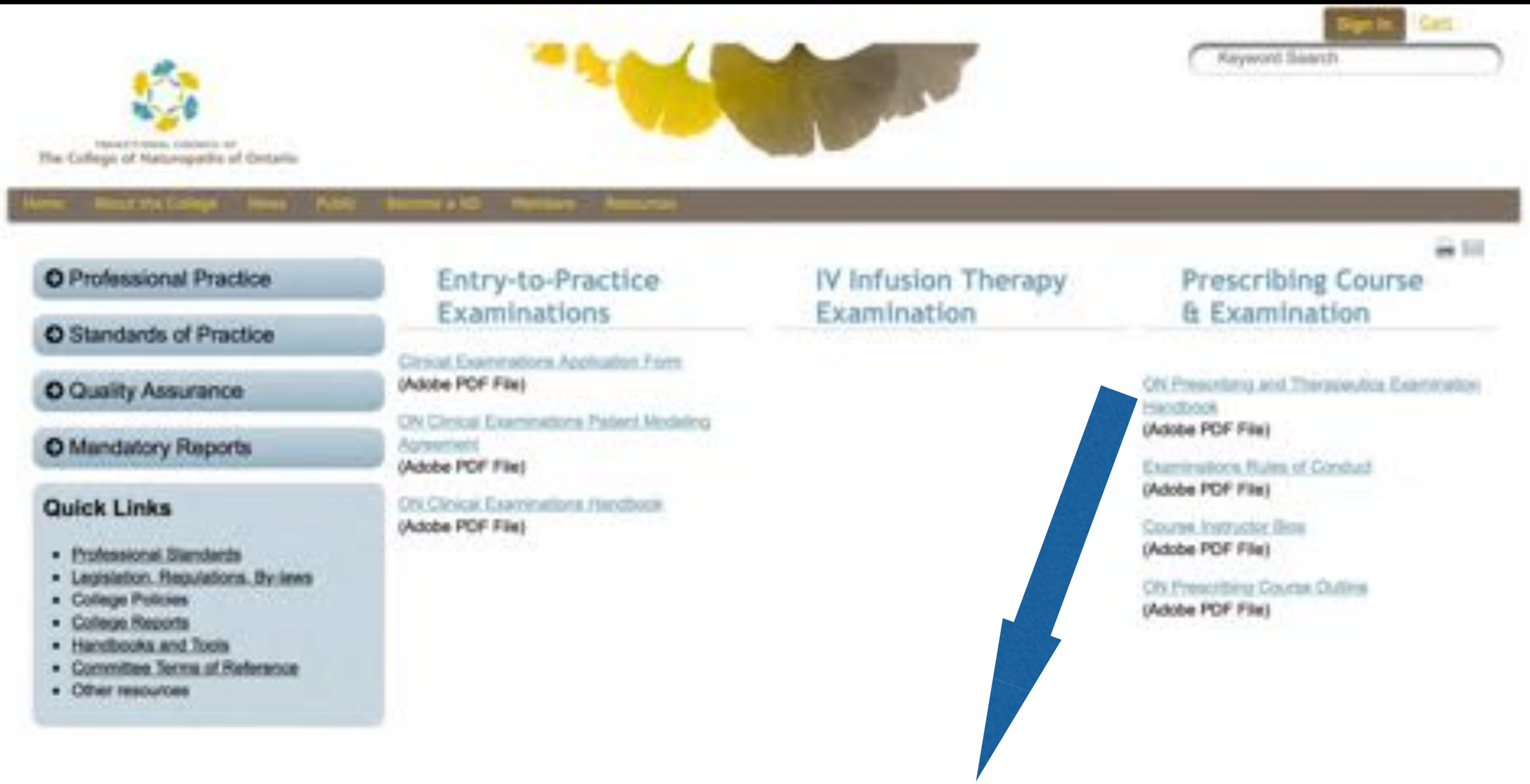
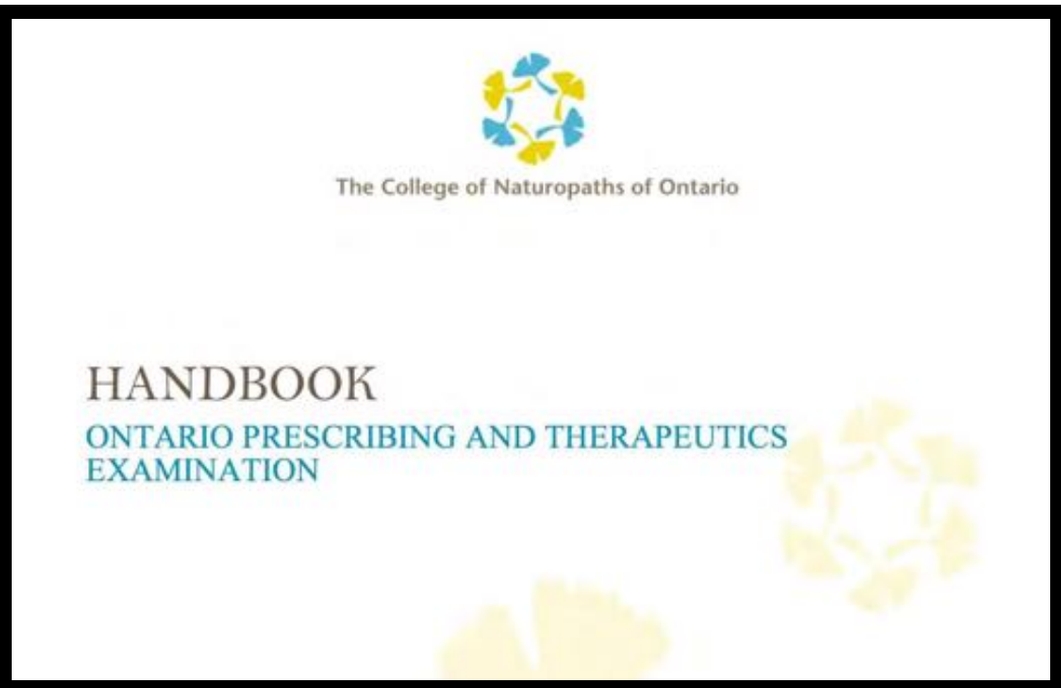




First Exam - June 14, 2015

The Assessment Process

- 📖Curriculum developed in conjunction with the CONO and based very much on the process used in BC and Alberta
- 📖Written and oral components
- 📖Process for those who are not successful

The Assessment Process

- Each candidate will have 2.5 hours to complete an open book written exam - 100 multiple choice questions and 10 prescription short answer questions
- Candidates cannot use electronic references (i.e. no electronic devices may be accessed during the exam) or practice questions during this open book written exam
- Questions for the written exam are based on the following sources:
  - Course modules
  - Webinars
  - Therapeutics Choices, 7th Edition - but the 6th is fine
  - Handouts provided on the Therapeutics Education Collaboration website
  - Basic and Clinical Pharmacology, Bertram Katzung (<15% of written exam)

The Assessment: Written Exam

- 100 Multiple Choice Questions (open book)
  - 60-online questions in preparation area, ~15 will be on the final exam
- ~50 from the readings
- ~40 from the recorded live sessions and webinars
- ~15 (of the 90) are pharmacology, the rest are therapeutics
- ~5-10 Ontario Regulation Module questions
- PLUS 10 prescription sample questions on the exam - you need to identify the legal RX deficiency

The Assessment: Written Exam

- 📖 Candidates are required to achieve a score of at least 60% on the written exam.
- 📖 Results issued will note a “pass” or “fail” mark only

The Assessment: Oral Exam

- 📖3 cases
- 📖Open Book preparation - 75 min prep time
- 📖25 min/station (not open book) - can use one blank sheet/case to write down pertinent information
- 📖Will need to provide a written “prescription”
- 📖One evaluator/station
- 📖Structured marking sheet
  - 📖Identify goals of therapy, therapeutic options and list advantages and disadvantages for each option
  - 📖Provide rational prescription(s), monitoring parameters & be able to and justify choice
  - 📖Identify monitoring parameters
  - 📖List other things you want to do

The Assessment: Oral Exam

- Candidates should be prepared to provide the following for each case:
  - at least 5 relevant goals of prescription therapy.
  - 5 treatment options, including two (2) advantages and two (2) disadvantages for each treatment option.
  - one option can be NON PHARMACOLOGIC
  - a treatment plan, including: why the plan was chosen, how the therapy will be implemented and if any drugs would need to be stopped.
  - the monitoring parameters for efficacy and safety
  - a written prescription for the patient, which must be written on the sheet of paper provided, to be reviewed by the assessor following the oral assessment.

The Assessment: Oral Exam

- 📖To be successful, candidates are required to pass at least 2 of the 3 cases AND achieve an overall score of 60% on the oral component.
- 📖Results issued will note a “pass” or “fail” mark only.
- 📖Unsuccessful candidates will be provided with the reason(s) for the failed exam - specific written comments about why you failed - overall marks, allergy, interaction, not stopping medications etc.
- 📖There are a few reasons for AUTOMATIC failure of the oral exam - these are noted in the Exam information posted on the course page for the ‘prescribing and therapeutics examination’ and in the blueprints for the oral exam in the **Ontario Prescribing and Therapeutics Exam handbook**

The Assessment: Oral Exam

- KEY REASONS FOR UNSUCCESSFUL EXAM

- AUTOMATIC FAIL - of something you recommend could cause harm
  - PRESCRIBING SOMETHING TO WHICH THE PATIENT IS ALLERGIC - CROSS REACTIVITY
  - INTERACTIONS - between drugs and/or natural remedies
  - OVERDOSE
- LOSE MARKS
  - NOT STOPPING MEDICATIONS THAT MAY BE CAUSING THE PROBLEMS THE PATIENT IS HAVING
  - QUESTIONING THE DIAGNOSIS - it is what it is
  - NOT PRESCRIBING SOMETHING FOR SOMEONE WHO IS QUITE SICK OR HAVING IMPORTANT SYMPTOMS

IF YOU FAIL

- 📖Re-attempts must be made of the entire examination, regardless of which exam component the candidate was unsuccessful with.
- 📖Instructors can be available for a discussion of your oral exam if the written information is not sufficient to address your concerns. However, as results are issued by TC-CONO, to ensure the validity and security of the exam is maintained, any request for additional information regarding an unsuccessful examination attempt must be made through TC-CONO.

EXAM QUESTIONS & ADMINISTRATIVE ISSUES

- 📖All administrative questions concerning the examination should go to TC-CONO via the exams@collegeofnaturopaths.on.ca email address. Timetables, receipts and exam results will be issued by the TC-CONO and questions regarding these items should be posed directly to them.
- 📖Exam candidates are encouraged to familiarize themselves with the exam rules of conduct and expected exam protocol as detailed in the Ontario Prescribing and Therapeutics Examination Handbook, available in the Exam Resources section of the College website.
- 📖Members of the profession will be advised of upcoming exam dates, in CONO Bulletins and via the College's website, as dates are set.


DEPRESSION
SUICIDE
SUICIDAL
DEPRESSED
FRIENDS
SYMPTOMS
SELF-HATRED
PERSON
PATIENTS
PSYCHOLOGIC
THOUGH
FEELINGS
BASED

Outline

- Case Presentation
- Goals of therapy
- Treatment Options
- Factors to consider
- Comparing antidepressants
- Selecting and initiating a treatment
- Monitoring
- Questions

CASE PRESENTATION

- 25 yo woman, wt = 60kg, with low mood x 4 mo
- Dropped out of UofT because she couldn't concentrate and didn't want to be a student any more
- Sleeps 12 hrs/night & says she "can't get out of bed"
- Chief complaint: Low mood, confused and constantly irritated. Says she "can't win" and is never hungry
- Failed 2 courses in school
- Broke up with her partner 3 months ago
- NKAs and no other medical conditions

Goals of Therapy

- **SHORT TERM**
  (e.g., 2-3 months)
  - Stabilize depressive symptoms
  - Prevent complications (e.g., suicide)
  - Minimize side effects
  - Induce remission (not only response)
  - Improve quality of life
  - Education

- **LONG TERM**
  (e.g.,>3 months)
- Prevent relapse and recurrence
- Maintain a stable mood
- Manage side effects
- Education

Depression Treatment Options

1. **Antidepressant medication(s)**
2. **Psychotherapy**
   - Cognitive behavioural therapy (CBT)
   - Intrapersonal therapy (IPT)
3. **Electroconvulsive therapy (ECT)**
4. **Light therapy**
5. **Alternative therapies**
   - St. John’s wort, SAM-e, transcranial magnetic stimulation therapy, etc.

Overview of Antidepressant Classes

OPTIONS FOR 1ST OR 2ND CHOICE		
TCAs:	Tricyclic antidepressants	8 agents
SSRIs:	Selective serotonin reuptake inhibitors	6 agents
NaSSA:	Noradrenergic and serotonergic specific antidepressant	1 agent
RIMA	Reversible Inhibitor of Monoamine Oxidase	1 agent
NDRIs:	Noradrenaline dopamine reuptake inhibitors	1 agent
SNRIs:	Serotonin noradrenaline reuptake inhibitors	3 agent
RESERVED		
SARIs:	Serotonin antagonists/reuptake inhibitors	1 agent
MAOIs:	Monoamine oxidase inhibitors	2 agents
Heterocyclics: Maprotiline		1 agent

How do you pick which treatment to start?

Antidepressant chart

- RxFiles
- Clinical Handbook of psychotropic drugs
- Therapeutic Choices

Based on the available evidence, is there any one antidepressant that is superior to all the rest?

Are antidepressants more effective than psychotherapy?

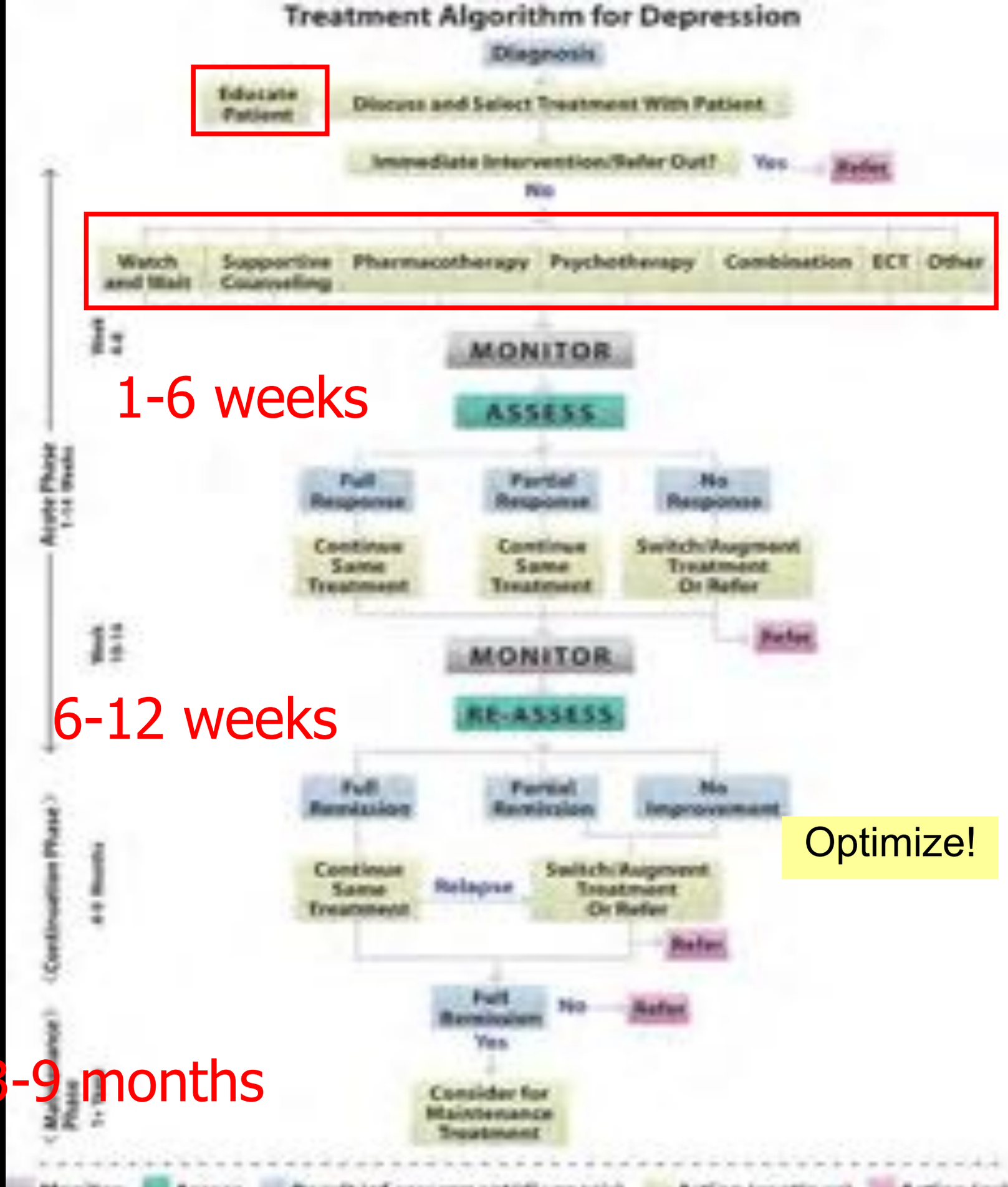
Factors to Consider When Starting Therapy

- Severity of episode
- Age
- Long term adherence
  - Risk of relapse increases if discontinued early (35%-60% vs. 10%-25%)
- Previous treatment response
- Drug interactions
- Accessibility
- Pharmacokinetics
- Potential side effects
- Suicide risk/impulsivity
- Patient preferences
- Clinician experience
- Effectiveness of treatment

"It's a new anti-depressant—instead of swallowing it, you throw it at anyone who appears to be having a good time."

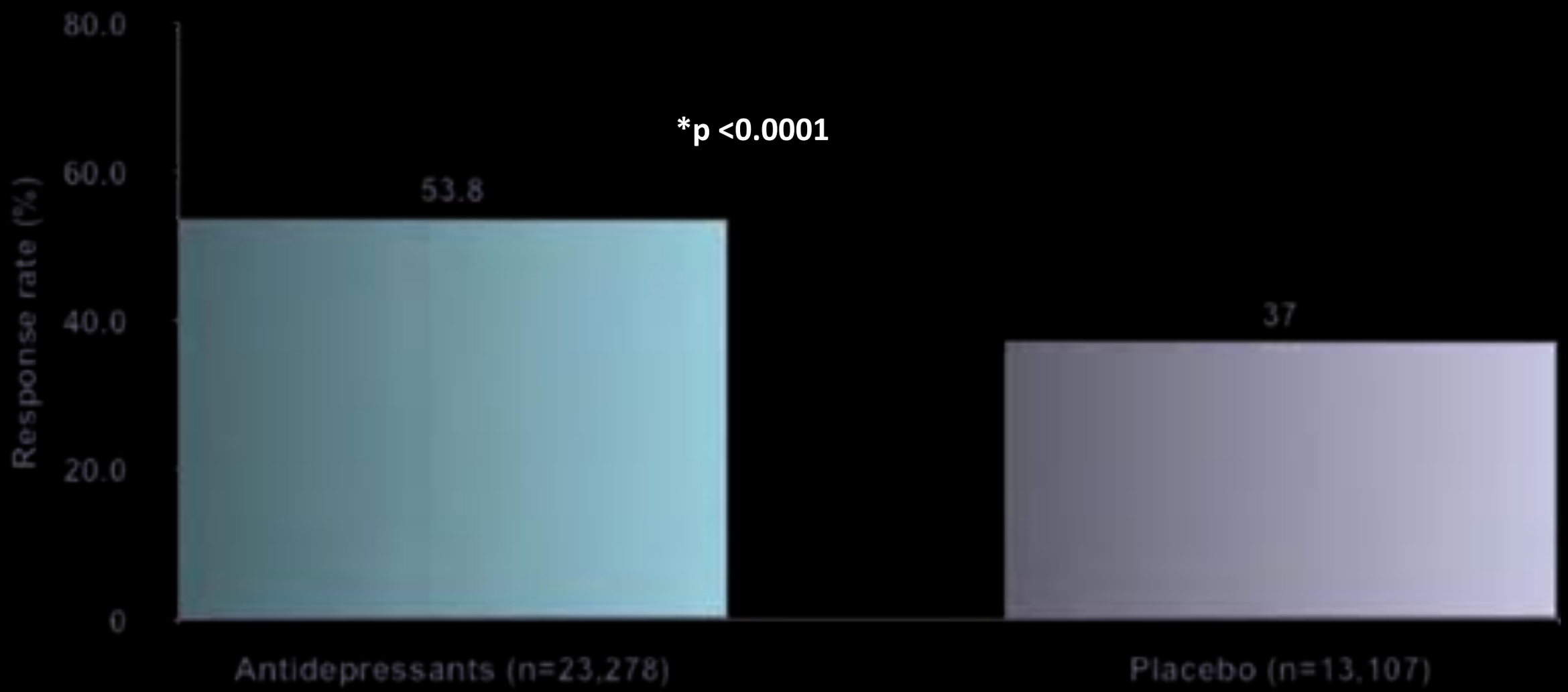
Depression Treatment Overview

- Education
- Treatment options
- Monitoring
- Acute, continuation and maintenance phases



Overall Response Rates: Antidepressants

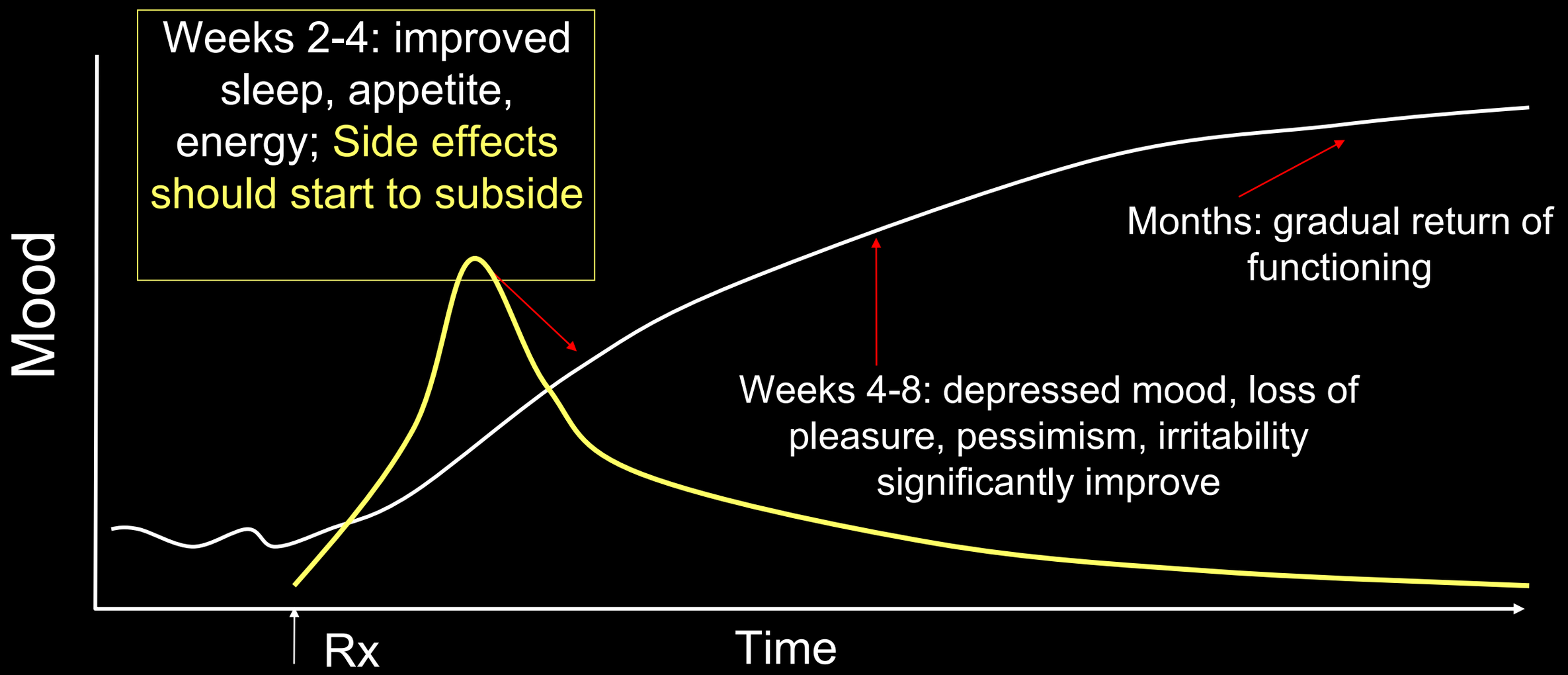
Meta-analysis including 262 drug-placebo comparisons from 182 clinical trials (n=36,385)



Papakostas, Fava. *Eur Neuropsychopharmacol* 2009:19:34-40

Antidepressants: Onset of Effect

- Symptoms begin to improve slowly over several weeks
  - 6/10 see a noticeable improvement at 4 wks
- If no improvement at 3-4 wks, 20% probability of benefiting



General Antidepressant Side Effects

- **Anticholinergic**
- **CNS effects**
  - Activation/agitation
  - Sedation
  - Paresthesias
  - Seizures
  - Increased suicidality

- **Cognitive**
- **Dermatitis**
- **GI**
- **Cardiovascular**
- **Sexual**
- **Weight Gain**

Managing ADSEs

- ADSE are common and should be managed to:
  - Improve patient comfort and relieve distress
  - Improve compliance
  - Allow for medication optimization

- Common (general) approaches:
  - Dosage reduction
  - Anticipating tolerance
  - Supportive measures
  - Switching medications

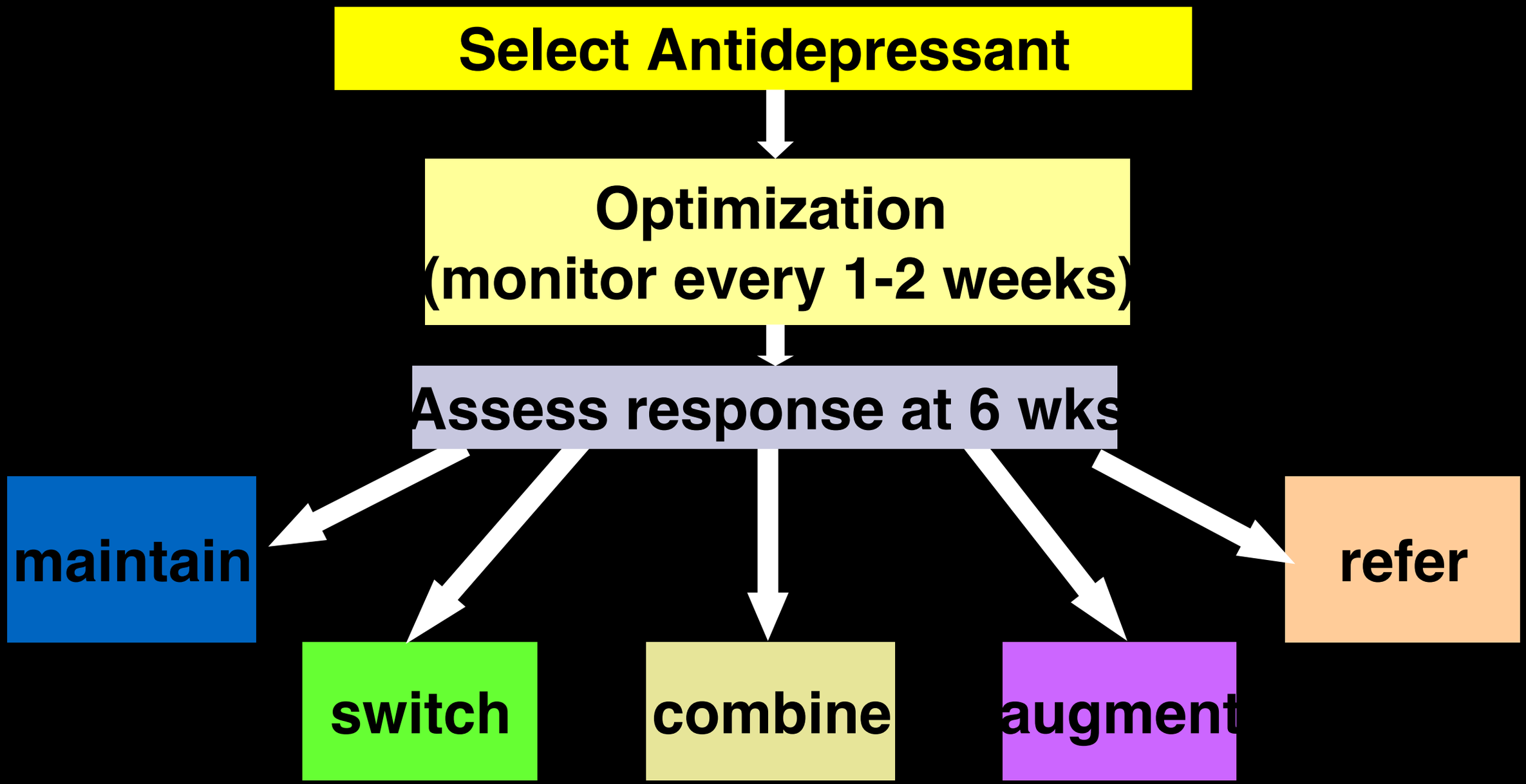
Serotonin Syndrome

- Cause
  - Using SSRIs with any other serotonergic agent
- Symptoms
  - Delirium, agitation, hyperpyrexia, diaphoresis, myoclonus, hyperreflexia, tremor, hypertension, diarrhea, incoordination
- Treatment
  - Stop suspected drug(s)
  - Supportive care

Adverse Effects

	Amitriptyline	Desipramine	Fluoxetine	Bupropion	Mirtazapine
Anticholinergic	**10-30%**	**2-10%**	**2-10%**	**10-30%**	**2-10%**
Orthostatic Hypotension	**10-30%**	**2-10%**	**10-30%**	**2-10%**	**2-10%**
Sexual Dysfunction	**2-10%**	**2-10%**	**>30%**	**<2%**	**2-10%**
Weight Gain	**>30%**	**2-10%**	**2-10%**	**<2%**	**2-10%**

Strategies for Reaching Remission



Appendix D: Switching Antidepressants

Switching antidepressants can be accomplished by the following strategies:

1. ***Direct switch:*** stop the first antidepressant abruptly and start new antidepressant the next day.
2. ***Taper & switch immediately:*** gradually taper the first antidepressant, then start the new antidepressant immediately after discontinuation.
3. ***Taper & switch after a washout:*** gradually withdraw the first antidepressant, then start the new antidepressant after a washout period.
4. ***Cross-tapering:*** taper the first antidepressant (usually over 1-2 week or longer), and build up the dose of the new antidepressant simultaneously.

The following table is intended for general guidance only. Whichever strategy is used, patients should be closely monitored for symptoms and adverse events. The duration of tapering should be determined individually for each patient. Physicians should balance the risk of discontinuation symptoms versus risk of delay in new treatment. The washout period is mostly dependent on the $t_{1/2}$ of the first drug.

Switching From	To →	SSRIs (except fluoxetine)	Fluoxetine	SNRIs	NDRI (bupropion)	NaSSA (mirtazapine)	RIMA (moclobemide)	TCA
SSRIs (except fluoxetine)	→	Taper & stop, then start new SSRI at a low dose[1,†]	Taper & stop, then start fluoxetine at low dose (10 mg)[1,†]	Taper & stop[5] (or to low dose),[1] then start low dose SNRI & ↑ very slowly.[1,3,5,†]	Taper & stop[5] (or to low dose),[2] then start bupropion.	Taper & stop[5] (or to low dose),[1] then start mirtazapine cautiously.[‡]	Taper & stop, wait 1 week, then start moclobemide.[1,5]	Cross-taper cautiously with very low dose TCA.[1,3,5,‡,§]
Fluoxetine*	→	Stop fluoxetine, wait 4-7 days. Start the new SSRI at low dose & ↑ slowly.[1,2,5]		Stop fluoxetine, wait 4-7 days. Start with low dose SNRI & ↑ very slowly.[3,5]	Stop fluoxetine, wait 4-7 days. Start bupropion.[5]	Stop fluoxetine, wait 4-7 days, then start mirtazapine cautiously.[5,‡]	Stop fluoxetine, wait 5 weeks, start moclobemide.[3,5]	Stop fluoxetine, wait 4-7 days. Start TCA at very low dose & ↑ very slowly.[1,5,‡,§]
SNRIs	→	Cross-taper cautiously with low dose of SSRI.[1,5]	Cross-taper cautiously with low dose of fluoxetine.[1,5]	Taper & stop, then start new SNRI.[1]	Taper & stop (or to low dose), then start bupropion cautiously.[5]	Cross-taper cautiously.[1]	Taper & stop, wait 1 week, then start moclobemide.[1,5]	Cross-taper cautiously with very low dose of TCA.[1,5,§]
NDRI (bupropion)	→	Taper & stop, then start SSRI (consider lower starting dose).[4,5]	Taper & stop, then start fluoxetine (consider lower starting dose).[4,5]	Taper & stop, then start SNRI at low dose & ↑ slowly.[4,5]		Taper & stop, then start mirtazapine cautiously (consider lower starting dose).[4,5]	Taper & stop, wait 1 week, then start moclobemide.[5]	Taper & stop, then start TCA at a low dose & ↑ slowly.[5]
NaSSA (mirtazapine)	→	Taper & stop[5] (or to low dose),[1] then start SSRI cautiously.	Taper & stop[5] (or to low dose),[1] then start fluoxetine cautiously.	Taper & stop[5] (or to low dose),[1] then start SNRI cautiously.	Taper & stop, then start fluoxetine cautiously.[5]		Taper & stop, wait 1 week, then start moclobemide.[1]	Taper & stop[5] (or to low dose),[1] then start cautiously with low dose of TCA.
RIMA (moclobemide)	→	Taper & stop, wait 24 hours, start SSRI.[1,5]	Taper & stop, wait 24 hours, start fluoxetine.[1,5]	Taper & stop, wait 24 hours, start SNRI.[1,5]	Taper & stop, wait 24 hours, start SNRI.[1,5]	Taper & stop, wait 24 hours, start SNRI.[1,5]		Taper & stop, wait 24 hours, start TCA.[1,5]
TCA	→	Gradually ↓ dose by up to 50% & start SSRI at normal starting dose, then slowly withdraw TCA over few weeks.[1,5,§]	Gradually ↓ dose by up to 50% & start fluoxetine at normal starting dose, then slowly withdraw TCA over few weeks.[1,5,§]	Cross-taper cautiously, start with low dose SNRI.[1,5]	Taper & stop[4] (or to low dose),[5] then start mirtazapine cautiously.	Taper & stop (or to low dose),[1,5] then start mirtazapine cautiously.	Taper & stop, wait 1 week, then start moclobemide.[1]	Cross-taper cautiously[1,5] (switching is of questionable benefit).[4]

Abbreviations: mg milligrams; **NaSSA** noradrenergic/specific serotonergic antidepressant; **NDRI** norepinephrine dopamine reuptake inhibitor; **RIMA** reversible inhibitor of monoamine oxidase A; **SNRI** selective serotonin norepinephrine reuptake inhibitor; **SSRI** selective serotonin reuptake inhibitor; **TCA** tricyclic antidepressants.

SSRI/SNRI Discontinuation Syndrome

- Seen with abrupt cessation of SSRI or SNRI
- Modest but clinically significant increase in favor of SSRIs vs. TCAs
- 1-2 weeks of feeling “off” or “fluish”
  - Common: dizziness, anxiety, nausea, sweating, coryza, headache, insomnia,
  - Occasionally: electric shock-like sensations, parasthesias, visual disturbances, myalgias, chills, confusion

- ***Can be VERY DISTRESSING and DISABLING***

Michelson et al. Br J Psychiatry 2000

SSRI/SNRI Discontinuation Syndrome

- **F** lu-like symptoms
- **I** nsomnia
- **N** ausea
- **I** mbalance
- **S** ensory disturbances
- **H** yper-arousal (anxiety/agitation)

Monitoring Parameter	Timeline
1. Target Symptoms for Depression, severity of symptoms and functioning (efficacy of antidepressant – aim for remission)	q7-14 days for 4-6 wks then q 1-3 months (to watch for relapse
2. Antidepressant adverse effects (depends on the medication selected – you should be able to identify which ones you'd be concerned with)	q7-14 days for 4 wks then q 3 months
3. Increase in obsessive, obtrusive suicidal thoughts/behaviours (especially in children, adolescents and young adults)	q7-14 days for 4-8 wks
4. Serotonin syndrome	First 2 wks of AD or new medication
5. Discontinuation syndrome	At discontinuation of therapy

Patient Health Questionnaire (PHQ-9)

Name: _____ Date: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

For office coding: Total Score _____ = _____ + _____ + _____

Total Score _____

Patient Health Questionnaire (PHQ-9)

PHQ-9 scores can be used to plan and monitor treatment. To score the instrument, tally the numbers of all the checked responses under each heading (not at all=0, several days=1, more than half the days=2, and nearly every day=3). Add the numbers together to total the score on the bottom of the questionnaire. Interpret the score by using the guide listed below.

Guide for Interpreting PHQ-9 Scores		
Score	Depression Severity	Action
0 - 4	None-minimal	Patient may not need depression treatment.
5 - 9	Mild	Use clinical judgment about treatment, based on patient's duration of symptoms and functional impairment.
10 - 14	Moderate	Use clinical judgment about treatment, based on patient's duration of symptoms and functional impairment.
15 - 19	Moderately severe	Treat using antidepressants, psychotherapy or a combination of treatment.
20 - 27	Severe	Treat using antidepressants with or without psychotherapy.

Questions?