Simplifying Psychopharmacology:

Empowering Primary Care with an introduction to *The Waco Guide to Psychopharmacology*

Objectives

By the end of this session, attendees will be able to:

- Implement ***The Waco Guide to Psychopharmacology*** as a clinical decision support tool to treat behavioral health disorders throughout the lifespan
- Apply a behavioral health clinical decision support tool to real-world case scenarios in order to guide diagnosis and treatment planning.
- Integrate key psychopharmacology principles into treatment strategies for Major Depressive Disorder (MDD), Alcohol Use Disorder (AUD), Post-Traumatic Stress Disorder (PTSD), and Bipolar Disorder.

Disclosures

- No financial disclosures
- Created free of industry funding
- Free to access

Evidence Based Interventions

BEHAVIORAL HEALTH INTEGRATION

CLINICAL DECISION SUPPORT

MANY MORE...

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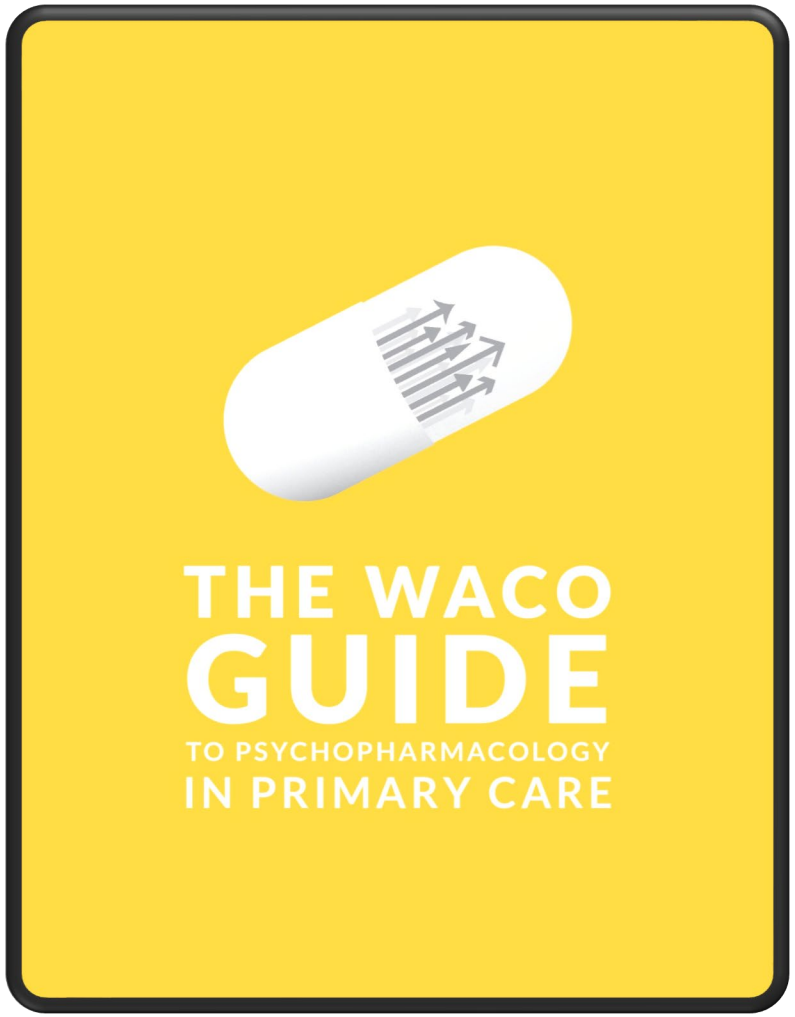
Excellent treatment outcomes when knowledge and scaffolding in place

American Academy of Family Physicians, 2018



Top-level evidence. Expert opinion.
Tailored to primary care.

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Clinical Decision Support for Psychopharmacology

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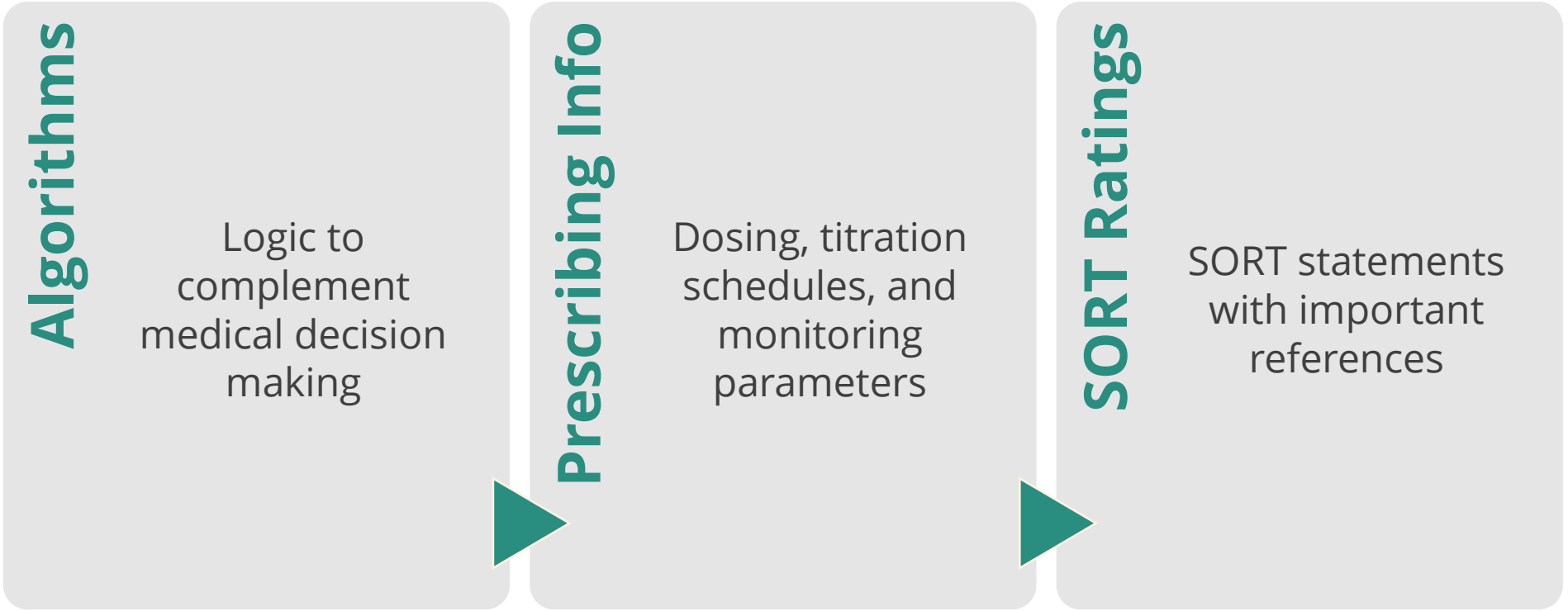
Components of Decision Support Tools



Individualized Treatment

Cardiac Impairment

myocardial infarction within last 6mo, cardiomyopathy with left ventricular dysfunction, or ventricular arrhythmia

Hepatic Impairment

based on Child-Pugh score

Renal Impairment

based on eGFR

Obesity

BMI ≥ 30 kg/m^2

Persons of Reproductive Age

divided into preconception, antepartum, and postpartum

Geriatric

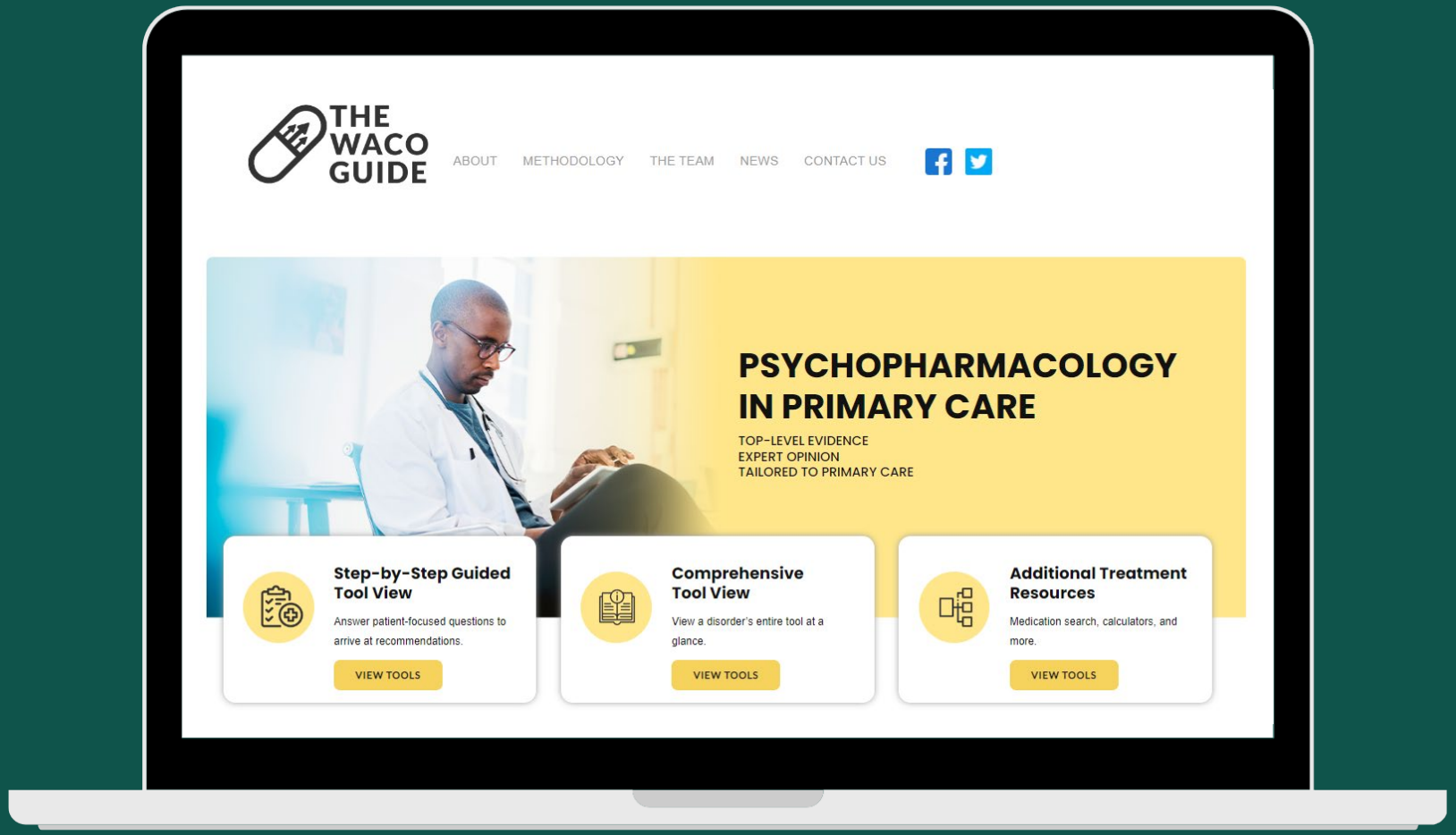
age ≥ 65 years

Pediatric

age < 13 years

Adolescent

age 13-18 years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TOP-LEVEL EVIDENCE
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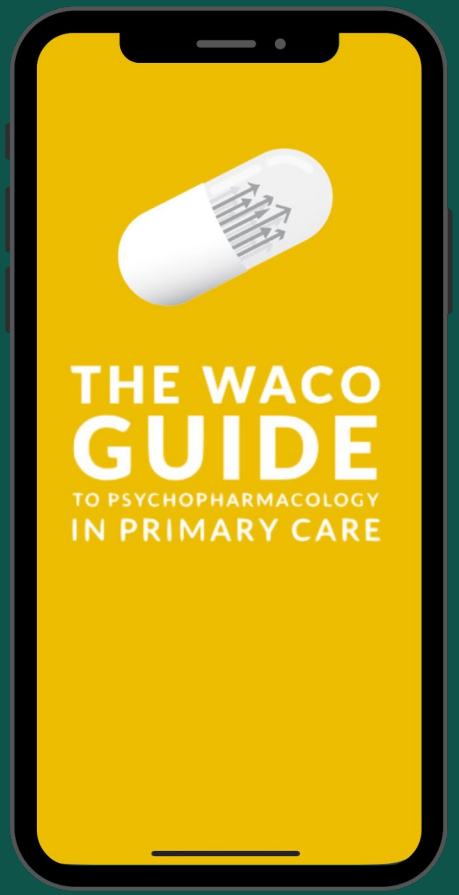
TAILORED TO PRIMARY CARE
Step-by-Step Guided Tool View
Answer patient-focused questions to arrive at recommendations.
VIEW TOOLS
Comprehensive Tool View
View a disorder's entire tool at a glance.
VIEW TOOLS
Additional Treatment Resources
Medication search, calculators, and more.
VIEW TOOLS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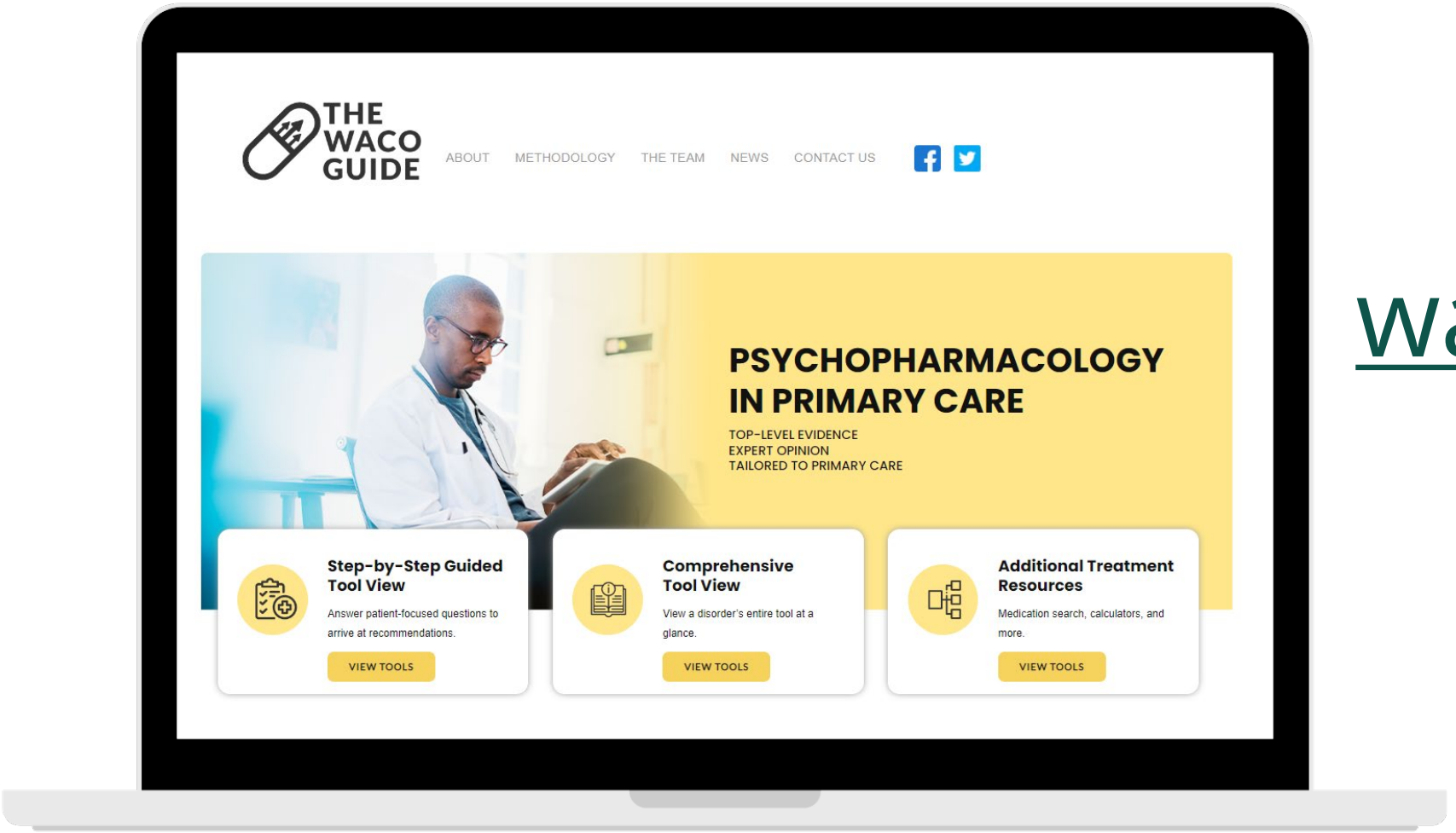

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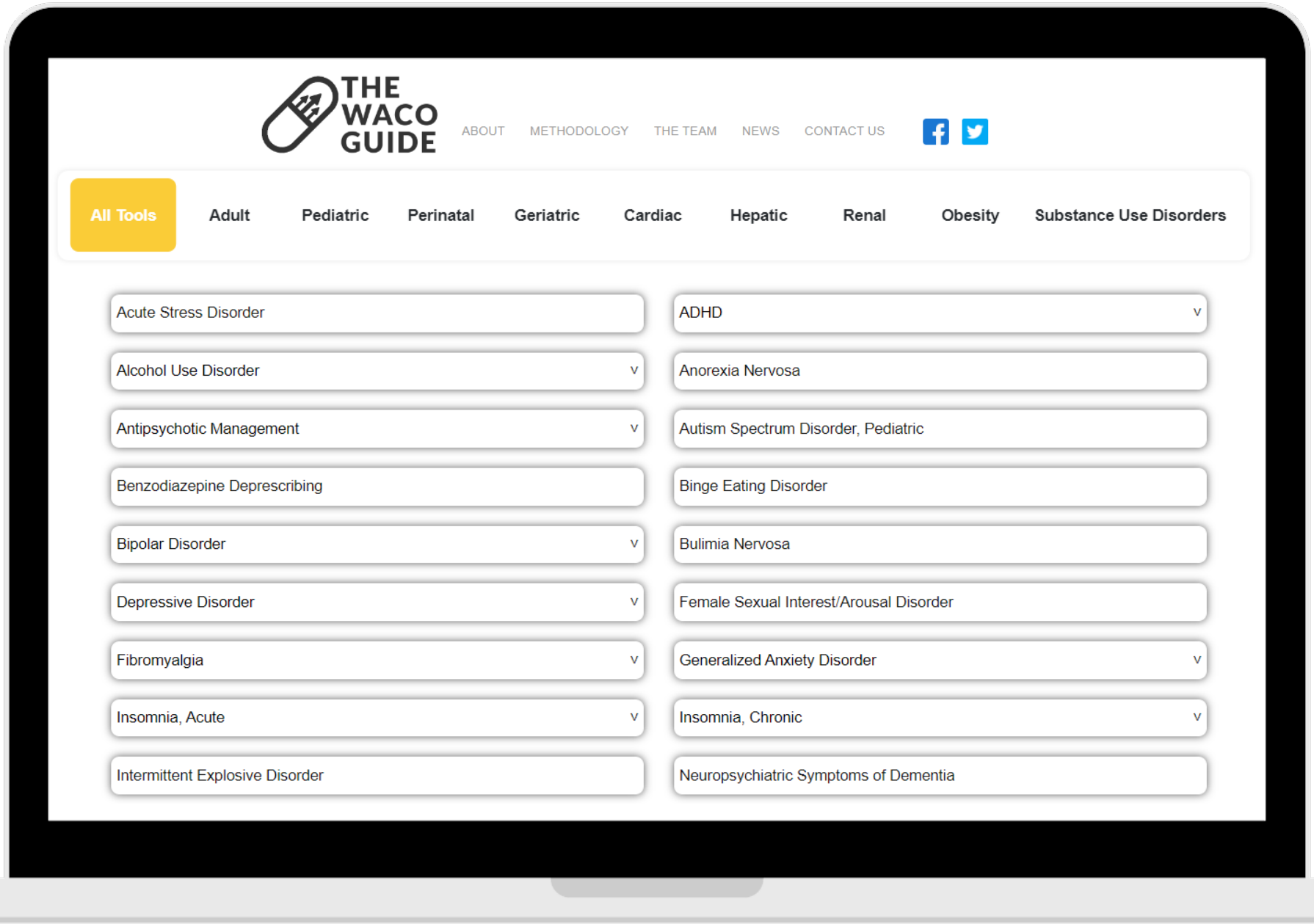

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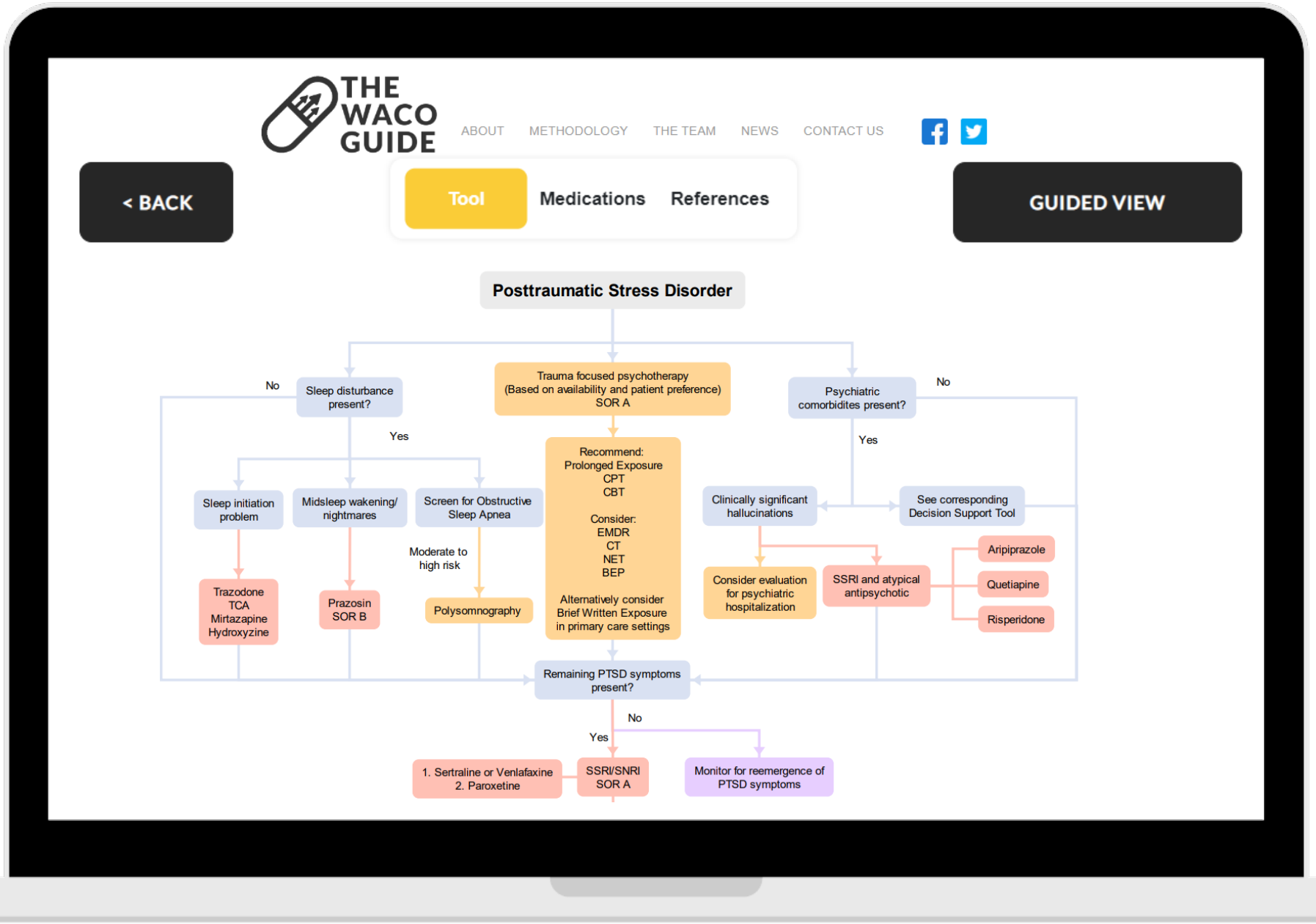
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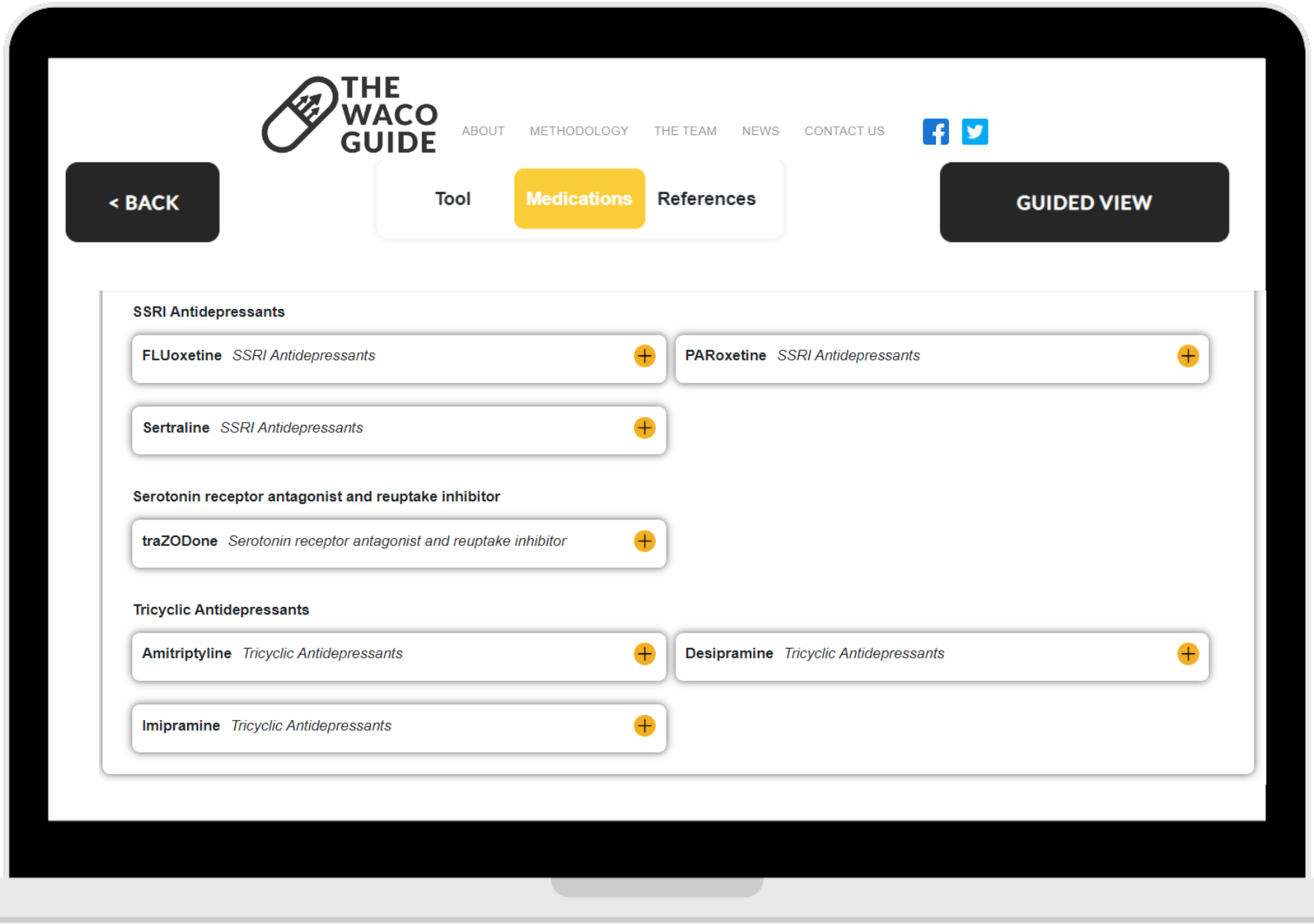
GUIDED VIEW
Posttraumatic Stress Disorder
Trauma focused psychotherapy
(Based on availability and patient preference)
SOR A
Recommend:
Prolonged Exposure
CPT
CBT
Consider:
EMDR
CT
NET
BEP
Alternatively consider
Brief Written Exposure
in primary care settings
No
Sleep disturbance present?
Yes
Sleep initiation problem
Trazodone
TCA
Mirtazapine
Hydroxyzine
Midsleep wakening/ nightmares
Prazosin
SOR B
Screen for Obstructive Sleep Apnea
Moderate to high risk
Polysomnography
No
Psychiatric comorbidites present?
Yes
Clinically significant hallucinations
See corresponding Decision Support Tool
Consider evaluation for psychiatric hospitalization
SSRI and atypical antipsychotic
Aripiprazole
Quetiapine
Risperidone
Remaining PTSD symptoms present?
Yes
No
1. Sertraline or Venlafaxine
2. Paroxetine
SSRI/SNRI
SOR A
Monitor for reemergence of PTSD symptoms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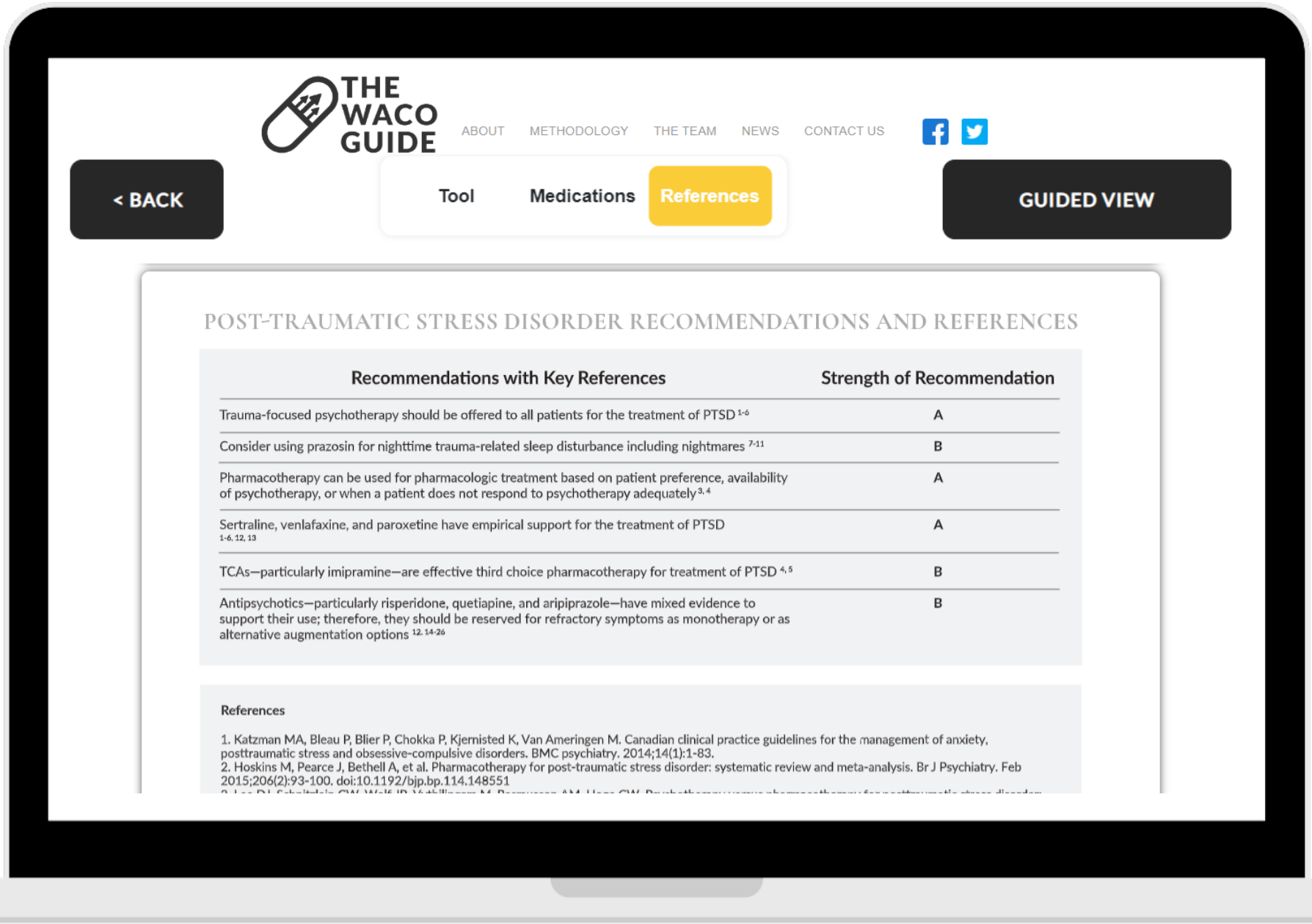
SSRI Antidepressants
FLUoxetine SSRI Antidepressants
PARoxetine SSRI Antidepressants
Sertraline SSRI Antidepressants
Serotonin receptor antagonist and reuptake inhibitor
traZODone Serotonin receptor antagonist and reuptake inhibitor
Tricyclic Antidepressants
Amitriptyline Tricyclic Antidepressants
Desipramine Tricyclic Antidepressants
Imipramine Tricyclic Antidepressants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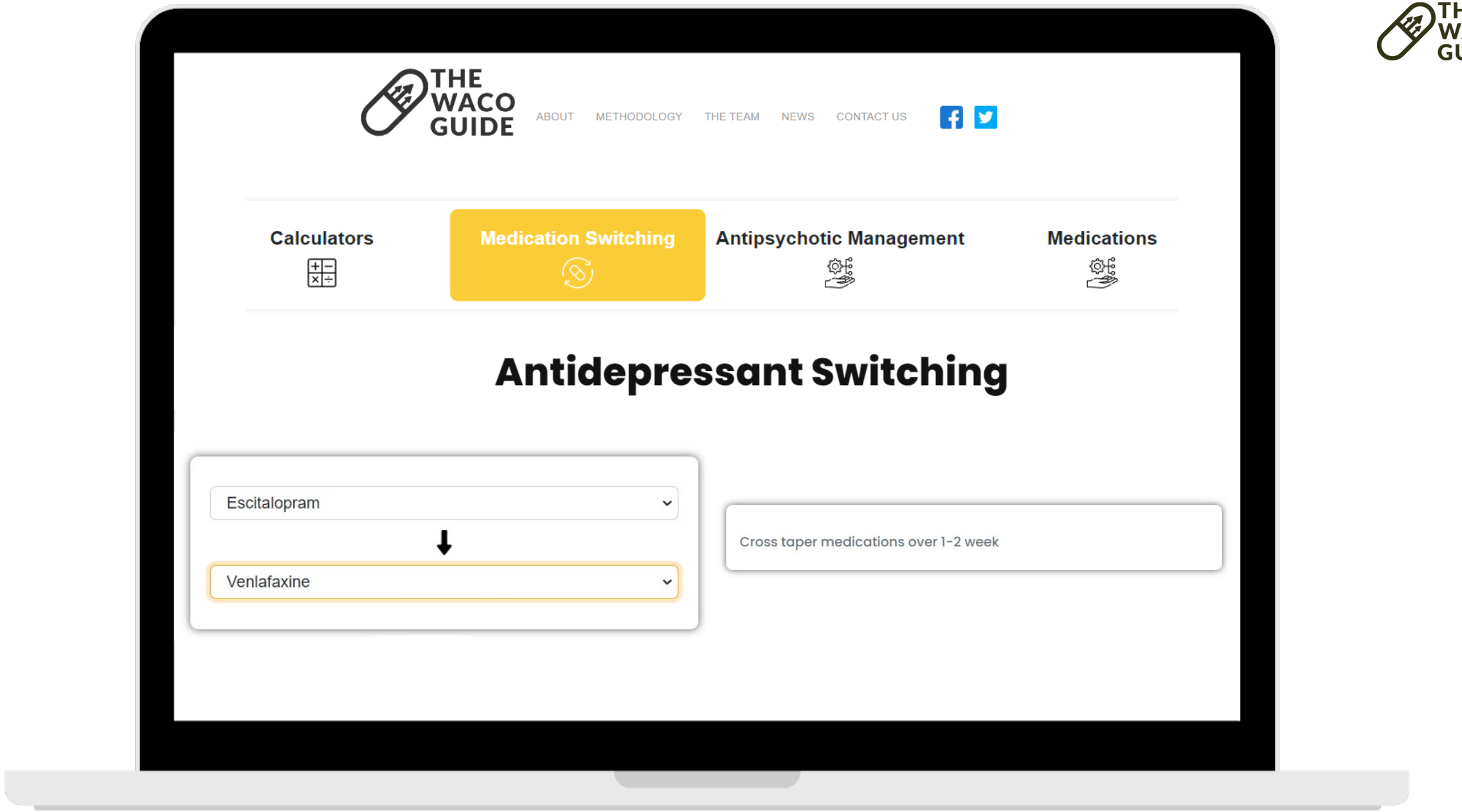
POST-TRAUMATIC STRESS DISORDER RECOMMENDATIONS AND REFERENCES
Recommendations with Key References
Strength of Recommendation
Trauma-focused psychotherapy should be offered to all patients for the treatment of PTSD 1-6
A
Consider using prazosin for nighttime trauma-related sleep disturbance including nightmares 7-11
B
Pharmacotherapy can be used for pharmacologic treatment based on patient preference, availability of psychotherapy, or when a patient does not respond to psychotherapy adequately 3, 4
A
Sertraline, venlafaxine, and paroxetine have empirical support for the treatment of PTSD 1-6, 12, 13
A
TCAs—particularly imipramine—are effective third choice pharmacotherapy for treatment of PTSD 4, 5
B
Antipsychotics—particularly risperidone, quetiapine, and aripiprazole—have mixed evidence to support their use; therefore, they should be reserved for refractory symptoms as monotherapy or as alternative augmentation options 12, 14-26
B
References
1. Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress and obsessive-compulsive disorders. BMC psychiatry. 2014;14(1):1-83.
2. Hoskins M, Pearce J, Bethell A, et al. Pharmacotherapy for post-traumatic stress disorder: systematic review and meta-analysis. Br J Psychiatry. Feb 2015;206(2):93-100. doi:10.1192/bjp.bp.114.148551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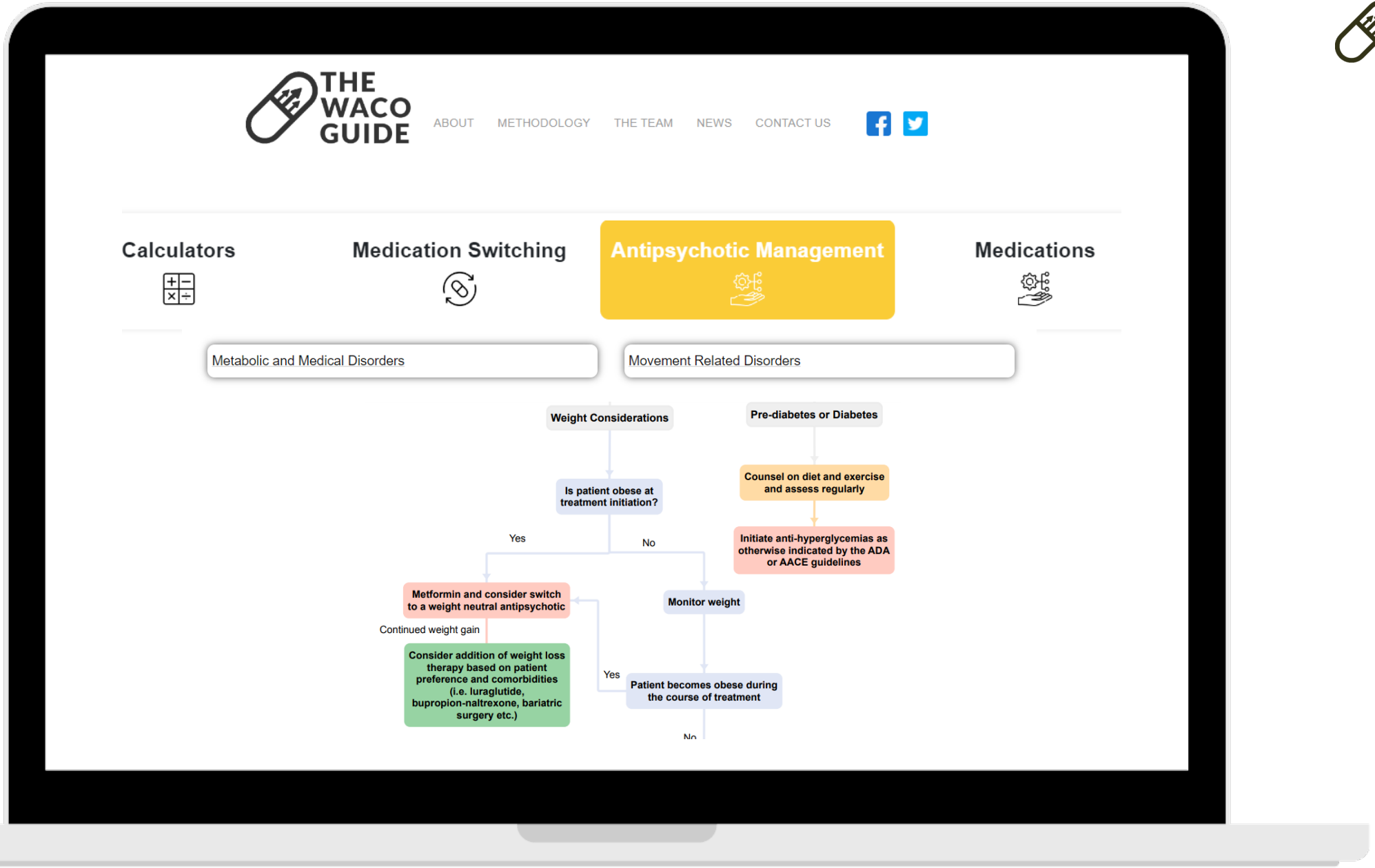
Antidepressant Switching
Escitalopram
Venlafaxine
Cross taper medications over 1-2 week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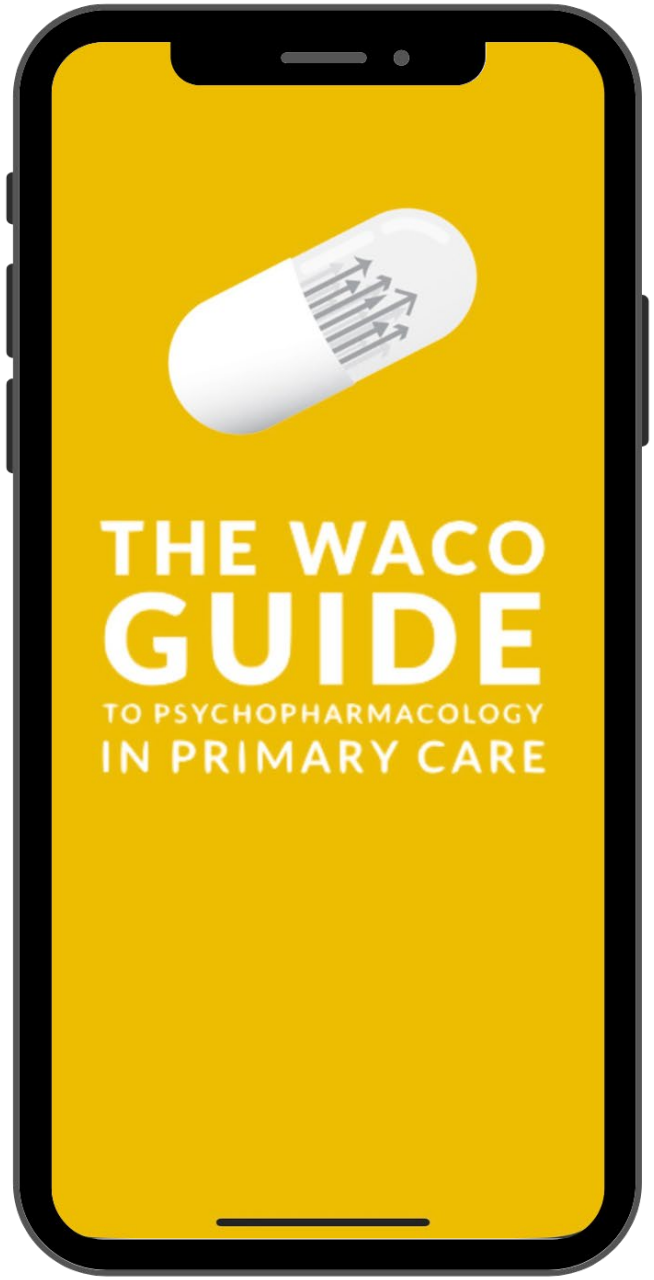
Weight Considerations
Is patient obese at treatment initiation?
Yes
No
Metformin and consider switch to a weight neutral antipsychotic
Continued weight gain
Consider addition of weight loss therapy based on patient preference and comorbidities (i.e. luraglutide, bupropion-naltrexone, bariatric surgery etc.)
Monitor weight
Yes
Patient becomes obese during the course of treatment
No
Pre-diabetes or Diabetes
Counsel on diet and exercise and assess regularly
Initiate anti-hyperglycemias as otherwise indicated by the ADA or AACE guidelines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Case 1: Post-traumatic Stress Disorder

- Mr. Ramirez is a patient who you are seeing with a prior diagnosis of PTSD and CKD4. You and your nurses have been working to get him for CKD follow for many months now, and he has finally come in.
- He reports a recent irritability and decreased mood over the past 3 months. This coincides with reemergence of intrusive nightmares 4/7 days of the week of his prior trauma.
- After addressing his CKD and discussing the importance of frequent follow up, he agrees that addressing his PTSD is crucial to his ongoing care.
- What would you recommend for further treatment?

POLL QUESTION: What would your treatment plan initially include?

A. Referral to trauma-focused psychotherapy
B. Initiation of prazosin for nightmares
C. Screening for OSA
D. All of the above

POLL QUESTION: What would your treatment plan initially include?

A. Referral to trauma-focused psychotherapy
B. Initiation of prazosin for nightmares
C. Screening for OSA
D. All of the above

Pearl #1: Therapy & Medical Treatment for PTSD

TABLE 2

Treatment of Posttraumatic Stress Disorder

Psychotherapy	Pharmacotherapy	Concurrent treatment
First line: trauma-focused psychotherapy Strongly recommended by the American Psychological Association: prolonged exposure, cognitive processing therapy Conditionally recommended by the American Psychological Association: brief eclectic psychotherapy, narrative exposure therapy, eye movement desensitization and reprocessing If trauma-focused psychotherapy is unavailable: stress inoculation training, present-centered therapy, interpersonal psychotherapy	First line: selective serotonin reuptake inhibitors (i.e., fluoxetine, paroxetine, and sertraline), serotonin-norepinephrine reuptake inhibitor (i.e., venlafaxine) Second line: mirtazapine, tricyclic antidepressants (i.e., imipramine, amitriptyline)	Sleep disturbance: prazosin Obstructive sleep apnea: screen and treat Comorbidities: treat according to specific disorder

Sartor Z, Kelley L, Laschober R. Posttraumatic Stress Disorder: Evaluation and Treatment. Am Fam Physician. 2023 Mar;107(3):273-281.

- Mr. Ramirez returns. You had previously started him on Prazosin and titrated to 2 mg nightly with resolution of his nightmares. He also engaged in Trauma Focused CBT with prolonged exposure therapy. He does not have OSA.
- He had a noticeable improvement. So much so that he pursued a job at a local Italian restaurant. On his second day he had to leave abruptly after a plate was dropped in the kitchen.
- **He requests further pharmacotherapy to treat his PTSD, how would you recommend treating him further?**

POLL QUESTION: What medication would you recommend for additional treatment?

A. Citalopram
B. Escitalopram
C. Fluoxetine
D. Sertraline

POLL QUESTION: What medication would you recommend for additional treatment?

A. Citalopram
B. Escitalopram
C. Fluoxetine
D. Sertraline

Pearl #2: Medications for PTSD

- Pharmacotherapy first-line / recommended treatment:
  - Patients in communities with limited behavioral health support
  - Patients who prefer pharmacotherapy over psychotherapy
  - Patient with residual symptoms after TFP or non-TFP
    - Up to half of patient may have residual symptoms after TFP, so medications will often be used
- Sertraline, Venlafaxine, Paroxetine have the most empiric support (VA/DoD guidelines)

Clinical practice guideline for the management of posttraumatic stress disorder and acute stress disorder. The Department of Veterans Affairs and the Department of Defense; 2017.

Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress and obsessive-compulsive disorders. *BMC psychiatry*. 2014;14(1):1-83.

Case 2: Alcohol Use Disorder and Depression

- Ms. Jones is 38-year-old female you are seeing in clinic for a hospital follow up for delirium tremens. She completed an inpatient benzodiazepine taper and was referred for a 12-step program upon discharge.
- She has a PMH significant for HTN and Alcoholic Cirrhosis (Child Pugh B), and just diagnosed during DT hospitalization. Recent significant labs were:
  - AST: 72 U/L (nl 10-40U/L)
  - ALT: 41 U/L (nl 7-35U/L)
  - Cr: normal
- She has had two children and is s/p BTL.
- This was her first hospitalization for DTs, and she is motivated for long-term alcohol abstinence.
- **She asks if pharmacotherapy would be a reasonable option for assisting her in cessation. Using the Waco Guide, how would you guide her further?**

POLL QUESTION: What medication would you recommend for maintenance therapy?

A. Naltrexone
B. Acamprosate
C. A or B
D. Topiramate
E. Disulfiram

POLL QUESTION: What medication would you recommend for maintenance therapy?

A. Naltrexone
B. Acamprosate
C. A or B
D. Topiramate
E. Disulfiram

Pearl #3: Medications for Alcohol Use Disorder

Name	Dosing	Contraindications	NNT for Abstinence	NNT for Heavy Drinking
Naltrexone	50 mg daily	Liver impairment Opioid use	20	12
Acamprosate	666 mg three times daily	CKD 4 or 5	11	-

Kinghorn WA, Nussbaum AM. *Prescribing Together: A Relational Guide to Psychopharmacology*. American Psychiatric Pub; 2021.

- In addition to initiating alcohol abstinence pharmacotherapy and caring for his Child-Pugh B Cirrhosis, you perform a psychiatric evaluation.
- Ms. Jones reports a multi year history of severe depression and anhedonia. She denies Mania/AVH/SI/HI and you diagnose her with severe MDD (PHQ-9 21 indicating severe symptomatology)
- You discuss multiple treatment options, and via shared decision decide on combination CBT and pharmacotherapy.
- She recalls being treated for MDD 10 years ago with Fluoxetine, but had little to no effect after 12 weeks at maximum dosing
- **Using the Waco Guide, how would you guide her further?**

POLL QUESTION: What medication would you recommend for depression?

A. Sertraline
B. Duloxetine
C. Escitalopram
D. Venlafaxine

POLL QUESTION: What medication would you recommend for depression?

A. Sertraline
B. Duloxetine
C. Escitalopram
D. Venlafaxine

Pearl #4: Which AD is Best?

- Balancing effectiveness and tolerability
- Sertraline, escitalopram, vortioxetine, and mirtazapine offer the best on balance

Cipriani A, Furukawa TA, Salanti G, et al. Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: a systematic review and network meta-analysis. *Focus*. 2018;16(4):420-429.

- Ms. Jones was started on escitalopram and titrated to a maximum dose of 10mg—max dose for cirrhosis.
- She has now been at max dose for 8 weeks resulting in a partial response which is reflected in a PHQ9 decrease to 14.
- She feels escitalopram has been a beneficial medication for her and desires further pharmacotherapy, using the Waco Guide, what pharmacotherapy would you choose for augmentation?

POLL QUESTION: What medication would you recommend for augmentation?

A. Aripiprazole
B. Lithium
C. Methylphenidate
D. Venlafaxine

POLL QUESTION: What medication would you recommend for augmentation?

A. Aripiprazole

B. Lithium

C. Methylphenidate

D. Venlafaxine

Severity based on PHQ-9

Score	Severity
0-4	No or minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20-27	Severe depression

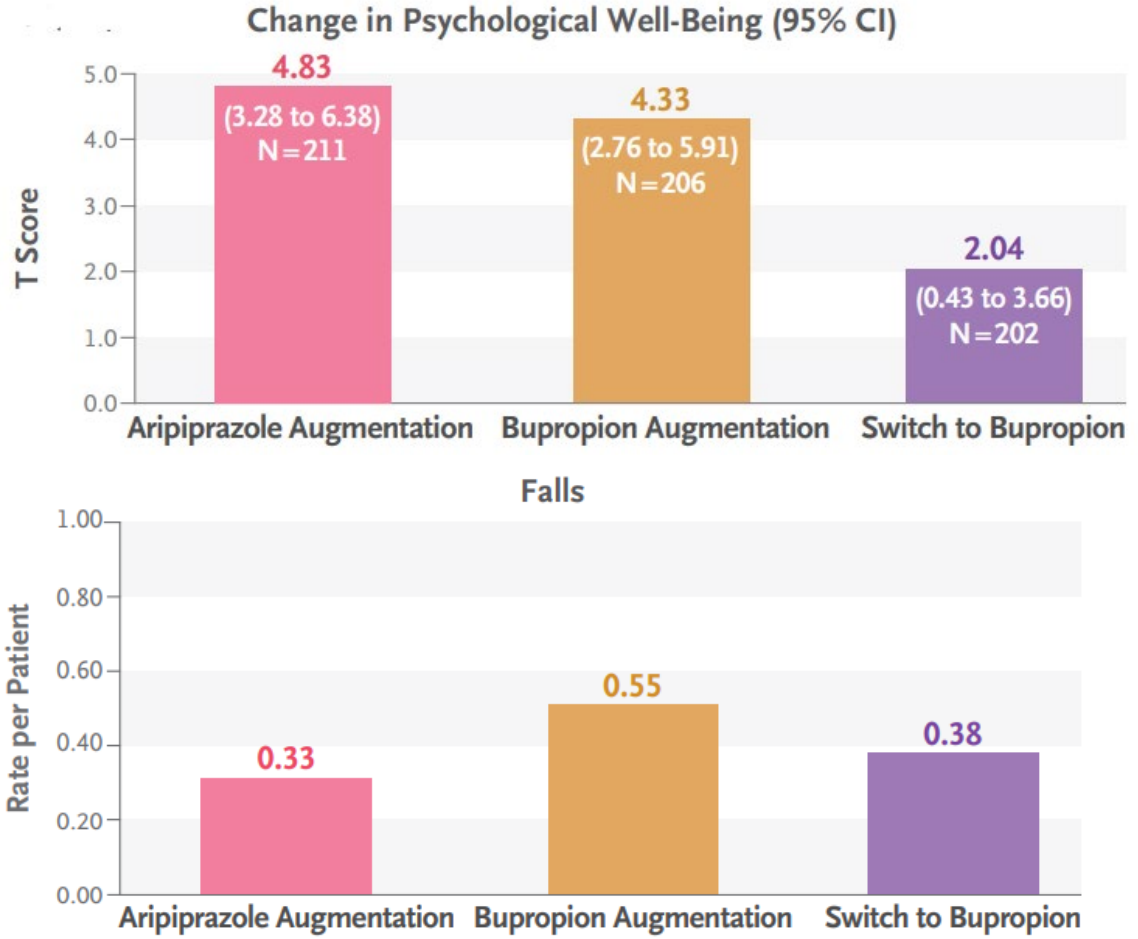
Defining response using the PHQ-9

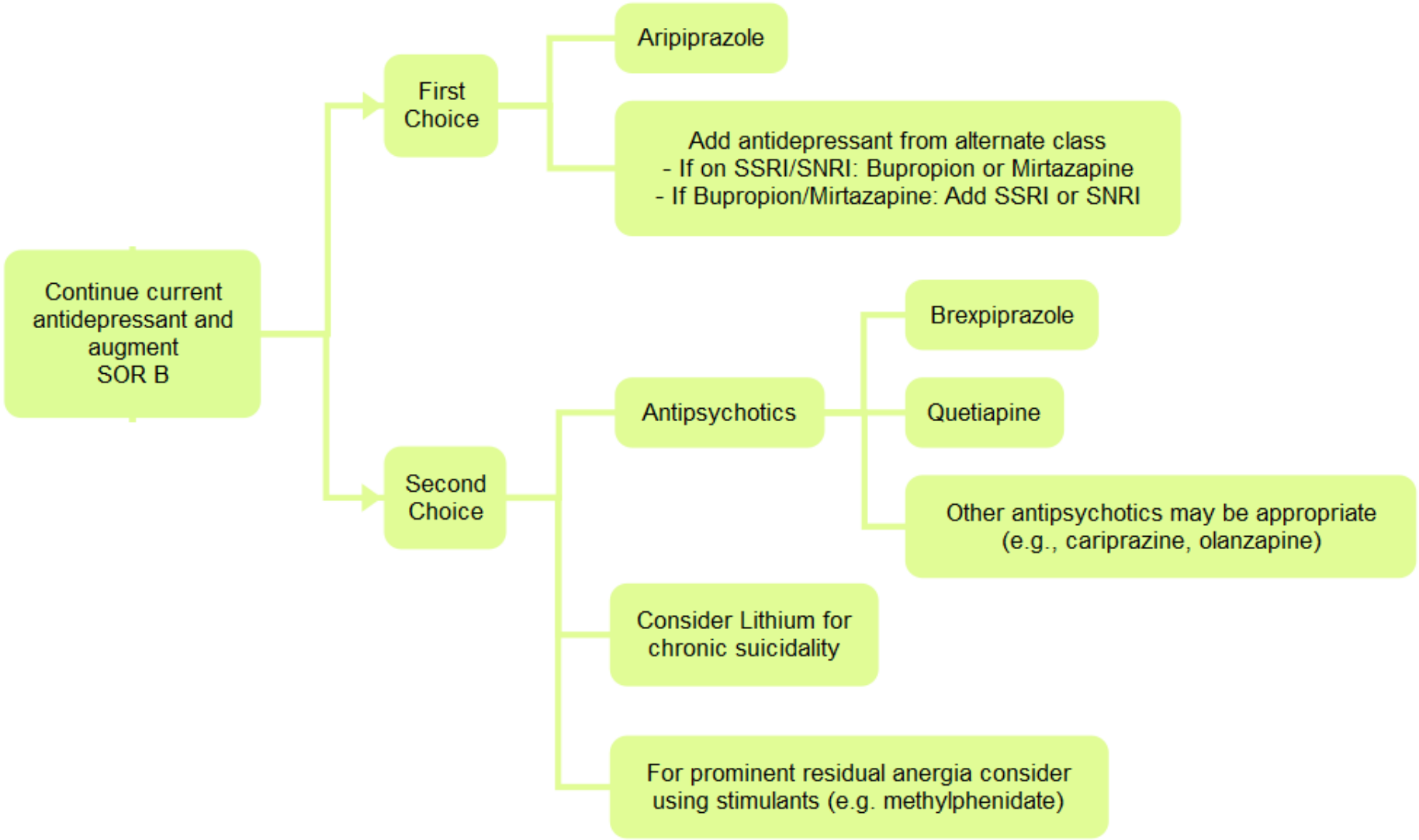
Response	Score
Meaningful response	5-point symptom reduction
Adequate response	>50% symptom reduction and score <10
Partial response	25-49% symptom reduction
No response	<25% symptom reduction

Pearl #5: To Augment or Switch?

- Response (symptom reduction)
  - Response: >50%
  - Partial Response: 25-49%
  - No response: <25%
- Switch or Augment?
  - STAR*D
  - VAST-D
  - And beyond…
- **Partial Response: Augment**

NEJM- Lenze Et al 2023




Continue current antidepressant and augment
SOR B
First Choice
Aripiprazole
Add antidepressant from alternate class
- If on SSRI/SNRI: Bupropion or Mirtazapine
- If Bupropion/Mirtazapine: Add SSRI or SNRI
Second Choice
Antipsychotics
Brexpiprazole
Quetiapine
Other antipsychotics may be appropriate
(e.g., cariprazine, olanzapine)
Consider Lithium for chronic suicidality
For prominent residual anergia consider using stimulants (e.g. methylphenidate)

Case 3: Bipolar Disorder

- Mr. Rockford is a 27-year-old diagnosed with bipolar disorder. He recently moved to your community and is on no medications at this time. Today he is euthymic.
- He reports two episodes of mania in the last year, most recently 4 months ago where he was hospitalized in inpatient psychiatric hospitalization for 5 days. He does not recall what he was treated with and you have no access to his records
- **He desires further pharmacotherapy to reduce his risk of developing mania. What pharmacotherapy would you consider as first line in a primary care setting to treat his history of recent mania?**

POLL QUESTION: What pharmacotherapy would you consider as first line in a primary care setting to treat his history of recent mania?

A. Lamotrigine
B. Valproic Acid
C. Carbamazepine
D. Cariprazine

POLL QUESTION: What pharmacotherapy would you consider as first line in a primary care setting to treat his history of recent mania?

A. Lamotrigine
B. Valproic Acid
C. Carbamazepine
D. Cariprazine

Pearl #6: Polarity Index

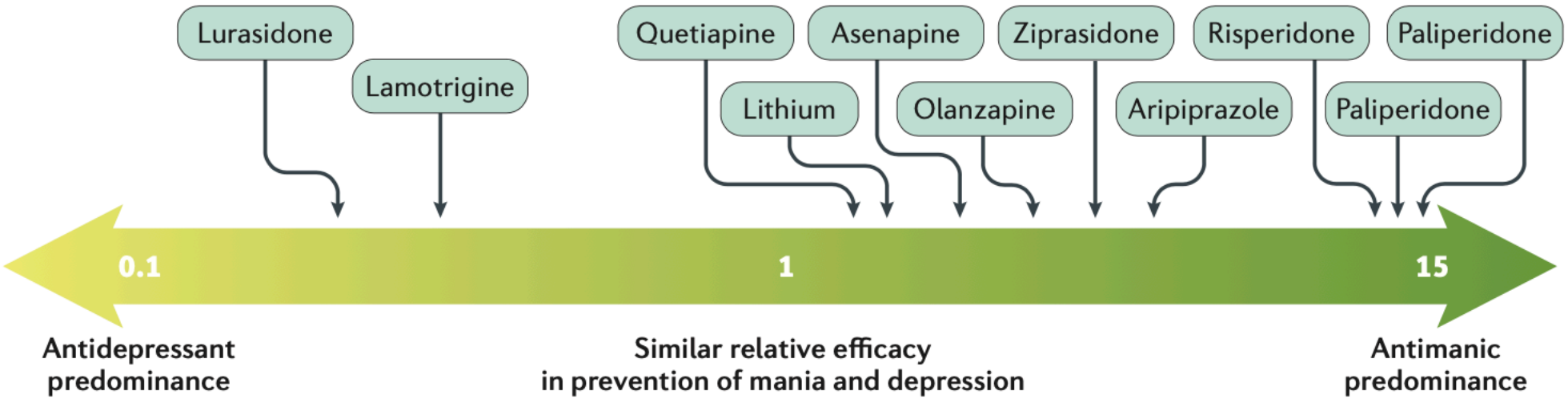


Figure 3 | **Polarity index.** The polarity index of drugs used for the maintenance treatment of patients with bipolar disorders is the ratio of the number of patients needed to treat for prevention of depression to the number of patients needed to treat for prevention of mania on the basis of results of randomized placebo-controlled trials[173]. This index classifies therapies as those with an antimanic prophylactic effect and those with an antidepressant prophylactic effect. A polarity index of 1 reflects an equal efficacy in preventing manic and depressive episodes.

Vieta E, Berk M, Schulze TG, et al. Bipolar disorders. *Nature reviews Disease primers*. 2018;4(1):1-16.

Case 5: Generalized Anxiety Disorder (Pediatric)

- Samantha is a 14-year-old female you have seen for the past 4 months for generalized anxiety disorder. Her anxiety is debilitating and negatively impacts her school performance, attendance, and friendships.
- You perform a thorough history and physical and rule out alternate etiologies of her symptoms. She denies SI/HI/AVH/Mania. FMH positive for GAD in mother.
- Through shared decision making, given the severity of her symptoms, Samantha, her parents and you determine that pharmacotherapy is in order in addition to referring for CBT. You start fluoxetine and titrate appropriately to max dose of 60mg. After 8 weeks at max dose, she has had an inadequate response.
- What pharmacotherapy would you consider next to treat her GAD?

Poll: What medication would you recommend for treatment?

A. Switch to Buspirone
B. Add Buspirone
C. Switch to Sertraline
D. Switch to Venlafaxine

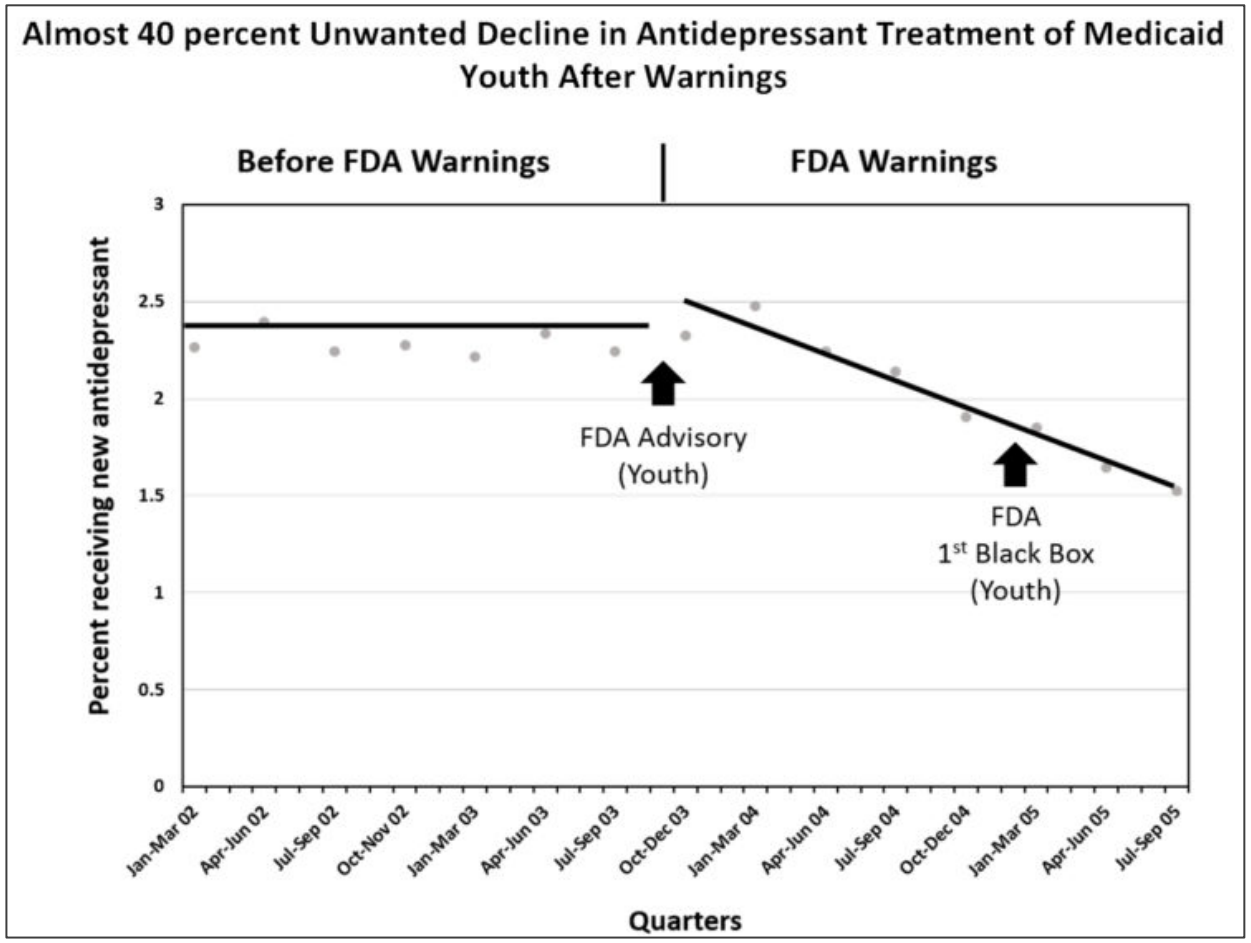
Pearl #7: Antidepressant Safety in Adolescents and Young Adults

- 2004: FDA issued a black box warning for antidepressants—suicide risk in patients 18-25 years of age—4% versus 2% with no reported fatalities in either cohort
  - Hammad et. al., *Arch Gen Psychiatry*. Mar 2006;63(3):332-9

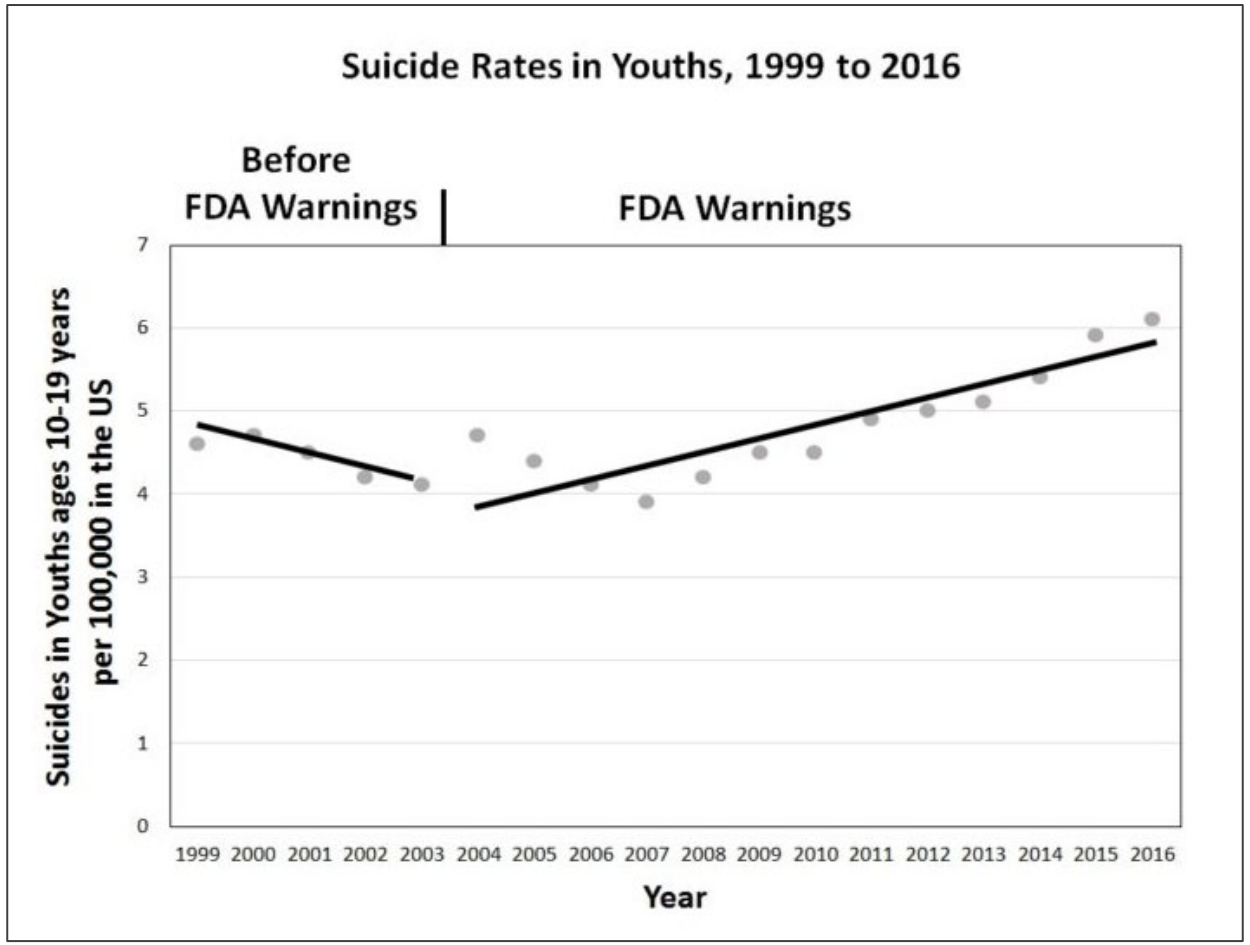
Recommends informing patients of risk

- **Close monitoring**
- **Warning acknowledges untreated depression as a significant risk for suicidality**
- **Does not recommend against use of SSRIs in this population**

- Severity bias whereby patients with severe symptoms are more likely to be prescribed antidepressants?
- Threshold for suicidality lowered in these studies (Morbid ideation vs Suicidal Ideation)



Data from the Archives of Pediatric and Adolescent Medicine as visualized by Soumerai & Koppel (2018) *StatNews.*



Data from the National Vital Statistics Reports, June 1, 2018 as visualized by Soumerai & Koppel (2018) *StatNews.*

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