Deprescribing Intervention For Children Receiving Polypharmacy (defined as three or more psychotropic medications used at the same time)

For Prescriber Use Only

Careful Evaluation

Polypharmacy not justified?

- Polypharmacy has not been helpful
- Polypharmacy has been causing side effects
- Re-evaluate child

Child stable?

- No emergency room visits in prior 3 months
- No hospitalizations in prior 3 months
- No planned major life events (e.g., moving, changing schools)

Initial Health Evaluation

- Conduct a full review of systems, record BMI
- Order labs if needed and not recently done (e.g., if obese, fasting glucose and fasting lipid profile)
- Review medical & psychiatric history

Safety/Crisis Plan

- To address behavioral escalations or adverse reactions during deprescribing
- Integrate into clinical safety plan
- Provide contact information for local clinic emergency services and 988
- Threat to self or others? Go to closest emergency room

INITIATE DEPRESCRIBING PROCESS

- Review with caregiver/child reasons the child was put on polypharmacy
- Help caregiver/child understand complexities of behavior, lack of efficacy of current polypharmacy
  - The lowest benefit-harm ratio
  - Lowest likelihood of adverse withdrawal reactions
  - Medications causing side effects
- Discuss severity of risks, safety of deprescribing, benefits of behavioral interventions

TAPER SLOWLY

- Plan taper process over about 14 weeks
- Reduce 1 medication at a time. Continue other medications as prescribed.
- Reduce dose by 10-25% every 2-4 weeks until discontinuation. If feasible, stay closer to the 10% reduction
- For example, if conducting a 25% taper, reduce dose to 75% of original dose for 4 weeks, then to 50% for 4 weeks, then 25% for 4 weeks, then discontinue
- See the other pages of this guide for some medication-specific examples

For **antidepressants**, (also see additional page):

- Anxiety/depression stable for 1 year
- Higher doses that have been utilized for long periods **OR** Medications with a higher risk of discontinuation need a slow dose reduction 10% every 2-4 weeks.

Risks of discontinuation side effects

- Higher Risk: Paroxetine, Venlafaxine, Duloxetine
- Moderate Risk: Citalopram, Escitalopram, Fluvoxamine, Sertraline, Trazodone
- Low Risk: Bupropion, Fluoxetine

For **antipsychotics**: See antipsychotic specific protocol.

For **stimulants**: One could consider a taper versus discontinuation of stimulant. Monitor for any increase in ADHD symptoms or disruptive behaviors.

MONITOR CLOSELY

Every Two Weeks

- Monitor for **Adverse Drug Withdrawal Events** and **Side Effects**
- Monitor for **Worsening Anxiety, Depression, PTSD, ADHD, OCD, suicidal thoughts, or other mental health symptoms.** Consider utilizing validated symptom scales that are diagnosis specific (e.g. Vanderbilt for ADHD).

Monthly

- Prescriber office visit with child/family
- Nurse phone check-ins every 4 weeks, between prescriber visits
- Record BMI
- Monitor for **Adverse Drug Withdrawal Events** and **Side Effects**

End of Taper

- Record BMI
- Repeat any labs conducted at the initial health evaluation to evaluate any changes if indicated

**If clinically indicated monitor BP and pulse*

Adverse Drug Withdrawal Events are Medication Specific

- Increase in irritability, challenging behaviors, suicidal thoughts or behaviors or other mental health symptoms should be evaluated

Alpha-2 Agonists:

- Taper slowly to avoid rebound hypertension.

Antidepressants: Monitor for Antidepressant Discontinuation Syndrome ("FINISH")

- Mild and reversible

Flu like symptom
Insomnia
Nausea
Imbalance
Sensory Symptoms (Paresthesia, Numbness, Electric Shock like Sensations, Rushing Noise in Head and Visual Trails)
Hyperarousal

Stimulants:

- Monitor for increase in ADHD symptoms.

Mood Stabilizers:

- This protocol is not appropriate for patients taking anti-epileptics for seizure disorders. Consult with a neurologist.

RESPOND TO EMERGENT ISSUES

Increase in suicidal thoughts

- Evaluate child, including safety assessment and plan, and consider returning to previous tolerated dose of medication

Antidepressant Discontinuation Syndrome

- Consider returning to previous tolerated dose of the antidepressant and taper more slowly

Increase in Irritability, Challenging Behaviors

- Evaluate the behavior and consider boost in behavioral or therapeutic strategies (e.g., caregiver management training, cognitive behavioral therapy, trauma-focused therapy).
- Consider an alternative strategy (e.g., relaxation, exercise, outdoor time, reduction of environmental stimuli, development of activities/hobbies).
- Consider increasing medication back to the prior visit dose, remain at dose for 2-4 weeks, depending on behaviors may potentially try a smaller dose reduction

Mood Stabilizers

Common Mood Stabilizers Used with Children, their Oral Forms, Dosage, Recommended & Example Tapers			
Generic Name	Oral Form	Strength	Recommended Taper
(Brand Name)			
Carbamazepine	S	100mg/5ml solution	Taper in 50-100 mg increments. ER formulations taper by 100 mg; T and solution taper by 50 mg.
	T	100, 200	
	ER, T	100, 200, 400 mg	
	ER, C	100, 200, 300 mg	
(Tegretol)	T	200 mg	
Example taper to reduce by about 10-25% every 2 weeks over 14 weeks: Child taking Carbamazepine 100 mg PO BID. Consider tapering to 50 mg PO QAM and 100 mg PO QHS for 2 weeks, then 50 mg PO BID for 2 weeks, then 50 mg PO QHS for 2 weeks, and then discontinue			
Divalproex Sodium	DR C	125 mg	DR Taper in 125-250 mg increments. ER tab taper by 250 mg increments
	DR T	125, 250, 500 mg	
	ER T	250, 500 mg	
(Depakote)	DR T	125, 250, 500 mg	
Example taper to reduce by about 10-25% every 2 weeks over 12 weeks: Child taking Divalproex sodium DR 500 PO BID. Consider tapering to 250 mg PO QAM and 500 mg PO QHS for 2 weeks, then 250 mg PO BID for 2 weeks, then 125 mg PO BID for 2 weeks, and then discontinue			
Lamotrigine	T	25, 100, 150, 200 mg	Taper in 25-50 mg increments.
	ODT	25, 50, 100, 200 mg	
	ER T	25, 50, 100, 200, 250, 300 mg	
	DT	5, 25 mg	
(Lamictal)	T	25, 100, 150, 200 mg	
Example taper to reduce by about 10-25% every 2 weeks over 14 weeks: Child taking lamotrigine 200 mg PO daily. Consider tapering to 150 mg PO daily for 2 weeks, then 100 mg PO daily for 2 weeks, then 50 mg PO daily for 2 weeks, then 25 mg PO daily for 2 weeks, and then discontinue.			
Lithium	C	150, 300 mg	Taper in 150-300 mg increments. Higher doses taper by 300 mg increments and lower doses taper by 150 mg increments.
	T	300 mg	
	ER T	300, 450 mg	
	S	8 mEq/5mL	
(Lithobid)	ER T	300 mg	
Example taper to reduce by about 10-25% every 2 weeks over 14 weeks: Child taking lithium 600 BID. Consider tapering to 300 mg PO QAM and 600 mg PO QHS for 2 weeks, 300 mg PO BID for 2 weeks, then 150 mg PO QAM and 300 mg PO QHS for 2 weeks, then 150 mg PO BID for 2 weeks, then 150 mg PO QHS for 2 weeks and then discontinue			
Oxcarbazepine	T	150, 300, 600 mg	Taper in 150-300 mg increments. Higher doses taper by 300 mg increments and lower doses taper by 150 mg increments.
(Trileptal)	S	300 mg/5ml	
(Oxtellar XR)	T	150, 300, 600 mg	
Example taper to reduce by about 10-25% every 2 weeks over 14 weeks: Child taking oxcarbazepine 600 BID. Consider tapering to 300 mg PO QAM and 600 mg PO QHS for 2 weeks, 300 mg PO BID for 2 weeks, then 150 mg PO QAM and 300 mg PO QHS for 2 weeks, then 150 mg PO BID for 2 weeks, then 150 mg PO QHS for 2 weeks and then discontinue			
ODT = Disintegrating tablet, DT= Dispersible T, ER = extended release, S = Solution, T = tablet, C= Capsule			

Monitor during Taper:

- If child has epilepsy consult with child's neurologist prior to tapering anti-epileptics.
- Monitor for any change in suicidal thinking, challenging behaviors, mood, or sleep difficulties.
- Consider utilizing validated symptom scales that are diagnosis specific (e.g. Vanderbilt for ADHD).

Antidepressant/Anti-Anxiety Medications

Common Antidepressants Used with Children, their Oral Forms, Dosage, Recommended & Example Tapers			
Generic Name	Oral Form	Strength	Recommended Taper
(Brand Name)			
Fluoxetine	S	20mg/5ml solution	Taper in 5-20 mg increments. Higher original dose taper by 20 mg; lower original dose taper by 5-20 mg. Fluoxetine has a long half-life.
(Prozac)	T, C	10, 20, 40, 60 mg	
Example taper to reduce by about 10-25% every 2 weeks over 14 weeks: Child taking Fluoxetine 60 mg PO daily. Consider tapering to 50 mg PO daily for 2 weeks, then 40 mg PO daily for 2 weeks, then 30 mg PO for 2 weeks, then 20 mg PO daily for 2 weeks, and then 10 mg for 2 weeks and then discontinue.			
Sertraline	T	20, 25, 50, 100 mg	Taper in 12.5-50 mg increments. Higher original dose taper by 50 mg; lower original dose taper by 12.5 mg
(Zoloft)			
Example taper to reduce by 10-25% every 2 weeks over 12 weeks: Child taking sertraline 200 PO QAM. Consider tapering to 150 mg PO QAM for 2 weeks, then 100 mg PO QAM for 2 weeks, then 75 mg mg PO QAM for 2 weeks, then 50 mg for 2 weeks, then 25 mg PO QAM for 2 weeks, then 12.5 mg for 2 weeks, and then discontinue.			
Citalopram	S	10 mg/5ml solution	Taper in 5-10 mg increments. Higher original dose taper by 10 mg; lower original dose taper by 5 mg
(Celexa)	T, C	10, 20, 30, 40 mg	
Example taper to reduce by 10-25% every 2 weeks over 14 weeks: Child taking citalopram 40 mg PO daily. Consider tapering to 30 mg PO daily for 2 weeks, then 20 mg PO daily for 2 weeks, then 10 mg PO daily for 2 weeks, then 5 mg PO daily for 2 weeks, and then discontinue.			
Escitalopram	T	5, 10, 20 mg	Taper in 2.5-5 mg increments. Higher original dose taper by 5 mg; lower original dose taper by 2.5 mg
(Lexapro)			
Example taper to reduce by 10-25% every 2 weeks over 14 weeks: Child taking escitalopram 20 mg PO daily. Consider tapering to 15 mg PO daily for 2 weeks, then 10 mg PO daily for 2 weeks, then 5 mg PO QHS for 2 daily, then 2.5 mg PO daily for 2 weeks, and then discontinue.			
Fluvoxamine	T	25, 50, 100 mg	Taper in 25-50 mg increments. Higher original dose taper by 50 mg; lower original dose taper by 25 mg
(Luvox)	ER	100, 150 mg	
Example taper to reduce by 10-25% every 2 weeks over 14 weeks: Child taking fluvoxamine 150 mg PO BID. Consider tapering to 100 mg PO QAM and 150 mg PO QHS for 2 weeks, then 100 mg PO BID for 2 weeks, then 75 mg PO BID for 2 weeks, then 50 mg PO QAM and 75 mg PO QHS for 2 weeks, and then 50 mg PO BID for 2 weeks, then 25 mg PO QAM and 50 mg PO QHS for 2 weeks, and then 25 mg PO BID for 2 weeks and then 25 mg PO QHS for 2 weeks and then discontinue			
Venlafaxine	T	25, 37.5, 50, 75, 100 mg	Taper in 25-37.5 mg increments. Higher original dose taper by 37.5 mg; lower original dose taper by 25 mg
(Effexor)	ER	37.5, 75, 150, 225 mg	
Example taper to reduce by 10-25% every 2 weeks over 14 weeks: Child taking Venlafaxine 225 mg PO daily. Consider tapering to 187.5 mg PO daily for 2 weeks, then 150 mg PO Q daily for 2 weeks, then 112.5 mg PO daily for 2 weeks, then 75 mg PO daily for 2 weeks, then 50 mg PO daily for 2 weeks, then 25 mg PO daily for 2 weeks, then 12.5 mg PO daily for 2 weeks and then discontinue.			
Duloxetine	DR	20, 30, 40, 60 mg	Taper in 20-30 mg increments. Higher original dose taper by 30 mg; lower original dose taper by 20 mg
(Cymbalta)	C		
Example taper to reduce by 10-25% every 2 weeks over 14 weeks: Child taking Duloxetine 120 mg PO daily. Consider tapering to 90 mg PO daily for 2-4 weeks, then 60 mg PO Q daily for 2-4 weeks, then 20 mg PO daily for 2-4 weeks, and then discontinue.			
Buspirone	T	5, 7.5, 10, 15, 30 mg	Taper in 5-15 mg increments. Higher original dose taper by 15 mg; lower original dose taper by 5 mg
(Buspar)			
Example taper to reduce by 10-25% every 2 weeks over 14 weeks: Child taking Buspirone 30 mg PO BID. Consider tapering to 15 mg PO QAM and 30 mg PO QPM for 2 weeks, then 15 mg PO BID for 2 weeks, then 7.5 mg PO QAM and 15 mg PO QPM for 2 weeks, then 7.5 mg PO BID for 2 weeks, and then 7.5 mg PO daily for 2 weeks and then discontinue			
ODT = Disintegrating tablet, DT= Dispersible T, ER = extended release, S = Solution, T = tablet, C= Capsule			

Monitor during Taper:

- Taper slowly to avoid antidepressant discontinuation syndrome (“FINISH”; see figure on first page).
- Monitor for any change in challenging behaviors, suicidal thoughts, depression, anxiety, OCD, PTSD, or other mental health symptoms.
- Consider utilizing validated symptom scales that are diagnosis specific (e.g. PHQ-9 for depression).

Alpha 2-Agonists

Common Alpha 2-Agonists Used with Children, their Oral Forms, Dosage, Recommended & Example Tapers			
Generic Name	Oral Form	Strength	Recommended Taper
(Brand Name)			
Clonidine	T	0.1, 0.2 mg	Taper in 0.05-0.1 mg increments. Can consider a taper more quickly by tapering every week instead of every 2 weeks if needed.
Clonidine ER *(Kapvay)*	T	0.1 mg	Taper in 0.1 mg increments. Can consider a taper more quickly by tapering every week instead of every 2 weeks if needed.
Example taper to reduce by about 10-25% every 2 weeks: Child taking Clonidine 0.2 mg PO QHS. Consider tapering to 0.15 mg PO QHS for 2 weeks, then 0.1 mg PO QHS for 2 weeks, then 0.05 mg PO for QHS weeks and then discontinue.			
Guanfacine	T	1, 2 mg	Taper in 0.5-1 mg increments. Can consider a taper more quickly by tapering every week instead of every 2 weeks if needed.
Guanfacine ER *(Intuniv)*	T	1, 2, 3, 4 mg	Taper in 1 mg increments. Can consider a taper more quickly by tapering every week instead of every 2 weeks if needed.
Example taper to reduce by about 10-25% every 2 weeks: Child taking Guanfacine ER 4 mg PO daily. Consider tapering to 3 mg PO daily for 2 weeks, then 2 mg PO daily for 2 weeks, then 1 mg PO for daily for 2 weeks and then discontinue.			
ODT = Disintegrating tablet, DT= Dispersible T, ER = extended release, S = Solution, T = tablet, C= Capsule			

Monitor during Taper:

- Taper slowly to avoid rebound hypertension
- Monitor for any change in ADHD symptoms, challenging behaviors or sleep difficulties.
- Consider utilizing validated symptom scales that are diagnosis specific (e.g. Vanderbilt for ADHD).

Stimulants

For stimulants: One could consider a taper versus discontinuation of stimulant. Monitor for any increase in ADHD symptoms or disruptive behaviors.

Monitor during Taper:

- Taper slowly to avoid rebound hypertension
- Monitor for any change in ADHD symptoms, challenging behaviors or sleep difficulties.
- Consider utilizing validated symptom scales that are diagnosis specific (e.g. Vanderbilt for ADHD).

References

1. Scott, I. A. et al. Reducing inappropriate polypharmacy: the process of deprescribing. JAMA Intern. Med. 175, 827–834 (2015).
2. Haddad, P. M., & Anderson, I. M. (2007). Recognising and managing antidepressant discontinuation symptoms . Advances in Psychiatric treatment,13(6), 447-457.
3. Warner, C. H., Bobo, W., Warner, C., Reid, S., & Rachal, J. (2006). Antidepressant discontinuation syndrome . American Family Physician, 74(3), 449-456.