

Depression Management Algorithm

Douglas Green, MD, FRCPC

Asmat Khan, MD, FRCPC

[Click here to proceed](#)

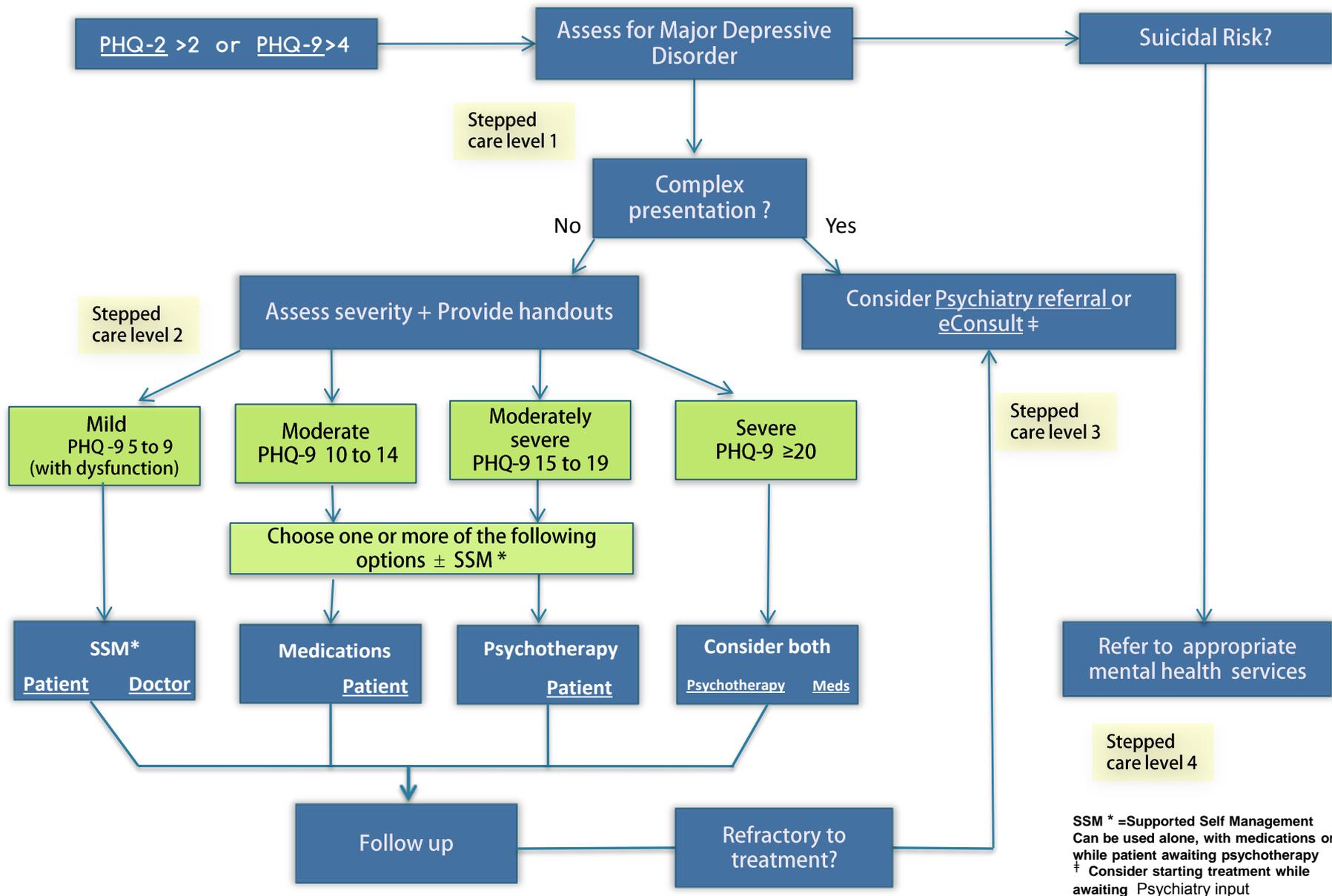
Department of Psychiatry,
University of Ottawa

- Instructions
- References
- Disclaimer
- Acknowledgements
- Feedback
- System Requirements



Depression Management Algorithm-Stepped Care Model

(Please click on the **blue boxes** or **underlined words** to obtain the related documents)



SSM * =Supported Self Management
 Can be used alone, with medications or while patient awaiting psychotherapy
 † Consider starting treatment while awaiting Psychiatry input

(Please click on the underlined words to obtain the related documents)

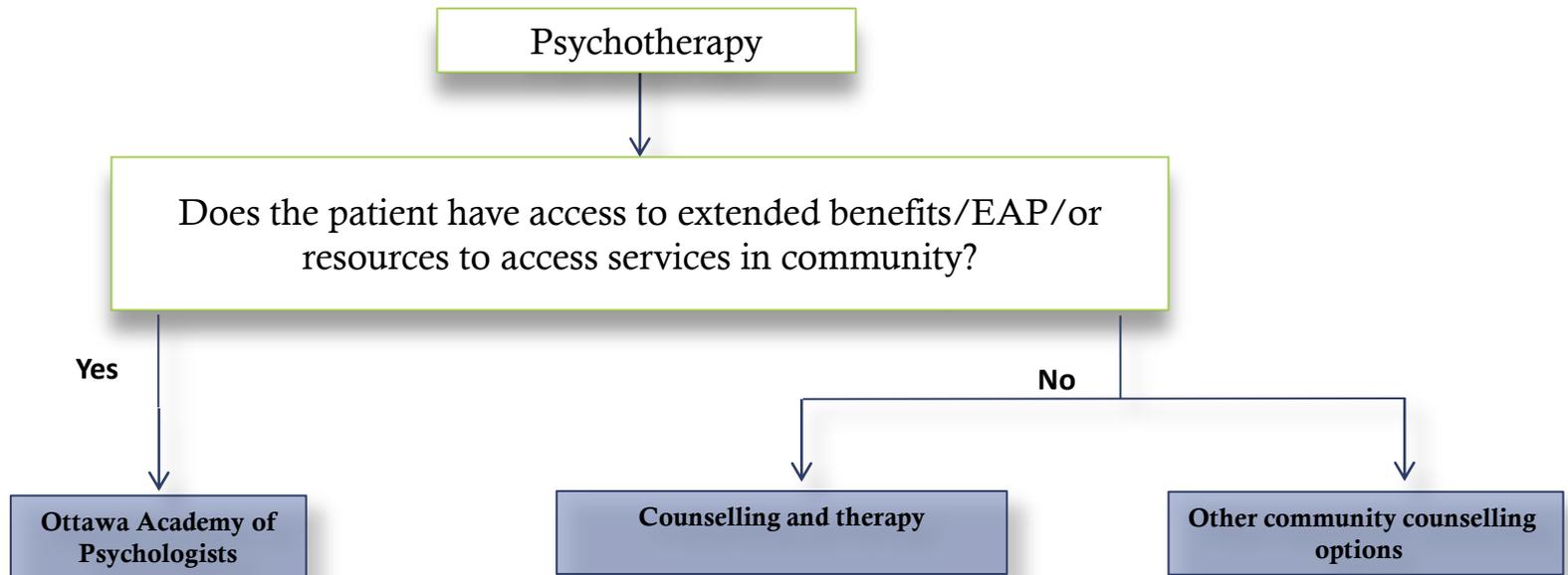
Assess for Major Depressive Disorder:

- Are all criteria met?
- R/O General medical conditions
- R/O Substance abuse
- R/O Possible bipolar disorder

Age	Physical exam	CBC	Lytes, BUN Creatinine Glucose	B ₁₂ , Folate TSH	Sleep study	Others as appropriate
Age <50, healthy						
Age <50, significant fatigue	✓	✓	?	✓	?	✓
Age >50	✓	✓	✓	✓	?	
Any age, suspected medical illness	✓	✓	✓	✓	?	✓

Depression Management Algorithm-Stepped Care Model (Psychotherapy)

(Please click on the blue boxes to obtain the related documents)



Complex Presentation

If one or more of the following are present, consider the patient's condition to be complex(Please click on each of the following for more information):

- Suicidal/homicidal risk
- Significant dysfunction(e.g. WSAS >20)
- Possible bipolar disorder
- Substance abuse
- Co-morbid anxiety disorder
- Psychosis
- Personality disorder
- Diagnostic uncertainty
- Refractory to treatment

Assess Severity and Provide Handouts:

(Please click on any of the following to get the relevant handout)

- What is Depression?
- Behavioural Activation
- Assertiveness and communication
- Regular exercise
- Sleep hygiene
- Other Resources

Refractory depression:

Defined as <50% drop in PHQ-9 score after 3 months of antidepressant treatment and/or psychotherapy.

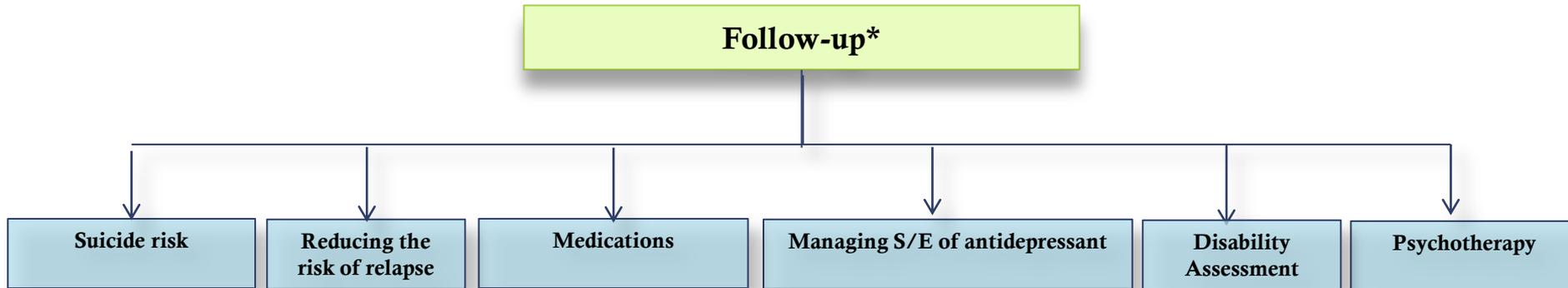
Consider/assess if:

- the diagnosis of depression is appropriate
- there is an undiagnosed medical condition
- there is an undiagnosed substance use
- the patient is adherent to medications

PHQ-9 based Follow-up of Psychotherapy

Initial Response to Psychotherapy after Three Sessions over Four - Six weeks		
PHQ-9 Score	Treatment Response	Treatment Plan
Drop of ≥ 5 points from baseline	Adequate	No treatment change needed. Follow-up in four weeks.
Drop of 2-4 points from baseline.	Probably Inadequate	Possibly no treatment change needed. Share PHQ-9 with psychotherapist.
Drop of 1-point or no change or increase.	Inadequate	<ul style="list-style-type: none"> • If depression-specific psychological counseling (CBT, PST, IPT*) discuss with therapist, consider adding antidepressant. • For patients satisfied in other type of psychological counseling, consider starting antidepressant • For patients dissatisfied in other psychological counseling, review treatment options and preferences

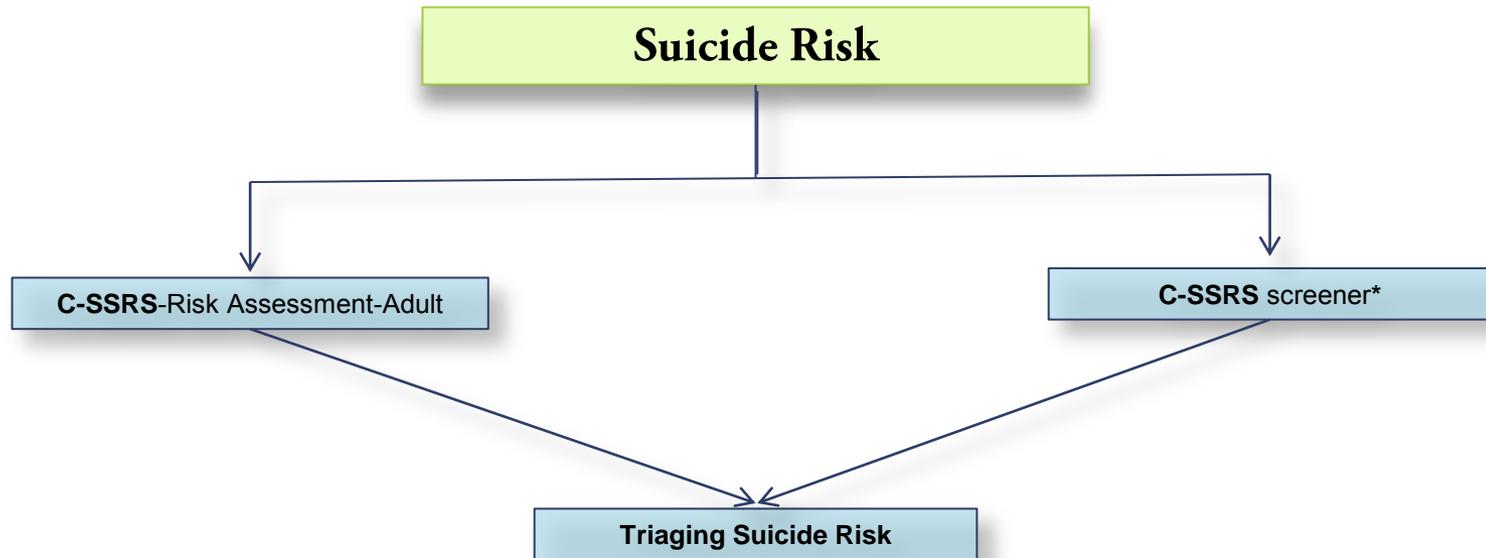
(Please click on the blue boxes to obtain the related documents)



*** Guidelines for follow-up**

- Recommend follow-up by phone or in person in one week depending upon the severity of the condition and every two weeks thereafter until remission.
- Suicidal patients will need closer follow-up.
- Once remission is achieved, gradually decrease the frequency of follow-ups.
- Consider annual follow-up once stable.

(Please click on the blue boxes to obtain the related documents)



**If the patient answered "yes" to items # 4, 5, 6 (within the last 3 months) then consider the suicide risk to be high.*

Managing antidepressants side effects

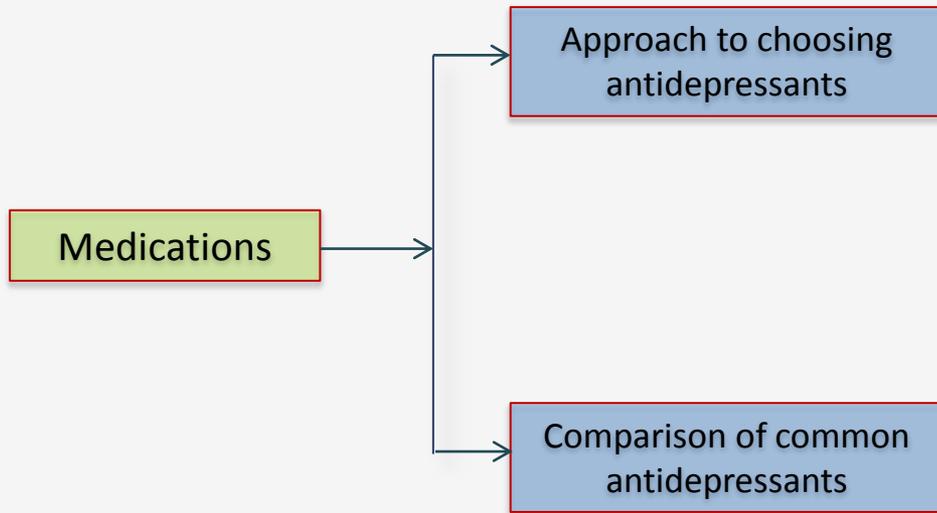
Side effects	Treatment Plan
Gastrointestinal symptoms like nausea & diarrhea	-Wait... -Suggest general measures to manage minor illness, in more severe or prolong cases switching to another antidepressant might be necessary.
Activating symptoms like agitation, insomnia and headaches.	-Wait..., ...often get better with time. -Try giving in the morning. In severe/more prolong symptoms, use less activating antidepressant. -If very agitated or tremor present consider reducing or stopping the medication.
Suicidal ideation (Mostly in ages<25)	Please refer to “ <u>Triaging suicidal risk</u> ” page
Sexual side effects (Reduced libido, anorgasmia, delayed ejaculation, reduced erection quality)	1-Reducing the dose of antidepressant. 2-Try a different antidepressant from <u>the table</u> like Wellbutrin or Mirtazapine 3-Might consider Sildenafil, Tadalafil if not medically contraindicated 4-Consider adding Wellbutrin for reduced libido
Activation of mania/hypomania (~0.1%)	1-Stop the antidepressant 2-Assess for safety 3-Consult Shared care or refer the pt. to Psychiatry emergency services(PES)

Medication(s) follow-up

Comparison of Common Antidepressants Table which contains links to follow-up of individual antidepressants

For tapering and stopping Antidepressants click here

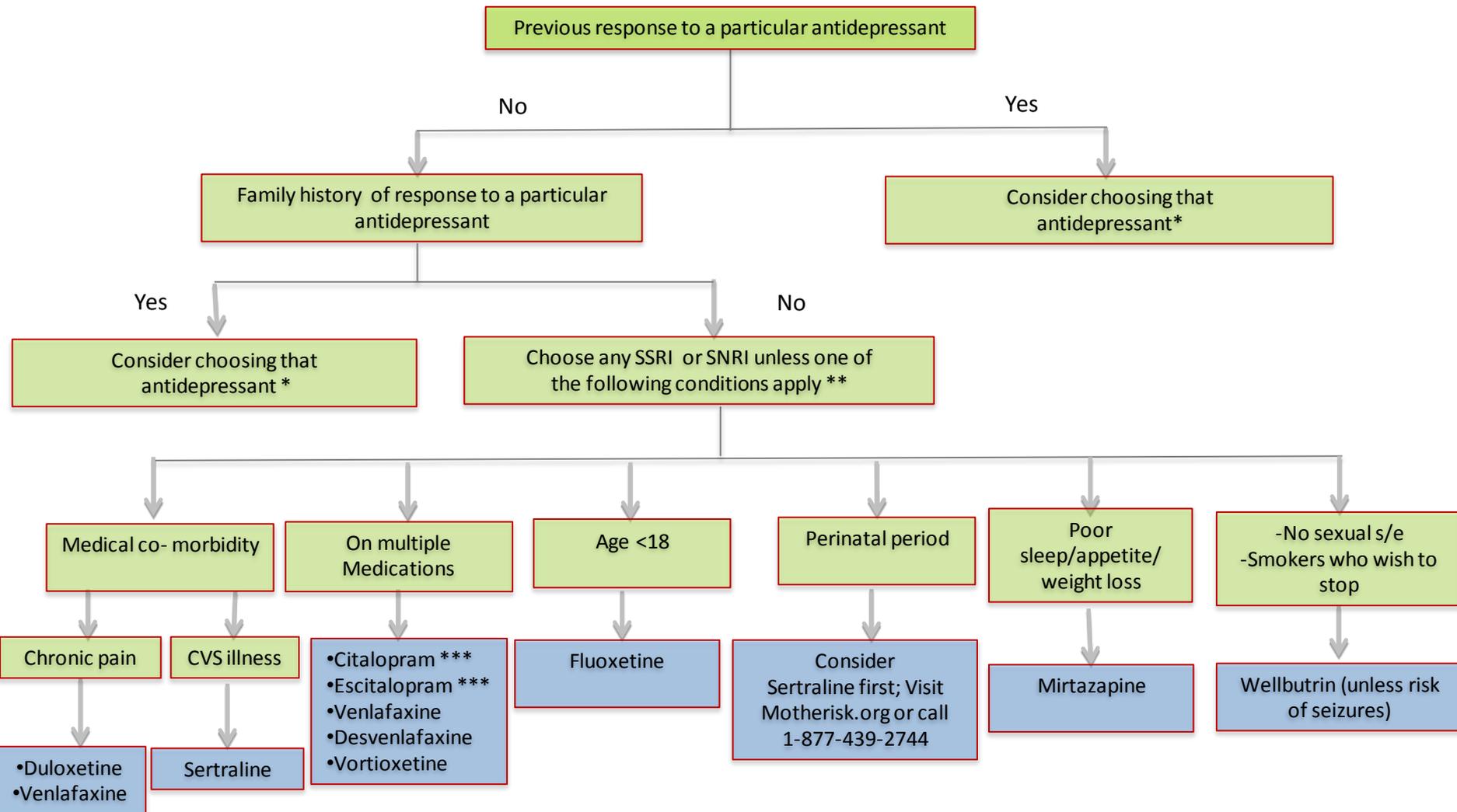
(Please click on the blue boxes for getting the related document)



(Please click on the blue boxes for getting the related document)

Approach to Choosing Antidepressant

(Please click on the blue boxes or underlined words to obtain further information)



* Unless one of the conditions listed at the bottom of this algorithm is considered to be pertinent.

** Please click here to see Comparison of Common Antidepressant Table.

*** Avoid combining it with Tamoxifen

Next Stage

- Most guidelines recommend switching to an antidepressant from another class although evidence for this strategy is limited
- To assist with **switching** consider using the following resources:
Website: <http://wiki.psychiatrienet.nl/index.php/SwitchAntidepressants>
or UpToDate: “Antidepressant medications in adults-switching and discontinuing medication”

Continuation Phase Treatment

- Patient who receive pharmacotherapy during acute phase treatment should continue their treatment for AT LEAST 6 to 9 months after symptom remission, at the same dose that led to a therapeutic response
- Patients with a first episode of MDD who enter remission should be followed every 3 months for the first year and at the end of 6-9 months should be evaluated for slow tapering and discontinuation of antidepressant medication
- For those patients with two episodes of major depression consider maintaining antidepressant medication for two years. May also consider indefinite treatment depending upon the clinical situation
- For those patients who have had 3 or more major depressive episodes consider maintaining antidepressant medication indefinitely
- Other groups considered at high risk for depression should also be considered for maintenance treatment including those whose depression was:
 - Prolonged
 - Associated with significant functional impairment
 - Associated with significant suicidal ideation
 - Associated with psychotic symptoms
- For patients who were augmented with antipsychotics, consider gradually tapering and discontinuing the antipsychotics after 6-9 months.

Augmentation

Level 1*

Choose either:

➤ Mirtazapine 30 mg po qhs X 2 weeks. If less than 20% response increase to 45 mg po qhs.

Or

➤ Bupropion XL 150 mg po daily X 2 weeks. If less than 20% response increase to 300 mg po daily

➤ If on either Bupropion or Mirtazapine as an initial agent, consider augmenting with an SSRI or SNRI

Level 2**

Choose either:

➤ Aripiprazole 2.0 mg po daily X 2 weeks. If less than 20% response increase to 5.0 mg po daily. **or**

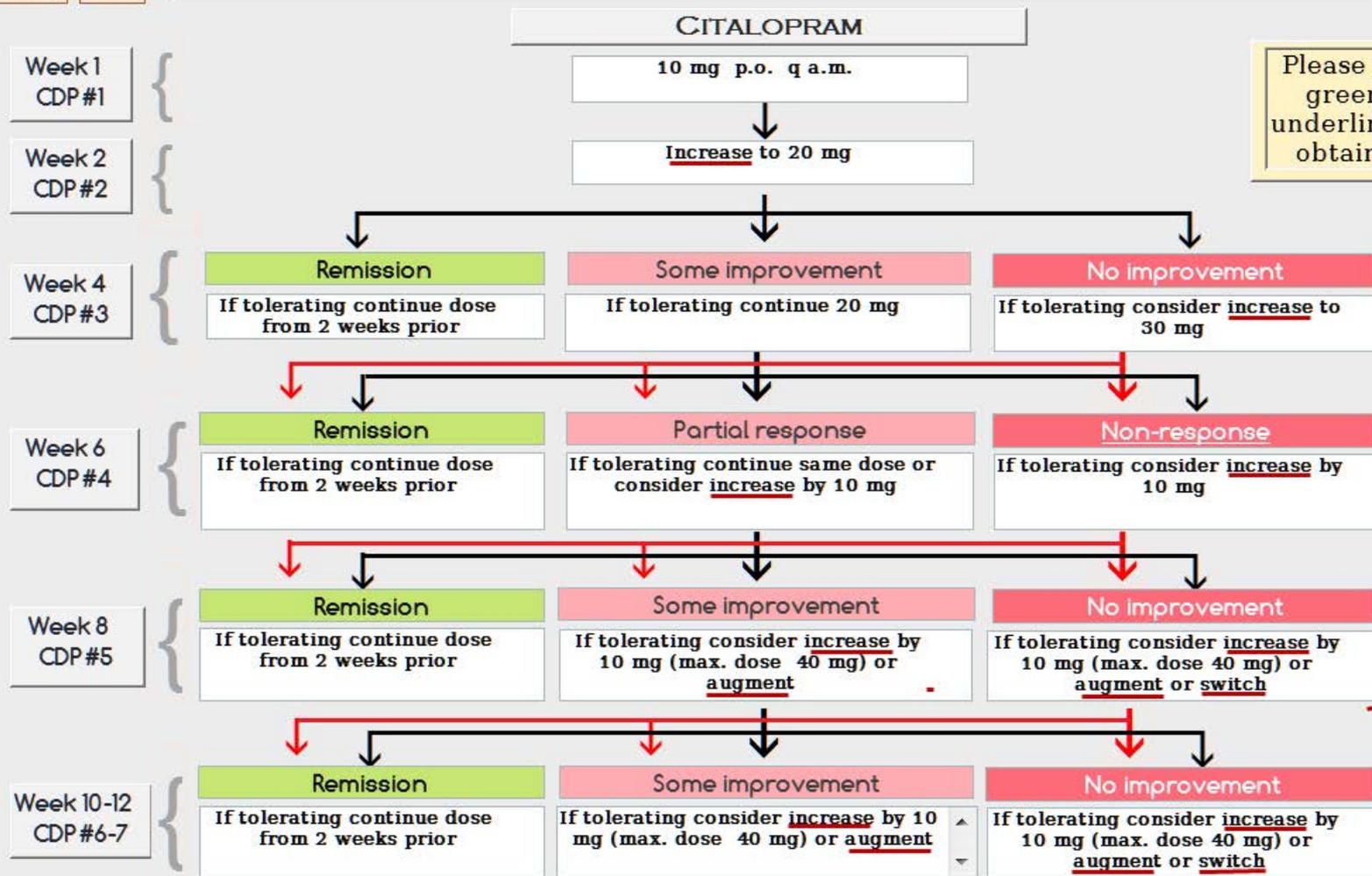
➤ Quetiapine XR 50 mg po at supper X 1 week, then increase to 100 mg X 1 week and if tolerated then increase it to 150 mg po q supper. If less than 20% response after 2 weeks then increase to 300 mg po q supper

*Evidence –based psychotherapy (CBT or IPT or PST) can also be used as an augmentation strategy instead of medication

** to be used if Level 1 interventions not effective or not tolerated



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)

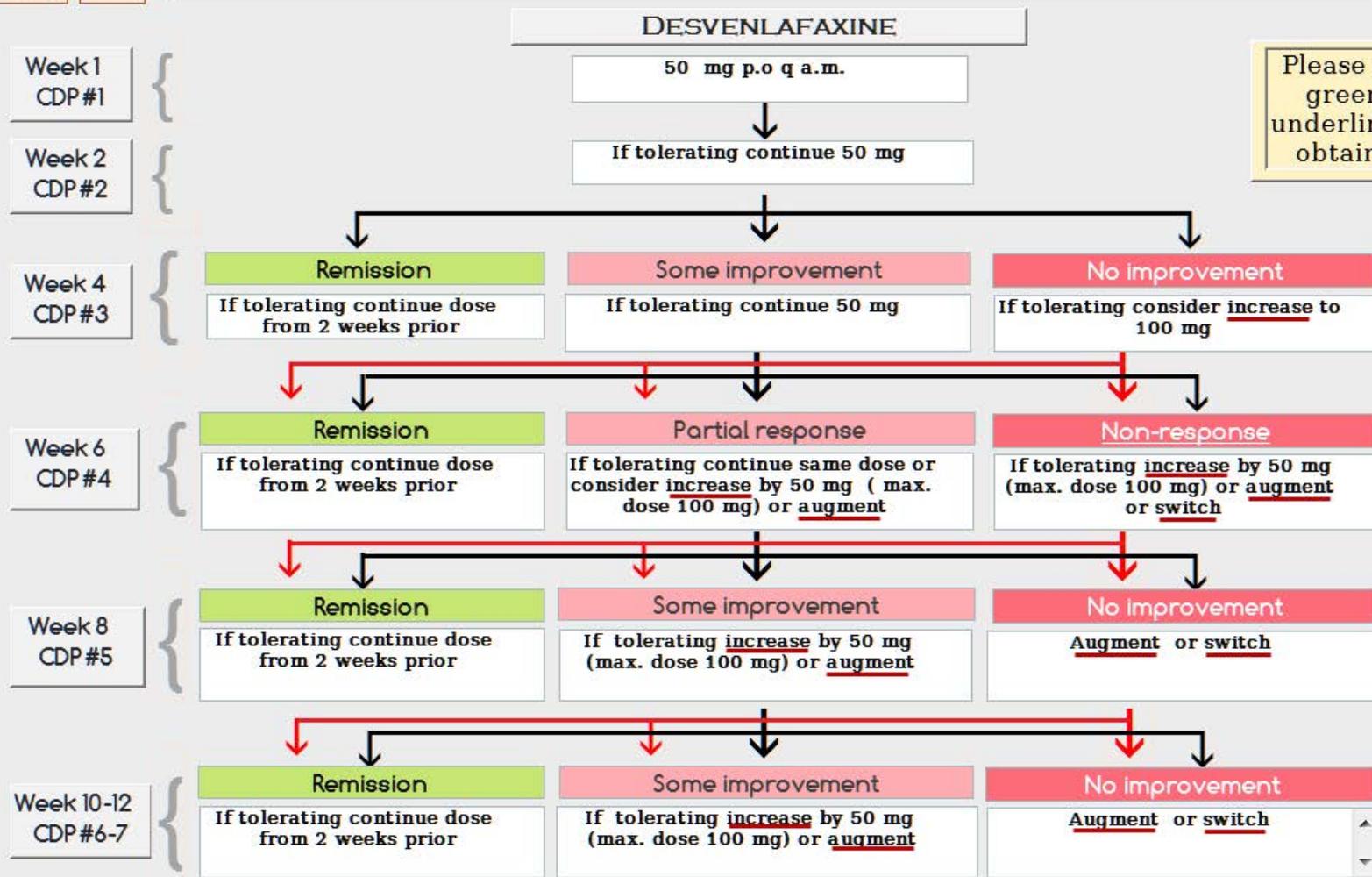


Please click on the green boxes or underlined words to obtain more info.

Remission : PHQ-9 <5
No Improvement: No drop in the PHQ-9 score.
Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1
Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1
Definitions and notes
Some Improvement: Any drop in the PHQ-9 score.
 At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.
 Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.
 In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)



Please click on the green boxes or underlined words to obtain more info.

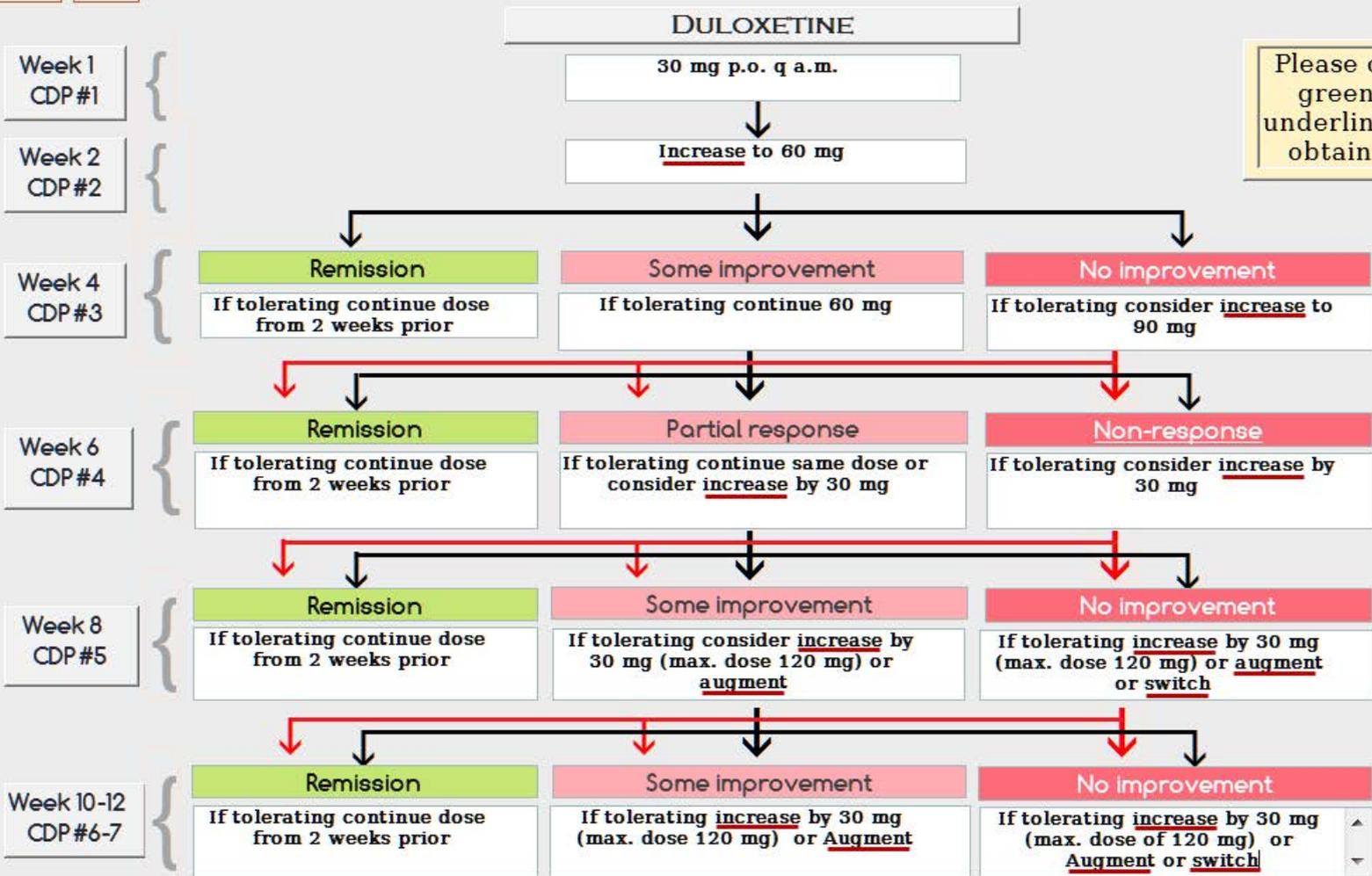
Remission : PHQ-9 <5
No Improvement: No drop in the PHQ-9 score.
Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1
Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

Definitions and notes
Some Improvement: Any drop in the PHQ-9 score.

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.
 Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.
 In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)



Please click on the green boxes or underlined words to obtain more info.

Remission : PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Definitions and notes

Some Improvement: Any drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

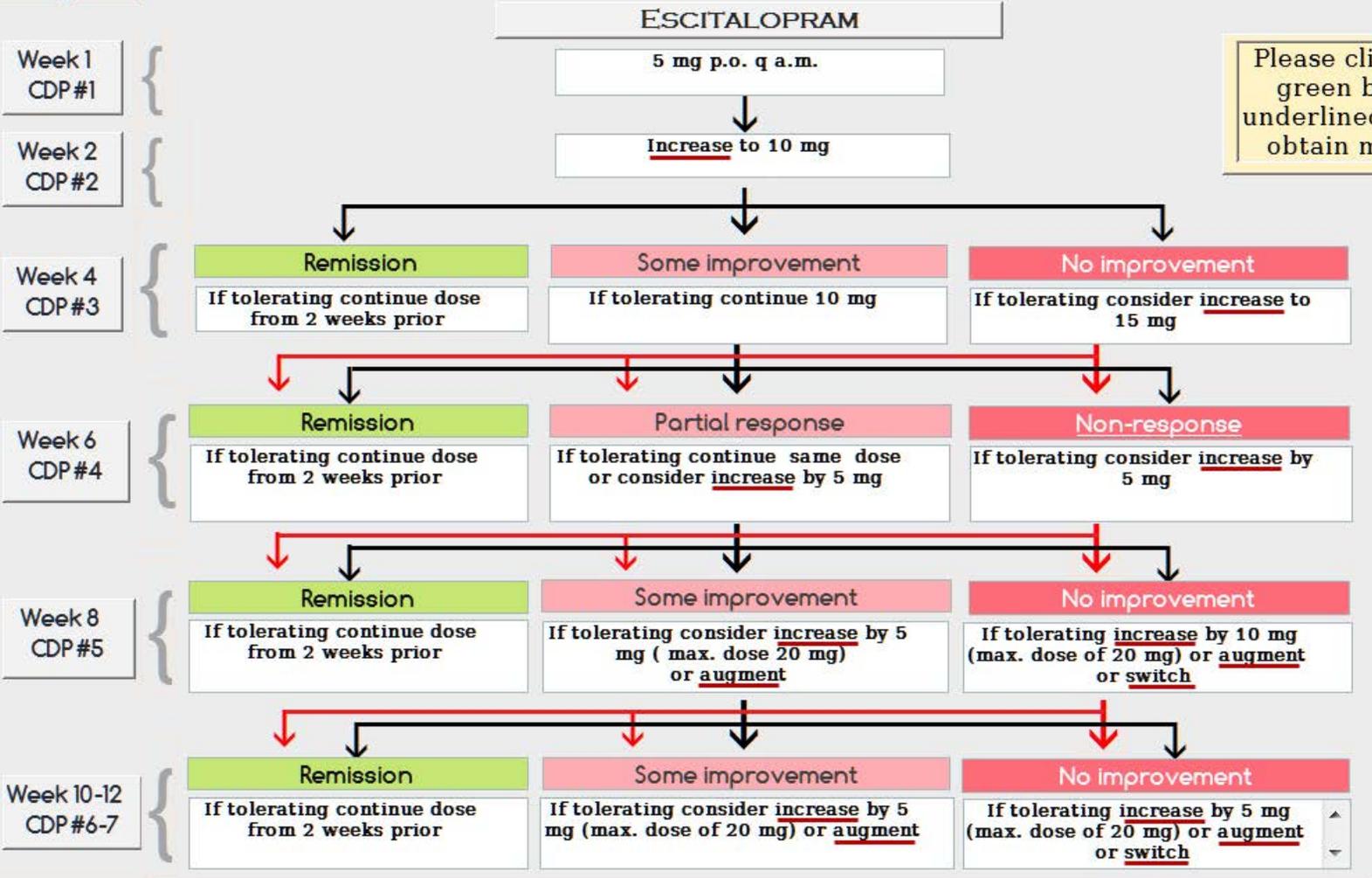
Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)

Please click on the green boxes or underlined words to obtain more info.



Remission : PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

Definitions and notes

Some Improvement: Any drop in the PHQ-9 score.

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

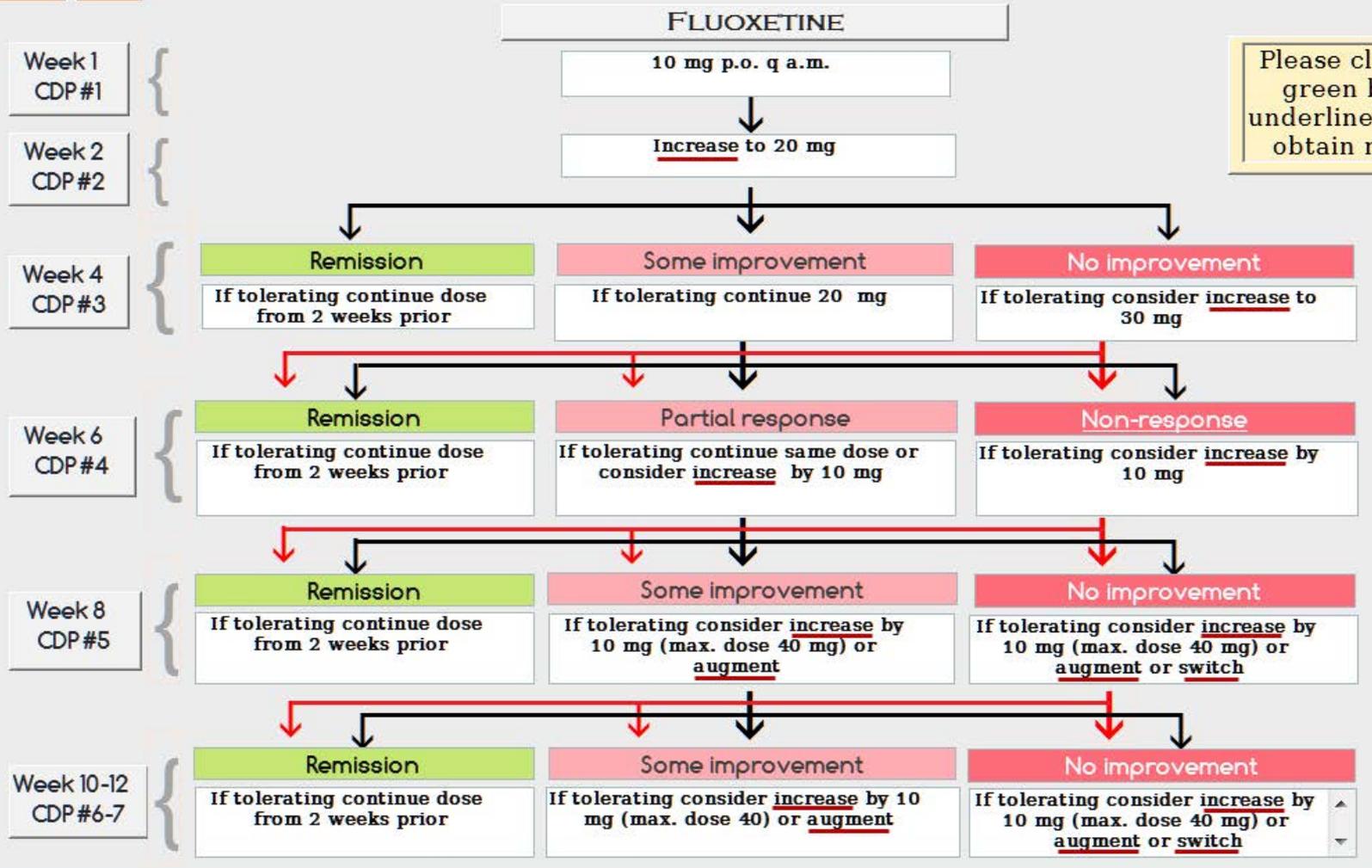
Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.

Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)



Please click on the green boxes or underlined words to obtain more info.



Remission: PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

Definitions and notes

Some Improvement: Any drop in the PHQ-9 score.

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

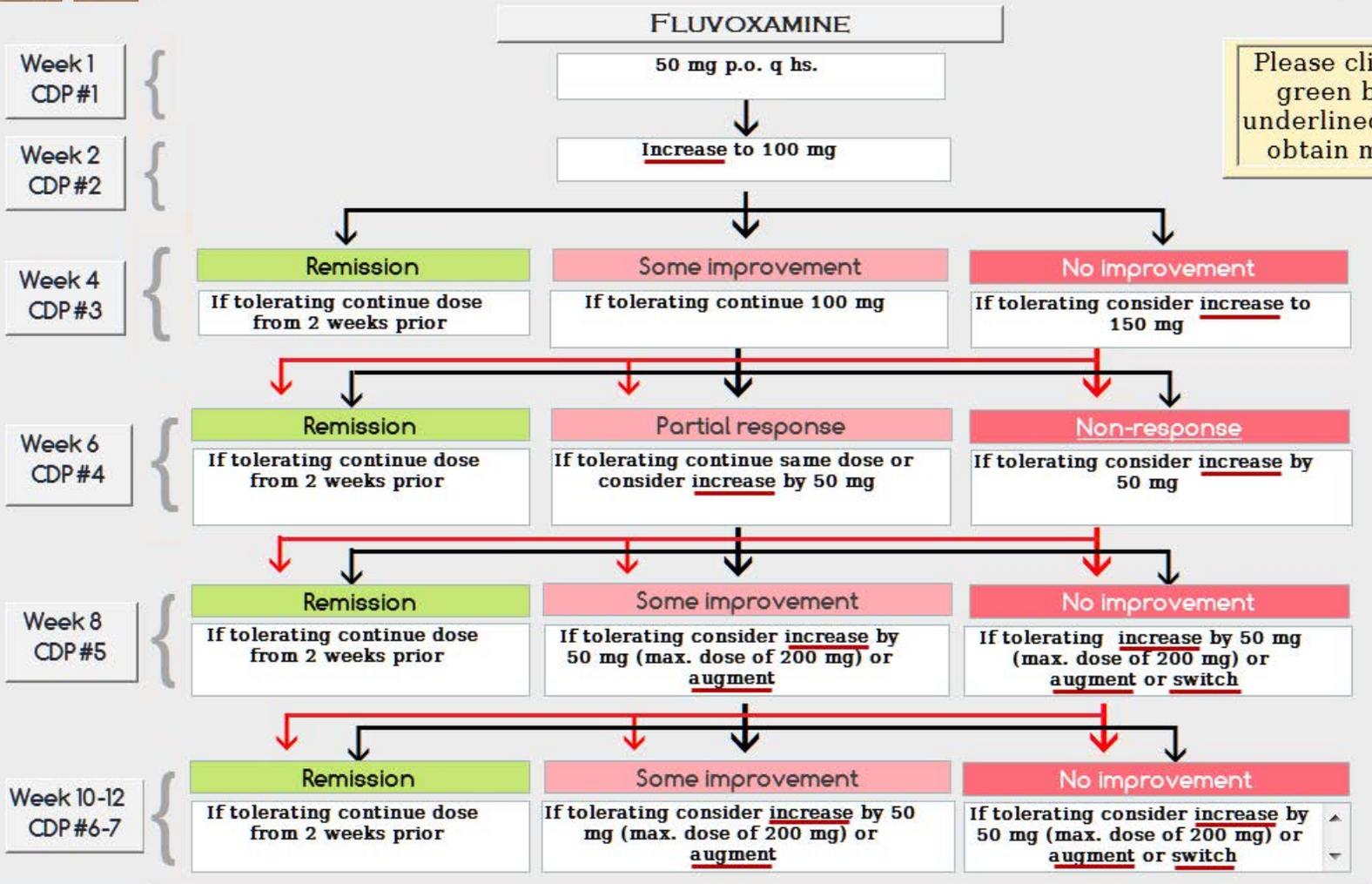
Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)

Please click on the green boxes or underlined words to obtain more info.



Remission: PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

Definitions and notes

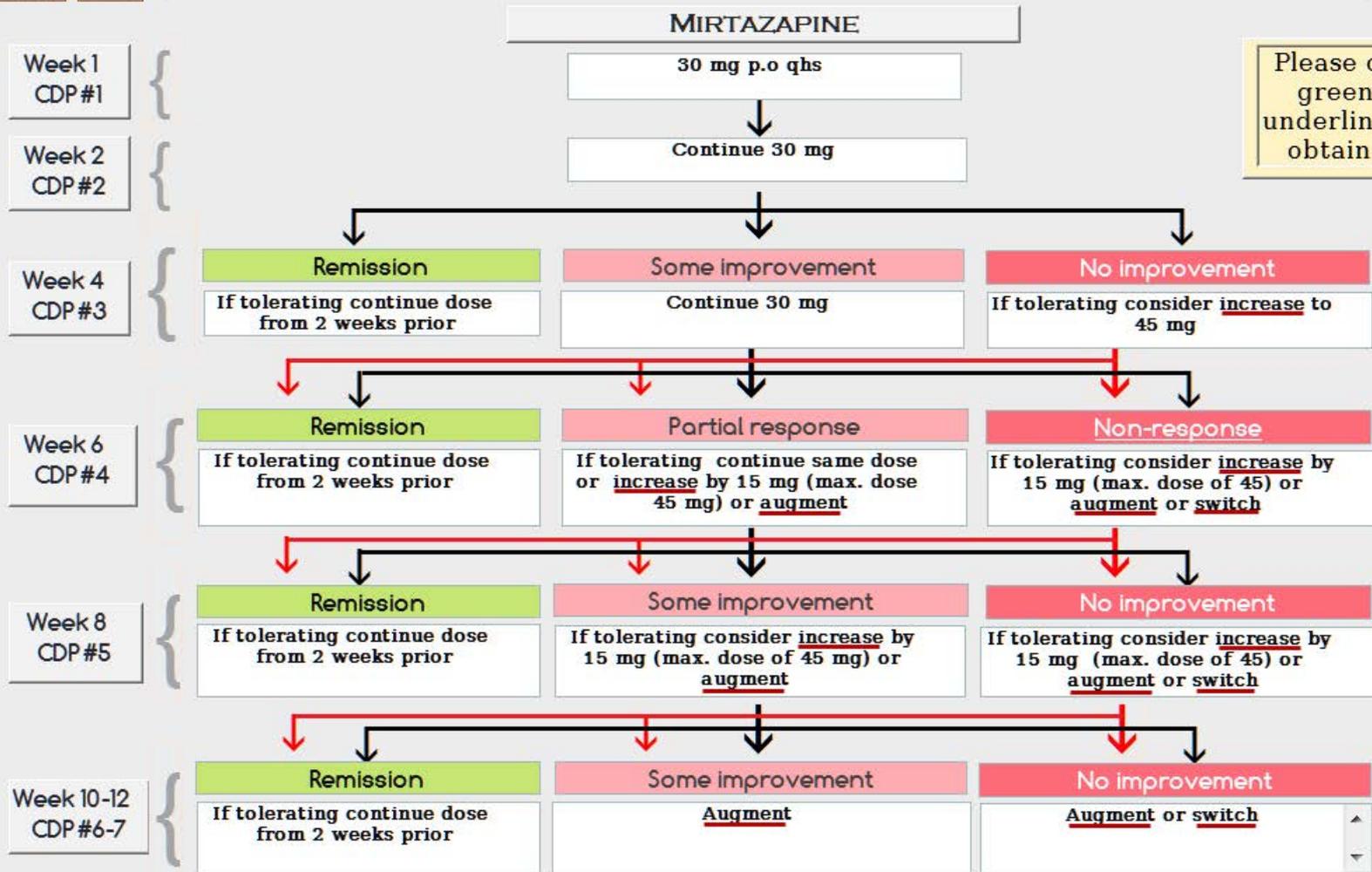
At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)



Please click on the green boxes or underlined words to obtain more info.

Remission: PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Some Improvement: Any drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

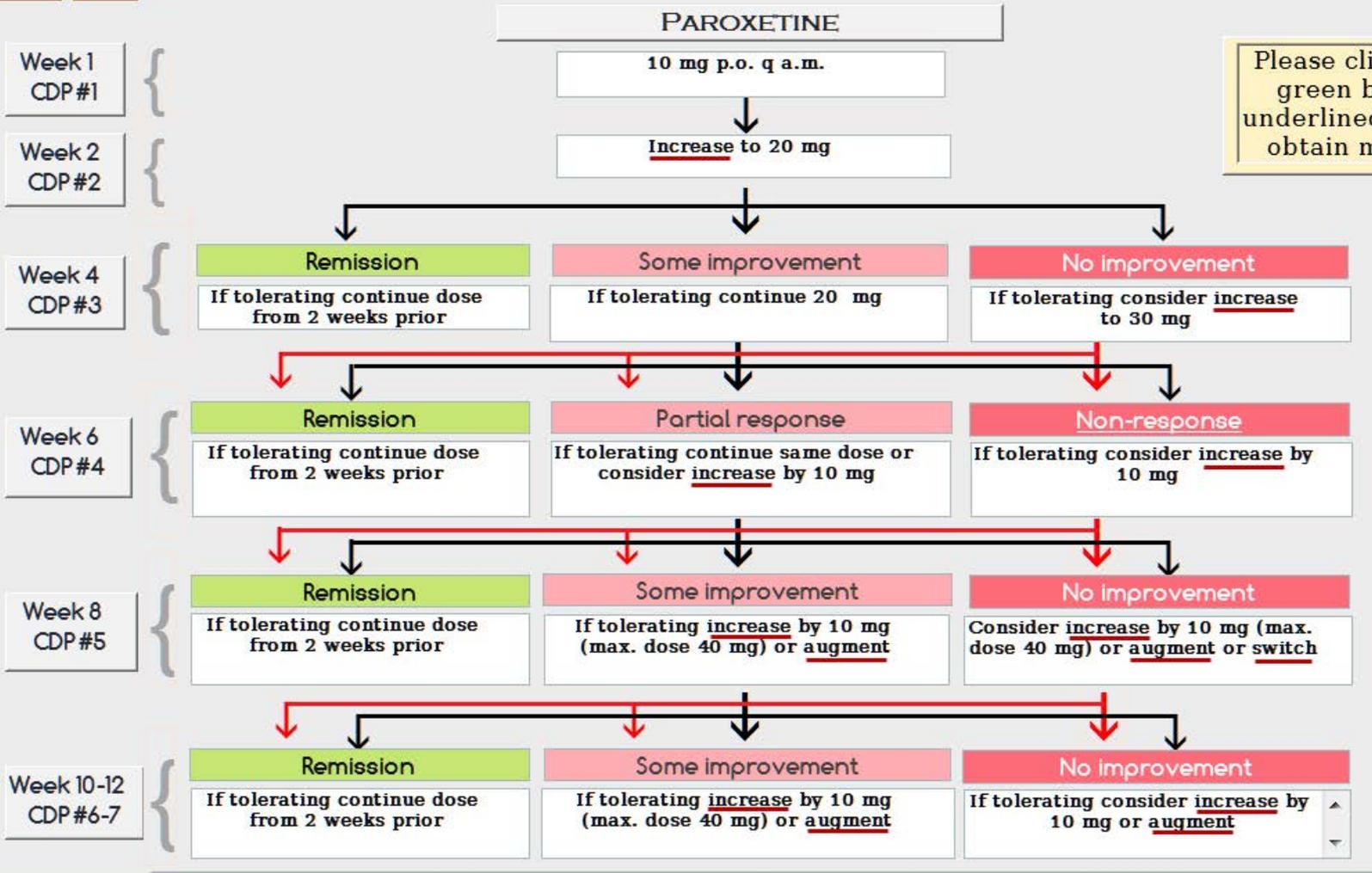
Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)

Please click on the green boxes or underlined words to obtain more info.



Remission: PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

Definitions and notes

Some Improvement: Any drop in the PHQ-9 score.

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

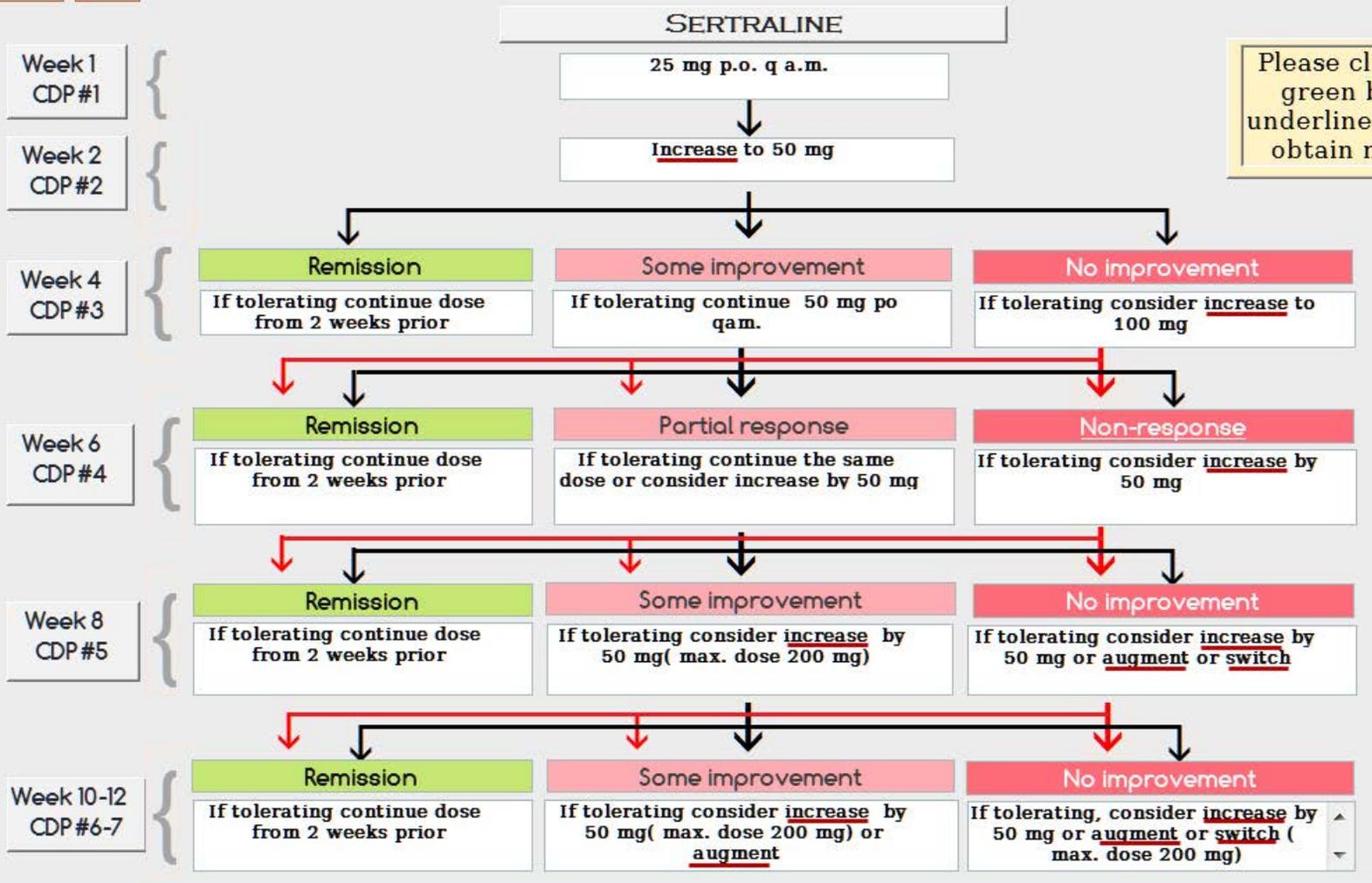
Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)

Please click on the green boxes or underlined words to obtain more info.



Remission: PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Some Improvement: Any drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.

Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)

Week 1
CDP #1

Week 2
CDP #2

Week 4
CDP #3

Week 6
CDP #4

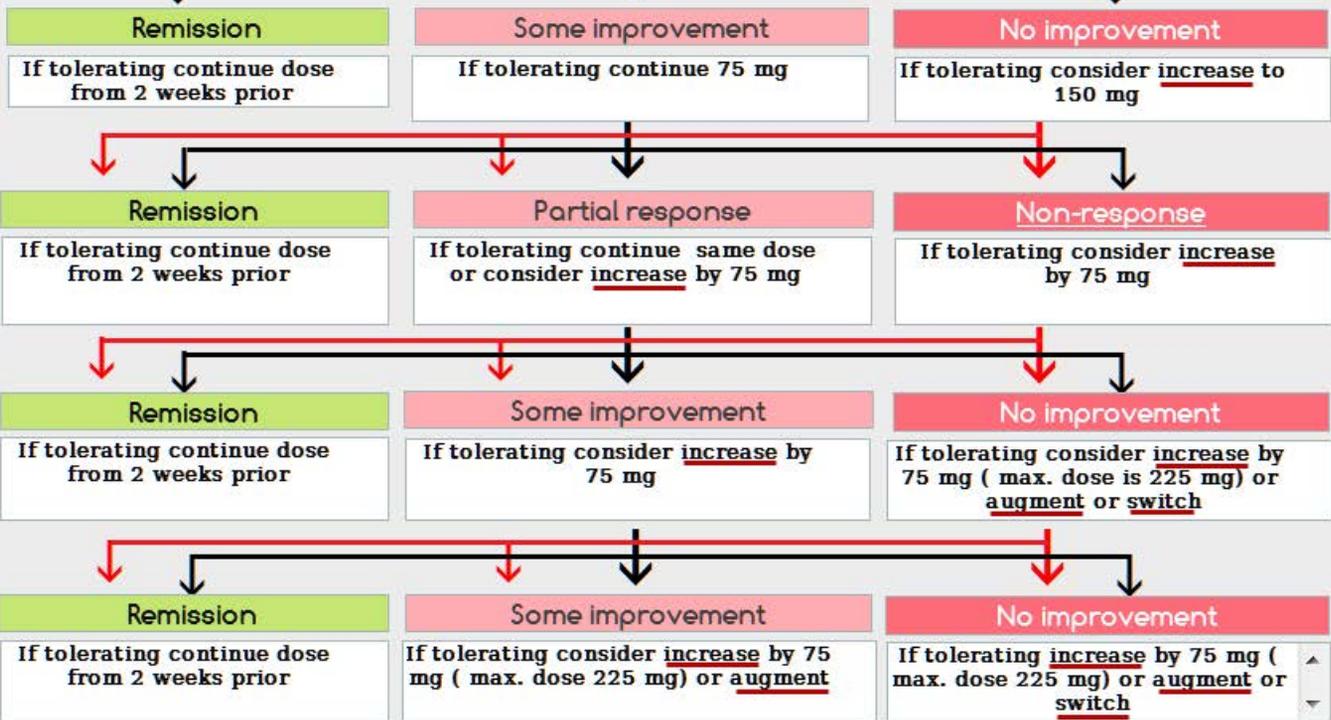
Week 8
CDP #5

Week 10-12
CDP #6-7

VENLAFAXINE

37.5 mg p.o. q a.m.

Increase to 75 mg



Please click on the green boxes or underlined words to obtain more info.

Remission: PHQ-9 <5
No Improvement: No drop in the PHQ-9 score.
Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1
Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1
Definitions and notes
Some Improvement: Any drop in the PHQ-9 score.
 At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.
 Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.
 In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.

Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)

Week 1
CDP #1

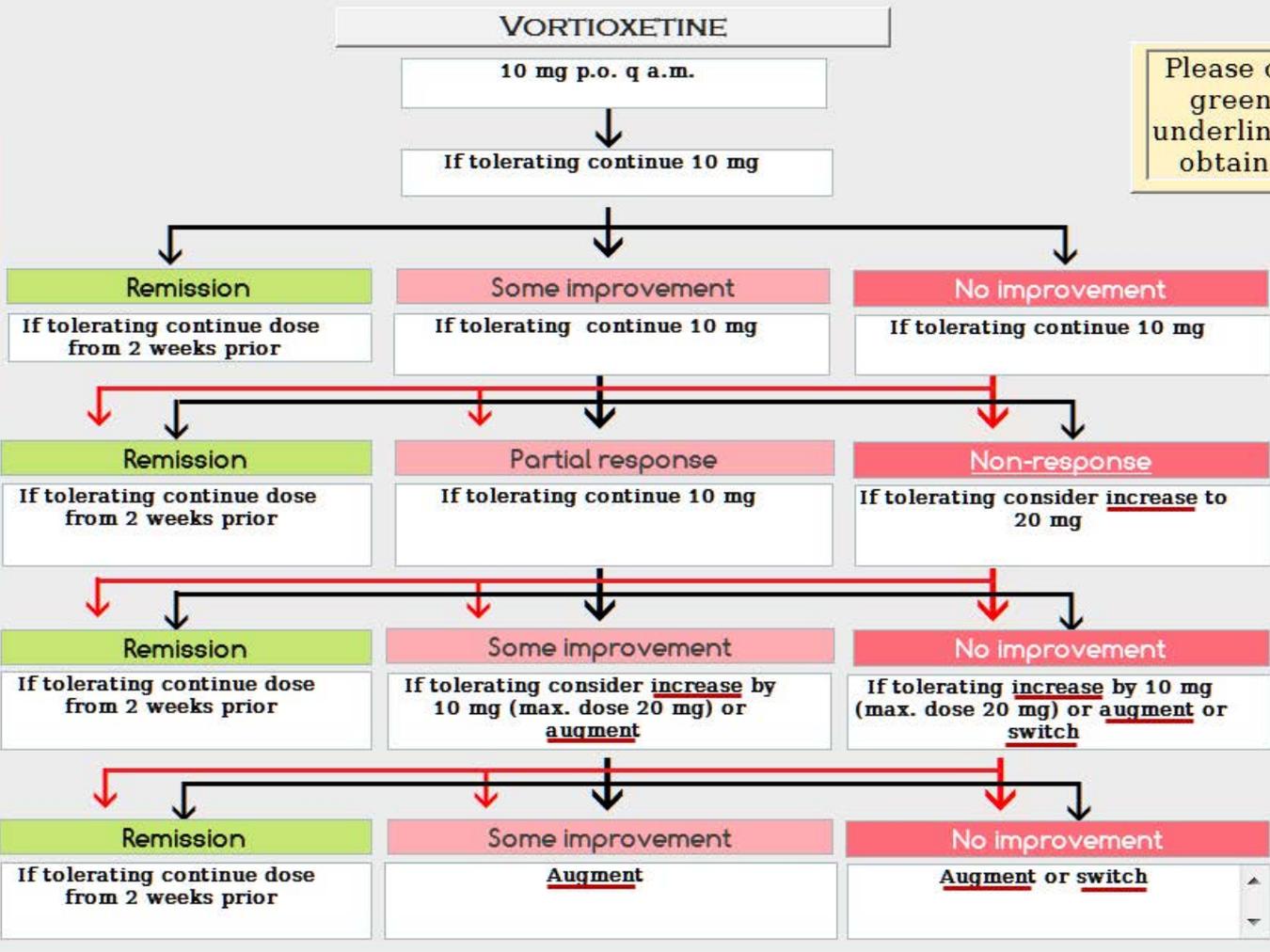
Week 2
CDP #2

Week 4
CDP #3

Week 6
CDP #4

Week 8
CDP #5

Week 10-12
CDP #6-7

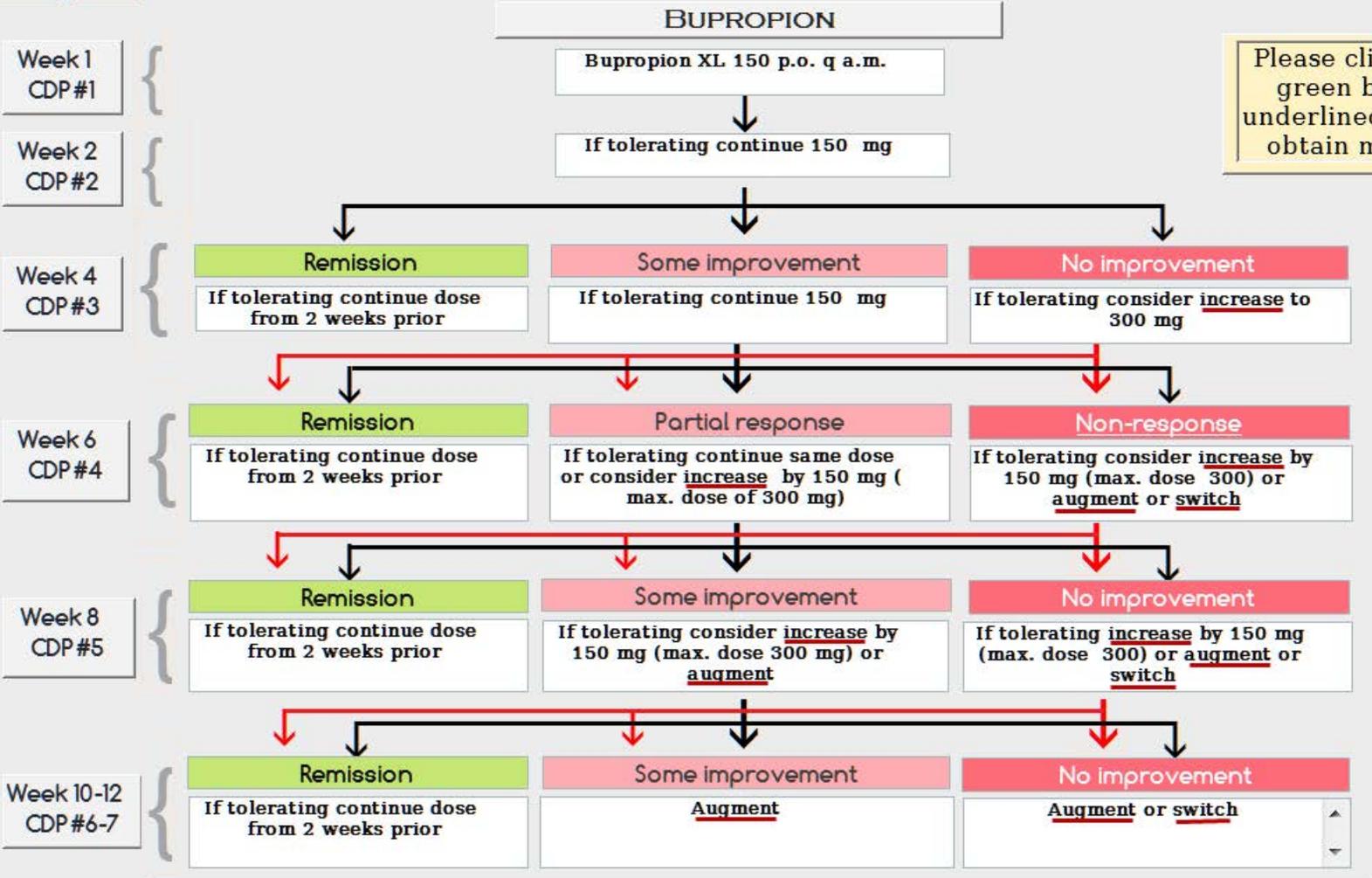


Please click on the green boxes or underlined words to obtain more info.

Remission: PHQ-9 <5
No Improvement: No drop in the PHQ-9 score.
Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1
Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1
Definitions and notes
Some Improvement: Any drop in the PHQ-9 score.
 At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.
 Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.
 In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.



Critical decision points (CDP) and PHQ-9 based care (for ages 18-65 years)



Please click on the green boxes or underlined words to obtain more info.

Remission: PHQ-9 <5

No Improvement: No drop in the PHQ-9 score.

Partial Response: A drop of 5 points in PHQ-9 score at week 6 compared to score at week 1

Non-response: A drop of <5 points in PHQ-9 score at week 6 compared to score at week 1

Definitions and notes

At CDPs 2,3,4,5,6 consider switching antidepressants if side effects are intolerable.

Lower doses or less frequent dosage increase may be better for anxious, medically compromised, geriatric patients or for those experiencing tolerable SE.

In cases of non-response reassess diagnosis, check for non-adherence and assess for impact of psychosocial factors.

Increasing/Maximizing antidepressant dose:

Do not increase/maximize the antidepressant dose if:

- There are significant side effects
or
- Significant risk of drug interactions
- Lower doses or less frequent dosage increase may be better for anxious or medically compromised patients

COMPARISON OF COMMON ANTIDEPRESSANTS WITH S/E (for ages 18-65 years)

(Click on the name of the [Antidepressant](#) to see its follow-up and dose increase algorithm)

	NAME OF ANTIDEPRESSANT	STARTING DOSE	INITIAL TARGET DOSE	MAX DOSE	ANTICHOLINERGIC	SEDATION	INSOMNIA / AGITATION	ORTHOSTATIC HYPOTENSION	QT	GI	WEIGHT GAIN	SEXUAL	COMMENTS
SSRI'S	Citalopram	10	20	40	0	0	1+	1+	1+	1+	1+	3+	Watch for QTc prolongation at doses >40 mg/day
	Escitalopram	5	10	20 (30 *)	0	0	1+	1+	1+	1+	1+	3+	Escitalopram(Cipralex) is the S-isomer of Citalopram.
	Fluoxetine	10	20	80	0	0	2+	1+	1+	1+	1+	3+	Longer half life so preferable in teenagers but for the same reason caution in the elderly. Also watch for drug-drug interactions.
	Sertraline	25	50	200	0	1+	2+	1+	0 to 1+	2+	1+	3+	May be used in panic d/o, consider in peripartum period.
	Paroxetine	10	20	50	1+	1+	1+	2+	0 to 1+	1+	2+	4+	Watch for significant discontinuation syndrome and drug-drug interactions. Avoid in elderly and pregnancy.
	Vortioxetine	5	10	20	0	0	0	0	0	2+	0	0 to 3+	Sexual S/E are dose dependent. Cross over when switching.
	Fluvoxamine	50	100	300	0	1+	1+	1+	0 to 1+	1+	1+	3+	Significant GI side effects.
	SNRI'S	Venlafaxine XR	37.5	75	225 (300 *)	0	1+	2+	0	1+	1+	0	3+
Desvenlafaxine		50	50	100	0	1+	2+	0	0	1+	0	3+	May increase blood pressure! Watch for significant discontinuation syndrome.
Duloxetine		30	60	120	0	0	2+	0	0	2+	0	3+	Also approved for several pain conditions.
NDRI	Bupropion XL	150	300	300 (450)	0	0	2+	0	1+	1+	0	0	Avoid in those prone to seizures and in Eating d/o.
NaSSA	Mirtazapine	30	30	45	1+	4+	0	0	1+	0	4+	1+	Significant sedation and weight gain.

*Above the Health Canada maximum dose. Consider in selected cases with input from Psychiatry when possible.

Increasing/Maximizing antidepressant dose:

Do not increase/maximize the antidepressant dose if:

- There are significant side effects or drug allergies
or
- Significant risk of drug interactions
- Lower doses or less frequent dosage increase may be better for anxious or medically compromised patients

Tapering and stopping

- For assistance with tapering and stopping an antidepressant, go to:
<http://wiki.psychiatrienet.nl/index.php/SwitchAntidepressants>
and locate the 'Stop' column for respective medication.
- Withdrawal from Paroxetine, Venlafaxine and Desvenlafaxine can be more difficult. Once at lowest dose, consider substituting Fluoxetine 10-20 mg. Once the withdrawal symptoms have abated, continue Fluoxetine 10 mg for 1-2 weeks and then discontinue.

Computer Requirements

- Microsoft Windows
 - 128MB of RAM (256MB recommended for complex forms or large documents)
 - 110MB of available hard-disk space
 - Minimum of Microsoft Internet Explorer 6.0 or 7.0, Firefox 1.5 or 2.0, Mozilla 1.7, AOL 9
- Broadband Internet connection
- Currently this Algorithm does not support IMac, Ios(Apple) or Android devices