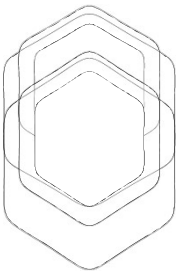

Update on Depression, Anxiety, and Mood Disorders

Greg Sullivan, MD
October 25, 2019

Best Care Practices in the Post-Acute and Long-Term Care Continuum 2019
FMDA's 27th Annual Conference & Trade Show

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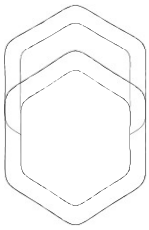

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Summaries, recommendations, and claims made hereafter represent the recommendations of the presenter as based upon an assessment of the salient literature. Unless otherwise explicitly stated, the contents of this presentation do not represent the opinion of either the Veteran's Health Administration or the University of South Florida.

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Learner Objectives

1. Describe the impact depression and anxiety play in long-term morbidity and mortality.
2. Identify a primary mood disorder and associated first- and second-line treatments.
3. Recognize a primary anxiety disorder and select most appropriate treatment.
4. Demonstrate an understanding of the overlapping roles that primary psychiatric and primary medical problems may play in pathology.

3

Why is this topic important?

Depression [1]
Estimates of up to 50% are cited regarding LTC residents with a diagnosis of depressive disorder or depressive symptoms

Bipolar Disorder [2]
As many as 10% of LTC residents are diagnosed with bipolar disorder

Anxiety [3]
Estimates of anxiety symptoms range up to 58% in residential LTC communities

Sleep [4,5]
Insomnia disorder prevalence exceeds 15% in 55+ population, insomnia symptoms are reported by greater than 50% in 65+

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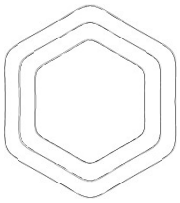

Depression & Mood Disorders

Bipolar Disorder

5

Diagnostic Criteria [6]

Bipolar I Disorder, manic episode

A – A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased activity or energy, lasting at least 1 week and present most of the day, nearly every day (or any duration if hospitalization is necessary).

B – During the period of mood disturbance and increased energy or activity, three (or more) of the following symptoms (four if the mood is only irritable) are present to a significant degree & represent a noticeable change from usual behavior:

1) Inflated self-esteem or grandiosity.
2) Decreased need for sleep.
3) More talkative than usual or pressure to keep talking.
4) Flight of ideas or subjective experience that thoughts are racing.
5) Distractibility, as reported or observed
6) Increase in goal-directed activity or psychomotor agitation
7) Excessive involvement in activities having high potential for painful consequences

C – The mood disturbance is sufficiently severe to cause marked impairment in social or occupational functioning or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features.

6

Diagnostic Criteria [6]

Bipolar II Disorder, hypomanic episode

A – Same as manic episode, except lasting at least 4 consecutive days rather than 1 week

B – Same as manic episode:

1) Inflated self-esteem or grandiosity.
2) Decreased need for sleep.
3) More talkative than usual or pressure to keep talking.
4) Flight of ideas or subjective experience that thoughts are racing.
5) Distractibility, as reported or observed
6) Increase in goal-directed activity or psychomotor agitation
7) Excessive involvement in activities having high potential for painful consequences

C – Associated with unequivocal change in functioning uncharacteristic of the individual when asymptomatic.

D – Disturbance in mood and the change in functioning are observable by others.

E – Episode is not severe enough to cause marked impairment in social or occupational functioning.

F – Episode is not attributable to the physiological effects of a substance or another medical condition.

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Pharmacologic, Biologic

Treatment of Bipolar Disorder [2]

Lithium
Serum 0.6-1.2 mEq/L
Avoid NSAIDS, dehydration
Monitor TSH, renal function

Valproic Acid
Serum 50-100 mcg/mL
Use caution with other AEDs
Monitor LFTs, platelets

Carbamazepine
Serum 7-12 mcg/mL
Autoinduction, drug-drug interactions
Monitor Na+ and WBC

Lamotrigine
Levels not typically monitored
Must titrate by schedule, to minimize risk of SJS
Monitor compliance

Antipsychotics
Mounting evidence in support of using neuroleptics as mood stabilizers, but increased risk in the elderly is problematic

Avoid Antidepressants
Risks with antidepressant monotherapy in the absence of mood stabilizers include mood destabilization

8

Depression & Mood Disorders

Depression

9

Morbidity [7,8]

Associated with cardiovascular disease, diabetes, treatment noncompliance, and dementia

Mortality [9]

Odds of dying may be up to 1.5-2.0 times higher in elderly with depression

Cost of Depression

Associated with increased care utilization costs and decreased chance of acute recovery [7]

In 2010 an estimated $44+ billion in direct costs were paid for individuals 50+ with MDD [10]

10

Diagnostic Criteria

Major Depressive Disorder [6]

A - Five or more of the following symptoms, present during a 2-week period, represent a change from previous level of function, and include at minimum (1) or (2)

1) Depressed mood most of the day, nearly every day, as indicated by either subjective report or observation
2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day
3) Significant weight loss when not dieting or weight gain, or decrease or increase in appetite nearly every day
4) Insomnia or hypersomnia nearly every day
5) Psychomotor agitation or retardation nearly every day
6) Fatigue or loss of energy nearly every day
7) Feelings of worthlessness or excessive or inappropriate guilt nearly every day
8) Diminished ability to think or concentrate, or indecisiveness, nearly every day
9) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B – Symptoms cause clinically significant distress or impairment in social, occupational, or other function

C – Episode not attributable to physiologic effect of a substance or another medical condition

11

Clinical Criteria

Endicott Substitution Criteria [15]

A - Five or more of the following symptoms, present during a 2-week period, represent a change from previous level of function, and include at minimum (1) or (2)

1) Tearfulness, fearfulness, or depressed appearance in face or body posture
2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day
3) Significant weight loss when not dieting or weight gain, or decrease or increase in appetite nearly every day
4) Social withdrawal or decreased talkativeness
5) Psychomotor agitation or retardation nearly every day
6) Brooding, self-pity, or pessimism
7) Feelings of worthlessness or excessive or inappropriate guilt nearly every day
8) Cannot be cheered up, doesn't smile, no response to good news or humorous situations
9) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B – Symptoms cause clinically significant distress or impairment in social, occupational, or other function

C – Episode not attributable to physiologic effect of a substance or another medical condition

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Distinguishing
Depression and (Pseudo)dementia [16]

There are no clear and consistent, diagnostic or pathognomonic criteria

PSEUDODEMENTIA	DEMENTIA
Onset may be dated with precision	Onset may be dated only with broad limits
Rapid progression of symptoms after onset	Insidious progression of symptoms throughout course
Patients usually complain of cognitive loss	Patient's cognitive complaint may be minimal
Complaints of dysfunction usually detailed	Complaint of dysfunction usually vague
Failures are highlighted	Accomplishment are highlighted
Nocturnal accentuation uncommon	Nocturnal accentuation common
Attention preserved	Attention may be faulty
"Don't know" answers typical	Near-miss answers typical
Marked variability	Consistently poor performance

Brief cognitive screening may be misleading, but full cognitive assessment can be diagnostic

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Clinical Diagnostic Pearls
Geriatric Depression [7, 8]

Diagnosis is complicated by characteristics of aging, comorbidities, polypharmacy, and other factors

- Psychomotor slowing and decreased energy may overlap with simple aging and medical illness
- Concentration deficits may overlap with neurocognitive impairment or disorders
- Simple aging may elicit thoughts of mortality, which can be mistaken for suicidal ideation

Certain characteristics may be more suggestive of depression in the elderly

- Hopelessness, worthlessness, and overt wish for death
- Cognitive nihilisms, subtle delusion, or paranoia
- Negative view of the past, present, self, and future which is different from baseline

Patient may endorse symptoms in different ways

- Affective symptoms are frequently denied or minimized
- Emotional evidence of mood disturbance may be missed
- Anxiety and anhedonia should raise suspicion
- Somatic complaints are common (headache, abdominal pain, etc.)

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Pharmacologic, Biologic
Treatment of Depression

SSRI **Selective Serotonin Reuptake Inhibitors**
Limit reabsorption of serotonin into the presynaptic cell

SNRI **Serotonin-Norepinephrine Reuptake Inhibitors**
Limit reabsorption of serotonin and norepinephrine into the presynaptic cell

AA **Atypical Antidepressants**
Various mechanisms of action different from traditional antidepressants.

TCA **Tricyclic Antidepressants**
Block serotonin and norepinephrine transporters

… **Stimulants, Augmentation, TMS, ECT**
Various mechanisms, typically best-managed by specialist

15

Pharmacologic, Biologic
Treatment of Depression

SSRI **Selective Serotonin Reuptake Inhibitors**
Limit reabsorption of serotonin into the presynaptic cell

- citalopram ⟹ Generally well-tolerated, but consider checking EKG
- escitalopram ⟹ Well-tolerated, starting dose same as maintenance dose
- ~~fluoxetine~~ ⟹ Activating effect, interacts with other medications
- ~~fluvoxamine~~ ⟹ Numerous interactions with other medications
- ~~paroxetine~~ ⟹ Significant anticholinergic effects
- sertraline ⟹ Generally well-tolerated, highest potential for GI effects

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Pharmacologic, Biologic
Treatment of Depression

SNRI **Serotonin-Norepinephrine Reuptake Inhibitors**
Limit reabsorption of serotonin and norepinephrine into the presynaptic cell

- svenlafaxine ⟹ Expensive, not well-covered by insurance
- oxetine ⟹ Generally well-tolerated, benefits for pain control
- venlafaxine ⟹ Well-tolerated, monitor for increase in DBP
- ~~levomilnacipran~~ ⟹ Highest NE:5HT ratio, quite expensive

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Pharmacologic, Biologic
Treatment of Depression

AA **Atypical Antidepressants**
Various mechanisms of action different from traditional antidepressants,

- bupropion ⟹ Well-tolerated, no sexual side effects, energizing
- mirtazapine ⟹ Well-tolerated, may improve sleep and appetite
- ~~nefazodone~~ ⟹ Risk of hepatic failure, reserve for specialist use
- ~~trazodone~~ ⟹ Monotherapy for depression requires high doses
- vortioxetine ⟹ Fewer sexual SE, weight gain, sedation; increased nausea

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Pharmacologic, Biologic
Treatment of Depression

- Avoid tertiary amine TCAs
  Amitriptyline, imipramine, doxepin
- If requiring a TCA, use a secondary amine
  Nortriptyline, desipramine
- Monitor for cardiac concerns
  BBB raises risk of symptomatic AV block

TCA **Tricyclic Antidepressants**
Block serotonin and norepinephrine transporters

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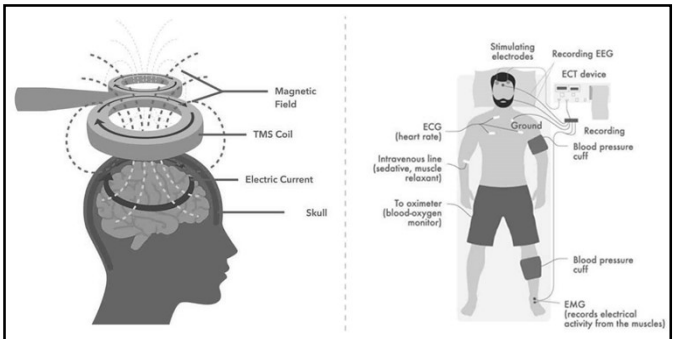

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Psychotherapeutic, non-pharmacologic
Treatment of Depression

CBT **Cognitive Behavioral Therapy**
Short-term, evidence-based treatment, with structured sessions and practical approach

MM **Meditation and Mindfulness**
Allotment of dedicated time to self-awareness and incorporation of present-mindedness

PD **Psychodynamic**

PA **Psychoanalytic**

… **ACT, IPT, PPT, and numerous others**

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Psychotherapeutic, non-pharmacologic

Treatment of Depression

CBT **Cognitive Behavioral Therapy**
Short-term, evidence-based treatment, with structured sessions and practical approach

- Most typically administered by MD, DO, PhD, LCSW, LMHC, etc.
- Evidence suggests that certain therapeutic programs are just as effective and demonstrate lasting effects when provided by supervised, non-expert lay providers [11]
- Highly structured, is effective in either individual or group formats

MM **Meditation and Mindfulness**
Attainment of dedicated time to self-awareness and incorporation of present-mindedness

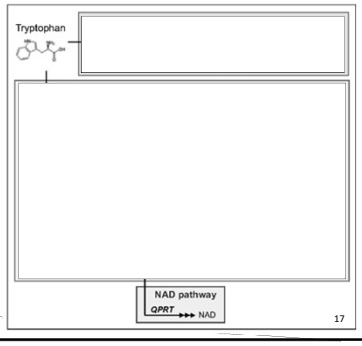
- Generally any member of the staff can be trained in relaxation, mindfulness skills, thereby making delivery to patients or residents seamless and comprehensive
- Formats often serve additional benefits to physical function (e.g. Tai chi)
- Effective in either individual or group formats

22

Medical and Psychiatric Overlap

Kynurenine Pathway

- Systemic inflammation inducing the production of proinflammatory cytokines in the brain
- Trytophan starvation
- Kynurenic acid NMDA antagonist
  Quinolinic acid NMDA agonist
- IFN-γ
  May promote microglial activation and downregulate astrocyte activity
- Th2, IL-4, IL-10
  May downregulate IDO, overproduce kynurenin, and cause psychosis



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Evolutionary and Psychiatric Overlap

Sickness Behavior [18]

- Some theorists argue neurovegetative symptoms of depression have been genetically selected
- **Exogenous advantages**
  - Reduces overall movement, conserving energy
  - Overall metabolic energy expended in fever rather than movement
  - Limits potential exposure to predation during periods of impairment
- **Endogenous advantages**
  - Lowered pain threshold ensures that injuries are not overlooked
  - Reduced grooming and respiration may reduce insensible water losses
  - Anorexia prevents continued ingestion of illness promoting substances
  - Anorexia may also reduce iron levels which are bioavailable during infection
- **Social advantages**
  - Limited mobility and social withdrawal prevents transmission of infection
  - Behavioral changes may signal health status to group members

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Anxiety Disorders

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Anxiety Disorders [12]

Prevalence in the US estimated to be 18%, up to 70% in people with chronic disease

Burden of Cost [12]

Contributed to an estimated 26.8 million disability-adjusted life years in 2010

Adverse Impacts [11]

Overall quality of life, sleep, health outcomes, and mortality are affected

Associations [11]

Consistent correlation with depression, lower perceived quality of life, pain, and lower perceived social support

26

Diagnostic Criteria

Generalized Anxiety Disorder [6]

A - Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities.

B – The individual finds it difficult to control the worry.

C – Anxiety and worry associated with 3+ of the following symptoms:

1) Restlessness or feeling keyed up or on edge.
2) Being easily fatigued.
3) Difficulty concentrating or mind going blank.
4) Irritability.
5) Muscle Tension.
6) Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep.

D, E, F – Cause clinically significant distress, not attributable to effects of substance or another medical condition, and not better explained by another mental disorder.

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Diagnostic Criteria
Panic Disorder [6]

A. Recurrent unexpected panic attacks (an abrupt surge of intense fear or intense discomfort that reaches a peak within minutes, and during which time four (or more) of the following symptoms occur:

1) Palpitations, pounding heart or accelerated heart rate
2) Sweating
3) Trembling or shaking
4) Sensations of shortness of breath or smothering
5) Feelings of choking
6) Chest pain or discomfort
7) Nausea or abdominal distress
8) Feeling dizzy, unsteady, light-headed, or faint
9) Chills or heat sensations
10) Paresthesia (numbness or tingling sensations)
11) Derealization (feelings of unreality) or depersonalization (detached from self)
12) Fear of losing control or "going crazy"
13) Fear of dying

B. At least one of the attacks has been followed by 1 month (or more) of one or both of the following

1) Persistent concern or worry about additional panic attacks and consequences
2) Significant maladaptive change in behavior due to panic attacks

C, D: Not attributable to effects of substance or another medical condition, and not better explained by another mental disorder.

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Clinical Diagnostic Pearls
Geriatric Anxiety Disorders [13]

Research has not supported a qualitatively different presentation based upon age of onset

The clinical evaluation should be customized to the population:

1) Use a broad array of terms: anxiety, concerns, nerves, think too much, fret
2) Give examples of worries and avoidance behaviors that are age-appropriate. Probe areas of health, finances, social support, perceived medical support, existential fears.
3) Don't ask whether worry is "excessive," but instead inquire whether friends or relatives believe the individual worries too much or whether description suggests high frequency or severity.
4) Note that depression and anxiety frequently coexist.
5) Be aware of the potential for co-occurring cognitive impairment, either as a direct consequence of the anxiety ("pseudodementia") or situations where anxiety may precede cognitive decline.

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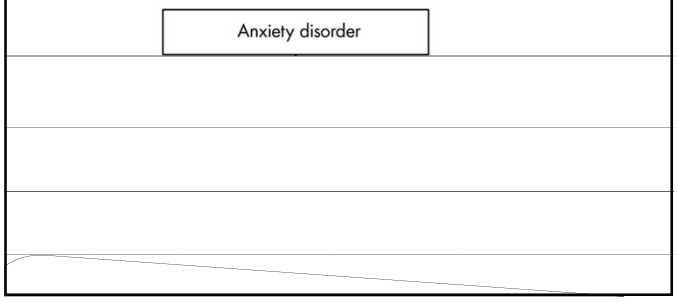
Most Common Iatrogenic Outcomes of
Unrecognized Anxiety [13]



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Pharmacologic, Biologic

Treatment of Anxiety

SSRI **Selective Serotonin Reuptake Inhibitors**
Limit reabsorption of serotonin into the presynaptic cell

SNRI **Serotonin-Norepinephrine Reuptake Inhibitors**
Limit reabsorption of serotonin and norepinephrine into the presynaptic cell

AA **Atypical Antidepressants**
Various mechanisms of action different from traditional antidepressants.

TCA **Tricyclic Antidepressants**
Block serotonin and norepinephrine transporters

... **Stimulants, Augmentation, ECT**
Various mechanisms, typically best-managed by specialist

31

Pharmacologic, Biologic

Treatment of Anxiety

SSRI **Selective Serotonin Reuptake Inhibitors**
Limit reabsorption of serotonin into the presynaptic cell

SNRI **Serotonin-Norepinephrine Reuptake Inhibitors**
Limit reabsorption of serotonin and norepinephrine into the presynaptic cell

5HT **Non-SSRI Serotonergic Agent**
Predominantly modulates specific serotonin receptor activity

AH **Antihistamines**
Utilizes sedation of histamine blockade to target anxiety

BZD **Benzodiazepines**
Positive modulation of GABAergic receptors

32

Pharmacologic, Biologic

Treatment of Anxiety/Depression

SSRI **Selective Serotonin Reuptake Inhibitors**
Limit reabsorption of serotonin into the presynaptic cell

- citalopram ⟹ Generally well-tolerated, but consider checking EKG
- escitalopram ⟹ Well-tolerated, starting dose same as maintenance dose
- ~~fluoxetine~~ ⟹ Numerous interactions with other medications
- ~~fluvoxamine~~ ⟹ Numerous interactions with other medications
- ~~paroxetine~~ ⟹ Significant anticholinergic effects
- sertraline ⟹ Generally well-tolerated, highest potential for GI effects

For anxiety… higher doses may be required

33

Pharmacologic, Biologic

Treatment of Depression/Anxiety

SNRI **Serotonin-Norepinephrine Reuptake Inhibitors**
Limit reabsorption of serotonin and norepinephrine into the presynaptic cell

- desvenlafaxine → Expensive, not well-covered by insurance
- duloxetine → Generally well-tolerated, benefits for pain control
- venlafaxine → Well-tolerated, monitor for increase in DBP
- ~~levomilnacipran~~ → Highest NE:5HT ratio, quite expensive

34

Pharmacologic, Biologic

Treatment of Anxiety

Buspirone

- Selective serotonin subtype 1A partial agonist
- Ve l-tolerated, generally safe in the elderly
- Ur ately requires BID–TID dosing
- Less efficacious in patients with history of benzodiazepine use for management of anxiety

5HT **Non-SSRI Serotonergic Agent**
Requires multiple daily dosing; modulates serotonin receptor activity

35

Pharmacologic, Biologic

Treatment of Anxiety

- Avoid in older or medically-complex patients
  Anticholinergic effects can be problematic
- If required, monitor closely for sedation, delirium
  hydroxyzine may be most common

AH **Antihistamines**
Utilizes sedation of histamine blockade to target anxiety

36

Pharmacologic, Biologic
Treatment of Anxiety

- Avoid in older, cognitively-impaired, or fall-risk
- Avoid with comorbid substance abuse

- If required, monitor closely for sedation, diversion
  Shorter-acting agents are preferred for use in the elderly when necessary, but longer-acting agents have fewer associations with rebound anxiety and lower risk of dependence and misuse

BZD **Benzodiazepines**
Positive modulation of GABAergic receptors

37

Psychotherapeutic, non-pharmacologic
Treatment of Anxiety

CBT **Cognitive Behavioral Therapy**
Short-term, evidence-based treatment, with structured sessions and practical approach

- Most typically administered by MD, PhD, LCSW, LMHC, etc.
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Allotment of dedicated time to self-awareness and incorporation of present-mindedness

- Generally any member of the staff can be trained in relaxation, mindfulness skills, thereby making delivery to patients or residents seamless and comprehensive
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- Effective in either individual or group formats

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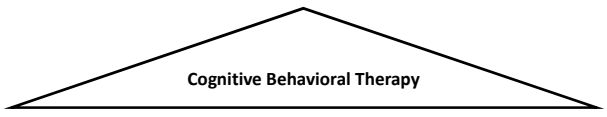
Thoughts **Behavior** **Feelings**



Cognitive Behavioral Therapy

- *Peaceful Living* is an example of CBT which has been modified to facilitate ease of delivery in various care scenarios [14]
- CBT for late-life GAD produces long-term improvements extending at least 12 months beyond treatment completion, also improving sleep and depression [11]

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Important Points in Managing Anxiety

Avoid

Benzodiazepines

- Lorazepam
- Alprazolam
- Clonazepam
- Chlordiazepoxide
- Temazepam

(where possible)

Avoid

Anticholinergics

- Diphenhydramine
- Doxylamine
- Hydroxyzine
- Dicyclomine
- Hyoscyamine
- Amitriptyline
- Doxepin

(where possible)

Assess

Contributors

- Sleep difficulties
- Chronic or acute pain
- Cardiac disease
- Underlying depression

- Environment
- Staffing
- Social support

40

(1.10) Prevalence estimates of depressive symptoms in LTC, using the MDS, is closest to which of the following?

A. 10%

B. 90%

C. 30%

D. 50%

41

(1.14) With what was Major Depression associated in the Longitudinal Aging Study Amsterdam?

A. Poorer self-perceived health

B. Increased social network

C. Married status

D. External locus of control

42

(5.2) When treating elderly depressed patients with SSRIs, which electrolyte disturbance is most common?

A. Potassium

B. Calcium

C. Sodium

D. Magnesium

43

(5.11) TCA use in the elderly has the potential to cause which of these cardiovascular effects?

A. Shortened PR and QRS intervals

B. Atrioventricular block

C. Decreased QT intervals

D. Sinoatrial block

44

(9.1) Which of the following medications is considered first line of treatment for mild to moderate forms of depression?

A. Bupropion

B. Trazodone

C. Citalopram

D. Nortriptyline

45

(9.3) Which of the following has proven to be the most robust predictor of late-life depression?

A. Religious involvement

B. Perceived social support

C. Personality pathology

D. Cognitive distortions

46

(10.12) An older patient with bipolar disorder who has been maintained on lithium for many years presented to the ED with lithium toxicity. Which of the following is the most likely cause?

A. The patient's lisinopril was discontinued

B. The patient's naproxen was increased

C. The patient's renal clearance increased with age

D. The patient's theophylline was increased

47

(12.2) What is the prevalence of anxiety disorders in the elderly?

A. The prevalence of late-life anxiety is currently unknown

B. All of the anxiety disorders are less common in older adults

C. If present, anxiety disorders are typically comorbid conditions stemming from depression and/or cognitive decline

D. Anxiety disorders are the most prevalent disorders in older adults

48

(23.4) Which of the following is the most studied psychotherapy modality for depression in older adults?

A. Psychodynamic psychotherapy
B. Interpersonal therapy
C. Cognitive-behavioral therapy
D. Problem-solving therapy

49

(25.2) Which of the following has NOT been shown to be associated with depression among LTC residents?

A. Diabetes
B. Increase in pain complaints
C. Risk of delirium
D. Unchanged nutritional status

50

(25.10) Which of the following is a component of the intrinsic system of mental health care in LTC?

A. Optimizing the ways staff and residents interact
B. Evaluating the interactions between medical and mental health problems
C. Establishing psychiatric diagnoses
D. Administering specific treatments for mental disorders

51

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Additional Resources:

- **Bipolar Disorder:** Article: *Bipolar Disorder in Long Term Care*
- **Depression** Article: *Late Life Depression Detection: An Evidence-Based Guideline*
- **Anxiety** Article: *Treatment of Anxiety Disorders*
  Article: *Pharmacological Management of Anxiety Disorders in the Elderly*

- **General**
  - Psychopharmacology Reference Table: Dr. John Bradley, Chief of Psychiatry MH Service VA Boston Healthcare System
  - Peaceful Living CBT Protocol Manual: Quijano, Calleo, Wetherell, and Stanley
  - Assessment tools for depression, anxiety
  - Relaxation exercises, mindfulness strategies

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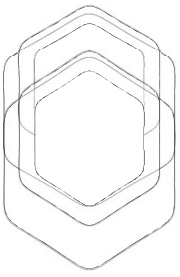

Thank you for your time

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