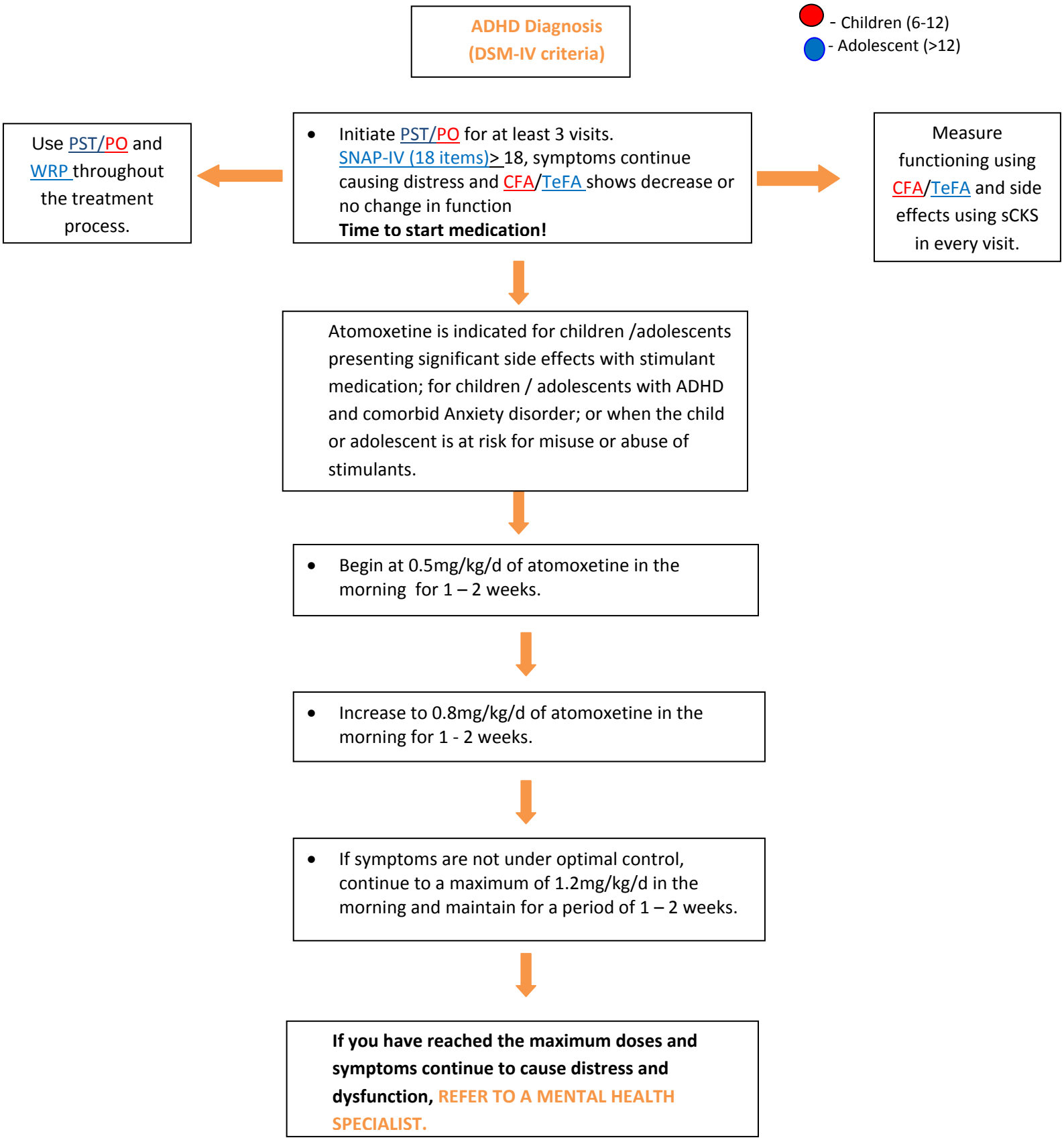
Measure functioning using CFA/TeFA and side effects using sCKS in every visit.

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

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

Initiating and Monitoring Non-Stimulant Medication in Children/ Adolescents



SAMPLE LETTER REQUESTING PSYCHOEDUCATIONAL TESTING

Date:

Salutation:

Re: Patient name ; Request for psychoeducational testing

With the permission of _____ (parent/guardian) 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;

(Physician name)

Cc: Parent/guardian

SAMPLE LETTER REGARDING SCHOOL SUPPORTS AND ACCOMODATIONS

Date:

Salutation:

Re: Patient name ; Request for School Support and Accommodation

With the permission of _____ (parent/guardian) 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;

(Physician Name)

Cc: Parent/guardian

DSM-IV TR criteria

DSM-IV-TR. Oppositional Defiant Disorder

A. A pattern of negativistic, hostile, and defiant behavior lasting at least 6 months, during which four (or more) of the following are present:

(1) often loses temper
(2) often argues with adults
(3) often actively defies or refuses to comply with adults' requests or rules
(4) often deliberately annoys people
(5) often blames others for his or her mistakes or misbehavior
(6) is often touchy or easily annoyed by others
(7) is often angry and resentful
(8) is often spiteful or vindictive

Note: Consider a criterion met only if the behavior occurs more frequently than is typically observed in individuals of comparable age and developmental level.

B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.

C. The behaviors do not occur exclusively during the course of a Psychotic or Mood Disorder.

D. Criteria are not met for Conduct Disorder, and, if the individual is age 18 years or older, criteria are not met for Antisocial Personality Disorder .

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

- Often fidgets with hands or feet or squirms in seat
- Often leaves seat in classroom or in other situations in which remaining seated is expected
- 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)
- Often has difficulty quietly playing or engaging in leisure activities
- Often on the go or often acts as if driven by a motor
- Often talks excessively

Impulsivity

- Often blurts out answers before questions have been completed
- Often has difficulty awaiting turn
- 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 (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 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 behavior 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. 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 categorises 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 favours 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)

Serious violations of rules

- often stays out at night despite parental prohibitions, beginning before age 13 years
- has run away from home overnight at least twice while living in parental or parental surrogate home (or once without returning for a lengthy period)
- is often truant from school, beginning before age 13 years