Approved by ICNF Board 8/4/2020

Follow-up Care for Children Prescribed ADHD Medication (ADD)
Clinical Guideline

This guideline focuses on children newly prescribed attention-deficit/hyperactivity disorder (ADHD) medication who had at least three follow-up care visits within a 10-month period, one of which was within 30 days of when the first ADHD medication was dispensed.

The two rates of this measure assess follow-up care for children prescribed an ADHD medication:

- *Initiation Phase.* Assesses children between 6 and 12 years of age who were diagnosed with ADHD and had one follow-up visit with a practitioner with prescribing authority within 30 days of their first prescription of ADHD medication.
- *Continuation and Maintenance Phase.* Assesses children between 6 and 12 years of age who had a prescription for ADHD medication and remained on the medication for at least 210 days, and had at least two follow-up visits with a practitioner in the 9 months after the Initiation Phase.

**See ICNF provider manual and HealthEC for metric specifications regarding ICNF metric set.*

The purpose of this guideline is to provide ICNF providers guidance regarding follow up visits and medication compliance for individuals, ages 6-12, who are being pharmacologically treated for ADHD (NCQA).

Note: Clinical Guidelines are statements that include recommendations intended to optimize metric success, based on the metric definition, informed by a systematic review of evidence available in the literature. They are guidance only to be interpreted and applied by each ICNF provider organization and will need to be evaluated by your clinicians to determine when applicable.

Summary Table of Potential Barriers and Interventions

The following summary table presents the primary barriers to children prescribed ADHD medication, the methods to identify the barrier, and the potential interventions to apply relative to managing medication compliance, monitoring treatment effectiveness, and identifying and managing side effects.

Possible Barrier	Signs/Symptoms of Barrier or Methods to Identify	Potential Interventions
Stigma	• Missed appointments • Client's lack of belief in benefit of treatment • Client's lack of insight into the illness	• Offering client choice on a variety of interventions to create opportunities that motivate a client to choose to engage in treatment • Providing client education/data surrounding ADHD e.g. amount of people diagnosed, success of treatment, typical side effects and how they can be managed

Possible Barrier	Signs/Symptoms of Barrier or Methods to Identify	Potential Interventions
	• Client's concern relative to judgement from family or friends	• Enhanced provider communication that recognizes client's communication tolerance/style and adapting communication methods appropriately • Motivational interviewing • Shared decision-making • Initiate a relationship with family members and include them in the treatment decision process, as appropriate • Address any cultural issues that may have not been identified earlier • Initiate a relationship with family members and include them in the treatment decision process; ensure school has appropriate support for teachers as well.

Adverse drug reactions	• Side effects of medication observed and reported
	• Client's lack of belief in benefit of treatment
	• Presence of barriers to care
	• Complexity of treatment
	• Poor health literacy – client demonstrates lack of knowledge about drug reactions and efficacy
	• Client states that they feel better when they stop taking medication
		• Educate client and parents about most common side effects of ADHD medications and how to manage them, and when to contact provider
		• Ensure client/parents that some side effects, such as upset stomach or headaches may go away after a few days of the body adjusting to the medication
		• Encourage the use of a log to note timing of side effects or events related to the treatment regimen
		• Educate client/parents on most common side effects of stimulant or non-stimulant medications, and how best to deal with these, as appropriate:
		  ○ Stimulant: sleep problems, weight loss, headaches/stomach aches, nervousness, decreased appetite, increased blood pressure, dizziness, rebound (irritability when medication wears off). Less common: personality changes and tics
		  ○ Non-Stimulant: nausea, stomach aches, decreased appetite, weight loss, fatigue, drowsiness, mood swings
		• Assess the potential for alternative dosing schedules
		• Reduce overstimulating or stressful relationships, environments, and life events
		• Update prescriber regarding client concerns and consider alternative medications that the client may consider more beneficial
		• Provide client with information on the nature and management of illness, drug rationale, drug reactions
		• When changing medications, try to adjust one medication at a time to identify which medication may be causing the side effect

Possible Barrier	Signs/Symptoms of Barrier or Methods to Identify	Potential Interventions
		• Coordinate with other providers if medication side effects or other reactions are identified
Denial of illness	• Clients lack of insight into illness • Missed appointments • Patient and/or guardian verbalization of denial	• Psychoeducation • Shared decision-making • Motivational messages • Care support group or 1:1 peer support
Poor provider-client engagement (lack of trust or confidence)	• Inadequate follow-up and discharge planning • Poor provider-client relationship • Missed appointments • Provider not trained to properly address clients experience in treatment or their concerns about entering treatment	• Expand provider access • Motivational interviewing • Enhanced/more frequent provider communication that recognizes client's preferred communication style and adapting communication methods appropriately • Ensure staff that are intervening are properly oriented and trained to support client
Difficulty of regimen	• Presence of comorbid physical health condition • Presence of cognitive impairment • Side effects of medication • Identified barriers related to treatment or access to medications • Confusion related to treatment or complexity of treatment • Identified social determinants of health challenges	• Alternative dosing schedules • Consider alternative medications that the client may consider more beneficial ○ Offering client choice to create opportunities that motivate a client to choose to engage in treatment • Personalized reminders • Initiate a relationship with family members and include them in the treatment decision process • Support patient and caregivers/guardians with methods to track medications and therapy support interventions
Feel they may have been misdiagnosed or not had their diagnosis/ prescription fully explained	• Presence of cognitive impairment • Side effects of medication • Missed appointments • Inadequate follow-up or discharge planning • Language and/or cultural barriers	• Provide the client with information on nature and management of illness • Psychoeducation • Motivational interviewing • CBT • Shared decision-making • Consider alternative therapies as described by Society of Clinical Child and Adolescent Psychology such as BPT, BCM, BPI, and others as noted at:

Possible Barrier	Signs/Symptoms of Barrier or Methods to Identify	Potential Interventions
		https://effectivechildtherapy.org/concerns-symptoms-disorders/disorders/inattention-and-hyperactivity-adhd/
Feel their symptoms have been cured and no longer require medication	• Clients lack of belief in the benefit of the treatment • Clients lack of insight into the illness • Client does not experience symptoms directly after stopping medications, supporting perceptions they no longer need the medications	• Provide the client with information on the nature and management of their illness • Psychoeducation ○ Understand the subjective attitudes and concerns the client is expressing with respect to their illness and medications and offer factual data and information as appropriate • Peer support
Medications too expensive and not being filled	• Lack of medication refills • Lack of parental support • Parent not attending appointments • Parent or client stating lack of financial resources to pay for medications	• Identify any alternative medications that may work just as well but be less costly, such as generic options • Identify websites that may offer price reduction support programs, such as goodrx.com • Contact health plan care management staff to explore alternatives • Contact local pharmacy to identify any discount programs available • Contact pharmaceutical companies to identify coupon programs for medications
Family (or guardian) not supportive of client	• Parent not attending appointments • Parent voicing frustration with client or treatment regimen • Client voicing lack of support from parents • Non-verbal signs of frustration by client or parents • Client or parent acting defensive or demanding	• Focus on Patient and Family Centered Care concepts, such as those described by IPFCC.org: Dignity and Respect, Information Sharing, Participation, and Collaboration. • Present to clients, parents/guardians support websites focusing on ADHD: Nami.org, chadd.org, understood.org, and ADDitudemag.com • CHADD has online fact sheets and support documents: https://chadd.org/for-parents/overview/ • CHADD also has local affiliate groups: https://chadd.org/affiliate-locator/ • Identify local support groups for ADHD such as https://www.psychologytoday.com/us/groups/adhd/florida • Review with parent/guardian the support methods for classroom treatment strategies for ADHD students, as described at: https://www.cdc.gov/ncbddd/adhd/school-success.html

Clinical Guidelines

Predictors/red flags to gauge medication adherence that indicate the need for interventions to evaluate and motivate adherence

- Presence of psychological problems, particularly depression
- Presence of comorbid physical health condition
- Presence of cognitive impairment
- Inadequate follow-up or discharge planning
- Side effects of medication
- Client's lack of belief in benefit of treatment
- Client's lack of insight into the illness
- Poor provider-client relationship (including PCP)
- Presence of barriers to care or medications
- Missed appointments
- Complexity of treatment
- Cost of medication, copayment, or both
- Social determinants of health challenges (food, safety, housing, transportation, other)

Methods of measuring adherence

When considering an intervention, it is important to consider your options and the related advantages and disadvantages of each choice. The below table outlines various methods for measuring medication adherence and the advantages and disadvantages of each.

Test	Advantages	Disadvantages
Direct Methods		
Directly observed therapy	Most accurate	Client can hide pills in the mouth and then discard them; impractical for routine use[1]
Measurement of the level of medicine or metabolite in blood	Objective	Variations in metabolism and "white coat adherence" can give a false impression of adherence; expensive
Measurement of the biologic marker in blood	Objective; in clinical trials, can also be used to measure placebo	Requires expensive quantitative assays and collection of bodily fluids
Indirect Methods		
Client questionnaires; client self-reports	Simple; inexpensive; the most useful method in the clinical setting	Susceptible to error with increases in time between visits; results are easily distorted by the client
Pill counts	Objective, quantifiable, and easy to perform	Data easily altered by the client (e.g. pill dumping)
Rates of prescription refills	Objective; easy to obtain data	A prescription refill is not equivalent to ingestion of

[1] Note: an additional disadvantage may be negative impact on therapeutic relationship

Test	Advantages	Disadvantages
		medication; requires a closed pharmacy system[2]
Assessment of the client's clinical response	Simple; generally easy to perform	Factors other than medication adherence can affect clinical response
Electronic medication monitors	Precise; results are easily quantified; tracks patterns of taking medication	Expensive; requires return visits and downloading data from medication vials
Measurement of physiological markers (e.g. heart rate in clients taking beta-blockers)	Often easy to perform	Marker may be absent for other reasons (e.g. increased metabolism, poor absorption, lack of response)
Client diaries	Help to correct for poor recall	Easily altered by the client
When the client is a child, questionnaire for caregiver or teacher	Simple; objective	Susceptible to distortion

Source: Osterberg L, Blaschke T. Adherence to Medication. New England Journal of Medicine 2005; 353: 487-497.

Overarching interventions to address non-adherence

The clinician-client relationship is a key factor in improving medication adherence. Trust and care are key qualities of the clinical-client relationship. Fostering positive expectancy and hope with clients are instrumental to clients increasing their adherence to medications. The following are specific interventions intended to improve medication adherence:

- Alternative dosing schedules (see below)
- Expand provider access
- Involve people in their treatment decisions (shared decision-making)
- Offer client choice
- Enhanced provider communication and positive effect
- Cognitive behavioral therapy
- Solution focused therapy
- Motivational interviewing and motivational enhancement strategies
- Psychoeducation
- Personalized reminders
- Support with obtaining medication

Medication adherence is related to dosing frequency:

Medication schedule	Rate of adherence
Once daily	~65-93%
Twice a day	~55-83%
Three times a day	~50-81%
Four times a day	~30-72%

Source: Osterberg L, et al. New England Journal of Medicine 2005; 353: 487-497.

[2] Note: an additional disadvantage may be ability to track variety of prescription fills

If possible, move clients to a dosing schedule that includes medication once a day instead of multiple times throughout the day.

Shared decision-making:

- Move from medication “compliance” (client’s passive following of provider orders) to making collaborative treatment decisions jointly based on client lived experience and choice.
- Invite, listen and take seriously the importance of the subjective attitudes and concerns of clients with respect to their illness and medications.
- Help clients understand that choices exist and that they are invited to participate in making decisions related to their treatment.
- Provide more information about treatment options available, including pros, cons, benefits and harms related to each. Ensure that the client understands the options and implications of choices.
- Support the person’s consideration of preferences in deciding what is best for them and their specific situation.
- Include family and key supports in decision-making process as appropriate.
- Recognize and respect cultural preferences.

Specific interventions to address non-adherence issues:

- Use motivational messages to increase client’s intention to adhere to medication recommendations.
- Explore the triggers or cues that led to the client not taking the prescribed medication
    - Ask if the client felt or acted different on days when they missed their medication
    - Ask about side effects experienced
- Review why choosing to not take medication prescribed seemed like a good idea at the time.
- Review the actual outcome resulting from their choice.
- Explore the potential discrepancy between their desired outcome and actual outcome.
- Strategize with clients about what they could do differently in the future, e.g.:
    - For clients who forget to take their medication:
        - Keep medication where they cannot be missed
        - Using an alarm clock or reminder application
        - Using a pill box that helps track whether the medication was taken or not
    - For clients not wanting to take their medications:
        - Acknowledge they have a right to choose not to use medications
        - Ask their reason for choosing not to take the medication
        - Tie discussion back to their recovery goals and utilize motivational interviewing skills to help make sure their decision is well thought out. Try to solicit reasons or values that can be used to engage them in a discussion about barriers or other possible solutions.
        - Update prescriber regarding client concerns and consider alternative medications that the client may consider more beneficial
- Reduce overstimulating or stressful relationships, environments, and life events.
- Provide the client with information (appropriate to his or her ability to assimilate) on the nature and management of the illness.

- Initiate a relationship with family members and include them in the treatment decision process.

References and Resources

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Morisky DE, Ang A, Krousel-Wood M, Ward HJ. Predictive validity of a medication adherence measure in an outpatient setting. *J Clin Hypertens (Greenwich)*. 2008;10(5):348–354.

Parks, Joseph. The National Council of Behavioral Health. *Clinical Strategies to Promote Medication Adherence.*

ADHD-Specific Resources:

CDC, ADHD in the Classroom: Helping Children Succeed in School. https://www.cdc.gov/ncbddd/adhd/school-success.html

Society of Clinical Child and Adolescent Psychology. https://effectivechildtherapy.org/concerns-symptoms-disorders/disorders/inattention-and-hyperactivity-adhd/

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CHADD – National Resource Center on ADHD. https://chadd.org/about/about-nrc/