# Pediatric Collaborative Care Behavioral Health Conference 2023-2024

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# SSRIs in Pediatrics

## Essentials of Prescribing

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Primary Care Behavioral Health Collaborative Care

# Conflict of Interest

The planner and speaker of this CE activity has no relevant financial relationships with ineligible companies to disclose.

The speaker does intend to discuss unlabeled or unapproved use of drugs or devices.

Please take a moment at the end of the session to complete your evaluation.

Thank you!

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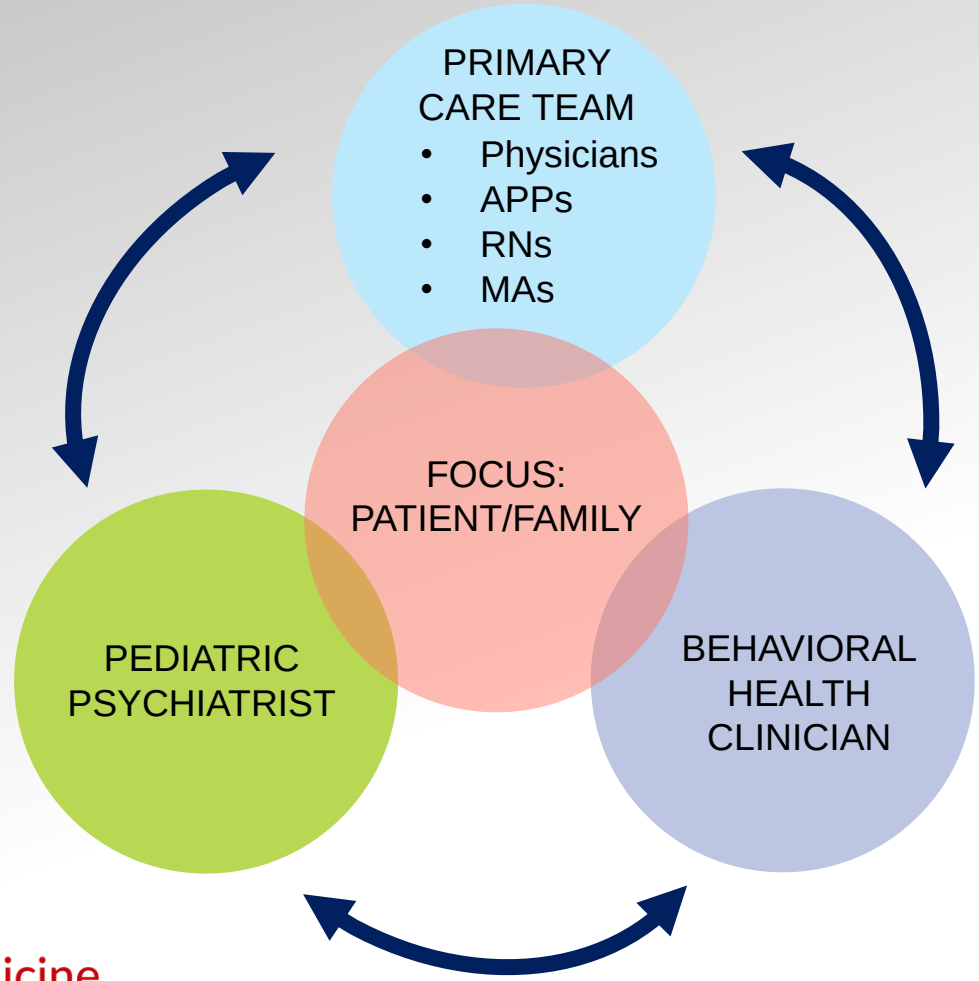
# Learning Objectives

- By the end of this educational activity, pediatricians and family doctors will:
  - Increase their confidence in the safe and effective prescribing of SSRIs in children and adolescents
  - Improve their knowledge base regarding pharmacology, benefits, and side-effects of commonly used SSRIs in pediatrics
  - Identify appropriate rationale and timelines for initiation of medication, monitoring while on medication, and tapering a medication

# Interprofessional Collaborative Care Team

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# SSRIs – Indications

- Peds – Depression, OCD (FDA-approved indications); anxiety
  - Fluoxetine
    - Depression (>8 yo), OCD (>7 yo)
    - Best data supports use of fluoxetine for pediatric/adolescent depression/anxiety
  - Sertraline
    - OCD (> 6 yo)
  - Escitalopram
    - Depression (>12 yo)
  - [Fluvoxamine]
    - OCD (>8 yo)
  - [Citalopram – Less data than others for use in peds population]
  - [**paroxetine** - Suggest against use in pediatric population]

# SSRIs – Rationale/Benefits

- Effective treatment of depression, anxiety, OCD in pediatric, adolescent, and adult populations
- Better tolerance, fewer side-effects as compared to earlier anti-depressant classes (e.g. TCAs, MAOIs)
- Safety in overdose
- Use on own or as adjunct to psychotherapy

# SSRIs - Pharmacology

- Decrease presynaptic serotonin reuptake
- Generally selective for serotonin system; limited effects on other neurotransmitter systems
- Increase length of time serotonin available
- Increase serotonin receptor occupancy
- Likely downstream effects that take time to work (4-8 weeks to see full response)

# SSRIs - Pharmacology

- Can be taken with or without food (suggest w/food due to GI s/e)
- Interactions with other drugs:
  - Citalopram, escitalopram, sertraline → Limited interactions
  - Fluoxetine → Strong inhibitor of CYP2D6 and 2C19
  - Fluvoxamine → Strong inhibitor of CYP1A2 and 2C19
  - Paroxetine → Strong inhibitor of CYP2D6
- Fluoxetine → Longest elimination half-life, 4-7d (active metabolite, norfluoxetine)
- Fluvoxamine, paroxetine → Shortest half-life (1/2-1 day)

# SSRIs – Common Side-Effects

- GI: Nausea, stomachache, diarrhea
- Neuro: Headache, dizziness, tremor, insomnia, fatigue
- Derm: Sweating
- GU: Sexual dysfunction (decreased libido, erectile dysfunction, anorgasmia)
- General: Weight gain (variable); affective blunting

# SSRIs – Common Side-Effects

- Disinhibition
  - Restlessness, hyperactivity, impulsivity, irritability, poor sleep
  - Higher risk in kids (<10 yo)
  - Typically emerges early in treatment or with dose increase

# SSRIs – Serotonin Syndrome

- Cause: Increased serotonergic activity
- Symptoms:
  - Mental status: Anxiety, agitation, confusion/delirium
  - Autonomic: sweating, mydriasis, increased HR/BP/temp
  - Neuromuscular: hyperreflexia, muscle rigidity, myoclonus, hyperreflexia
- Ranges from mild to severe/potentially dangerous
- Etiology:
  - Medications or supplements that impact serotonin system; medications/supplements that inhibit interaction of serotonin modulators; (rarely, due to single medication)

# SSRIs - Suicide Risk/Black Box Warning

- Initial FDA warning label in 2004 for kids/teens; expanded in 2007 to include young adults (younger than 25 yo)
- All anti-depressant classes
- Must discuss this warning/risk with patient/family before prescribing
- Risk of suicidal ideation or behavior:
  - 2% on placebo; 3-4% on antidepressant
  - Highest risk in first several weeks of treatment
  - NNH: 112 to 143
    - (vs NNT: 3 to 10)
- No increased risk in adults 25+; decreased risk in adults 65+

# SSRIs – Dosing

- Fluoxetine: 10-60 mg daily
  - Children (<10 yo): Dose range 5-20 mg. Start at 5 mg daily. May increase by 5 mg, every 4-6 weeks, as needed and if tolerated
  - Pre-teen/young teen (10-14 yo): Dose range 10-40 mg daily. Start at 10 mg daily. May increase by 10 mg, every 4-6 weeks, as needed and if tolerated
  - Older teen/young adults (15+): Dose range 10-60 mg daily. Start at 10 mg daily x 1 week, then increase to 20 mg daily. May increase by 10-20 mg, every 4-6 weeks, as needed and if tolerated

# SSRIs – Dosing

- Sertraline: 12.5-200 mg daily
  - Children (<10 yo): Dose range 12.5-50 mg. Start at 12.5 mg daily. May increase by 12.5 mg, every 4-6 weeks, as needed and if tolerated
  - Pre-teen/early teen (10-14 yo): Dose range 12.5-150 mg daily. Start at 12.5 mg daily. May increase by 12.5-25 mg, every 4-6 weeks, as needed and if tolerated
  - Older teen/young adults (15+): Dose range 25-200 mg daily. Start at 25 mg daily x 1 week, then increase to 50 mg daily. May increase by 25-50 mg, every 4-6 weeks, as needed and if tolerated

# SSRIs – Dosing

- Escitalopram: 2.5-20 mg daily
  - Children (<10 yo): Dose range 2.5-10 mg. Start at 2.5 mg daily. May increase by 2.5 mg, every 4-6 weeks, as needed and if tolerated
  - Pre-teen/early teen (10-14 yo): Dose range 2.5-20 mg daily. Start at 2.5 mg daily. May increase by 2.5-5 mg, every 4-6 weeks, as needed and if tolerated
  - Older teen/young adults (15+): Dose range 5-20 mg daily. Start at 5 mg daily x 1 week, then increase to 10 mg daily. May increase by 5-10 mg, every 4-6 weeks, as needed and if tolerated

# SSRIs – Best Practices for Prescribing

- Dosing:
  - Titrate dose to most effective/therapeutic dose
  - Start low in younger kids and teens; avoid increasing too fast
  - Typically, can increase dose every 4-6 weeks, as needed and if tolerated
  - In severe depression or anxiety, consider increasing dose somewhat more rapidly; don't wait full 6-8 weeks if patient is severely depressed/anxious and severely impaired by symptoms
  - Goal of treatment: Full response/remission of symptoms (>50% reduction in rating scale scores/symptoms)

# SSRIs – Best Practices for Prescribing

- Follow Up Schedule:
  - Initial Treatment: Follow up with PCP in 4-6 weeks; sooner if concerns for severe symptoms/impairment or worsening condition, safety concerns, new psychiatric symptoms, or significant side-effects
  - Once symptoms improving, consider spacing out follow-up with PCP (e.g. every 6-8 weeks for a period of time, then every 2-4 months once stable)
  - Consider if severity of symptoms/impairment warrants escalation to specialty care
  - Rationale for follow-up with PCP (in addition to BHC visits)
    - Ongoing assessment of symptoms, safety, side-effects; assessment and discussion re: medications and mental health treatment overall; support for patient and family; team approach
    - Appropriate titration of medication dose
  - Monitor for:
    - Symptoms of depression/anxiety; functional status/impairments; SI/self-harm; new psychiatric symptoms; life stressors; side-effects; consistency of use

# SSRIs – Best Practices for Prescribing

- When to increase dose:
  - Insufficient response at lower dose after sufficient duration of treatment
- When to hold dose:
  - Symptoms/functioning begin to improve
- When to switch to alternative medication:
  - Limited or no response to current medication at full therapeutic dose, for sufficient duration
  - Poor tolerance of medication; significant adverse effects; worsening symptoms

# SSRIs – Best Practices for Prescribing

- Options for treatment:
  - First-line:
    - SSRI #1 (usually fluoxetine), titrate to effective dose and treat for sufficient duration
  - Second-line:
    - SSRI #2, titrate to effective dose and treat for sufficient duration
  - Third-line:
    - Consider SSRI #3 or SNRI (e.g. venlafaxine)
    - Alternatively, referral to child psychiatry

# SSRIs – Best Practices for Prescribing

- Maintenance Treatment
  - Remain on medication for 9-12 months past point of initial improvement
  - Reduce risk of relapse

# SSRIs – Best Practices for Prescribing

- Tapering off medication:
  - Decrease gradually and incrementally, every 1-2 weeks
    - Slow taper or decrease amount of each decrease in dose if patient is quite sensitive to taper
    - e.g. for sertraline, decrease by 12.5-25 mg, every 1-2 weeks, as tolerated. Could slow down to every 2-4 weeks if patient is sensitive to taper
  - Follow-up every 2-4 months during taper process, to assess stability of mental health concerns and tolerance of taper
- Serotonin Discontinuation Syndrome:
    - Headache, nausea, dizziness, fatigue, myalgias, paresthesias, “brain zaps”
    - More common with rapid taper or abrupt d/c of med; meds with short half-life (e.g. paroxetine, venlafaxine, duloxetine)
    - Less common with meds with long half-life of elimination (e.g. fluoxetine)
    - Uncomfortable but not dangerous
    - Management:
      - Slow down or pause taper

# SSRIs – Best Practices for Prescribing

- Choosing one SSRI vs another
  - Tolerance
  - Consistency with taking medication
    - If inconsistent (e.g. teens), fluoxetine is good choice due to long half-life and active metabolite
  - Interactions with other medications (particularly fluoxetine + other meds)
  - Family history of response?

# SSRIs – FAQs

- If the patient reports SI, do I assume it's because of SSRI?
  - Always challenging to differentiate cause
  - SSRIs can contribute to new-onset SI, but so can ongoing depression/anxiety and other stressors
  - Importance of baseline assessment of safety/SI, and evaluating for additional stressors
  - If it's clear that patient has had no benefit or has dramatically worsened on SSRI, taper off SSRI quickly and consider alternative SSRI to treatment depression/anxiety

# SSRIs – FAQs

- What to do if patient won't/can't swallow pill?
  - Fluoxetine, sertraline, escitalopram all come in liquid form
  - All SSRIs (except ER forms [paroxetine, fluvoxamine]) can be either crushed [tablets] or contents of capsule mixed in with applesauce/yogurt/pudding/juice
  - Can also prescribe in smaller increments (e.g. 2 x 25 mg tabs of sertraline if 50 mg tab is too large)
  - Practice swallowing pills (e.g. small candies like mini-M&Ms)
  - Incentives
  - Mirtazapine: Dissolvable form

# SSRIs – FAQs

- Can you use SSRI with TCA (e.g. amitriptyline for HAs)?
  - Yes (in general)
  - TCA dose for headache tx is typically lower than for depression/anxiety, so risk of interaction is lower
  - Educate about potential risk of serotonin syndrome and symptoms to watch for
  - Review medications and supplements patient is taking
    - Risk for serotonin syndrome increases with addition of further serotonergic medications or medications that inhibit metabolism of SSRI or TCA

# SSRIs – FAQs

- Can I use SSRI with stimulant? (concern for increased anxiety)
  - Data is inconclusive on whether stimulants will worsen anxiety
  - Generally, stimulants do not seem to worsen anxiety or mood, although some patients reports worsening of symptoms on stimulant
  - In general, ok to use SSRI and stimulant together

# Summary

- SSRIs are effective for the treatment of anxiety and depression in pediatric, adolescent, and young adult populations
- Fluoxetine as first-line agent
- Side-effects are not uncommon but are usually tolerable
- Utilize medication at therapeutic dose, for sufficient period of time, to achieve full response/remission of symptoms