Depression in Medical Illness

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Disclosures

- **I have no relevant financial disclosures or conflicts of interests.**

Learning Objectives

1. Understand how depression impacts other medical conditions.
2. Learn strategies for diagnosing depression in patients with other co-morbid medical conditions.
3. Discuss principles for treating depression in medically ill patients with particular emphasis on medication management.
4. Learn about how better integration of behavioral health and primary care can improve outcomes.

Why does depression matter in medical settings?

- Depression is common – MDD lifetime prevalence of 17%.
  - 2-4% in the community, 5-10% in primary care, 6-14% medical inpatients.
  - Related to 10 percent of PCP visits
- Limited access to treatment.
- Medical patients and psychiatric patients are the same patients!

Why does depression matter in medical settings?

- MDD is associated with…
  - Medically unexplained symptoms.
  - Higher morbidity, delayed recovery, negative prognosis from medical illness.
- Higher health care utilization.
  - Longer inpatient length of stay.
  - Twofold increase in ED visits.
  - Up to 50 percent higher medical costs.
- Threefold increased risk of non-adherence.

What causes depression in medically ill patients?

- Depression increases in virtually all medical conditions in which it has been studied.
- Biological: physical effects of illness and treatment, medications, neurological involvement, genetic vulnerability, systemic inflammation, pain, proximity to death.
- Psychosocial: social support, attachment security, self-esteem, spirituality and religiosity.

How to diagnose depression in the medically ill?

- Complicated by interactions with physiological and psychological effects of medical illness/treatment.
- Major Depressive Disorder is NEVER an appropriate response to medical illness.
  - Dreaded complication of medical illness.
  - Source of excessive suffering.
  - Warrants clinical attention.

Are there alternative approaches?

- Exclusive approach - identifies most severely depressed patients, least sensitive
- Substitutive approach
  - Fearful or depressed appearance
  - Social withdrawal or decreased talkativeness
  - Brooding, self-pity, or pessimism
  - Mood that is not reactive (to good news)
- Inclusive approach – most sensitive and reliable

How can medical providers screen for depression?

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	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

How can medical providers screen for depression?

- **PHQ-9**
  - **Cutoff ≥ 10 has sensitivity and specificity of 0.88 for MDD.**
  - **Can be used to estimate severity and monitor response to treatment.**
  - **Cautions: Always check question 9!**
- **PHQ-2 – if score ≥ 3 then administer PHQ-9**
- **Remember to always talk to the patient.**

Depression Treatment Options

- Psychotherapy
  - Typically safe, improves coping skills, health behaviors.
  - Accessibility may be limited.
- Medications
  - All antidepressants are equally efficacious.
  - Adequate trial is 6 to 8 weeks.
  - Treatment is an iterative process:
    - Increase dose, augment, switch, wait.
- Neuromodulation – ECT, TMS

How to select antidepressants in medically ill patients?

- Drug-disease interactions
  - Psychiatric condition
  - Heart disease
  - Hepatic or renal impairment
  - CNS disease
- Drug-drug interactions

SSRIs

- Generally first-line due to safety and tolerability.
- Common side effects: GI distress, headache, nervousness, insomnia, sedation, sexual dysfunction.
- Rare side effects: SIADH, bleeding, increased suicidal ideation (age ≤ 24)
- Low anticholinergic burden.
- Sertraline, citalopram, escitalopram have lowest risk of cytochrome P450 interactions.
- Sertraline has best cardiac safety data.

SNRIs

- Helpful for chronic pain
- Worse discontinuation symptoms
- Venlafaxine, desvenlafaxine
  - Few cytochrome P450 interactions
  - Hypertension, nausea are common side effects
  - Effective for hot flashes
- Duloxetine
  - Chronic pain indication
  - Rare risk of transaminitis, hyperbilirubinemia

TCAs

- Effective analgesics in patients with chronic pain.
- Use limited by side effects
  - Anticholinergic side effects – dryness, confusion
  - Cardiac conduction effects – prolongs QRS and QTc
  - Orthostatic hypotension
  - Lethal in overdose
- Nortriptyline and desipramine are best tolerated.
- Lower doses needed for sleep and pain vs depression.

Other antidepressants

- Bupropion – acts on NE and DA
  - Activating, improves concentration, not associated w/ sexual dysfunction
  - Helps with tobacco cessation
  - Seizure risk, typically not helpful for anxiety
- Mirtazapine – indirectly increases NE and 5HT
  - Rapidly relieves anorexia, insomnia
  - Sedation and weight gain are common side effects
  - Not associated with sexual dysfunction
  - Few cytochrome P450 interactions

Side Effects – Best and Worst

- Weight gain
  - more common with TCAs, mirtazapine
  - Bupropion may decrease appetite
- Sedation
  - some TCAs, mirtazapine
  - Other antidepressants, especially bupropion can be activating
- Anticholinergic effects – TCAs, paroxetine
- Chronic pain – noradrenergic antidepressants (TCAs, SNRIs)

Side Effects – Best and Worst

- Arrhythmia risk
  - Greatest with TCAs
  - More QT-prolongation with citalopram, escitalopram compared to other SSRIs
  - Sertraline best studied in heart disease
- Orthostatic hypotension
  - Minimal risk with SSRIs
  - Highest risk with TCAs
- Sexual dysfunction – least associated with mirtazapine, bupropion

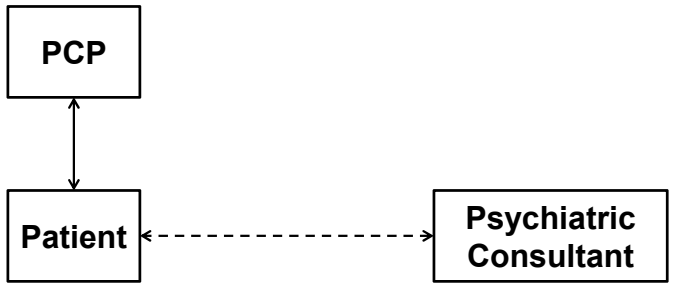
Drug-Drug Interactions

- CYP isoenzymes
- QT-prolongation
  - Particularly TCAs, citalopram, escitalopram
  - Macrolides, antiarrhythmic agents
- Serotonin toxicity
  - Caution with tramadol, fentanyl, methadone, meperidine
  - Caution with linezolid
- Bleeding risk

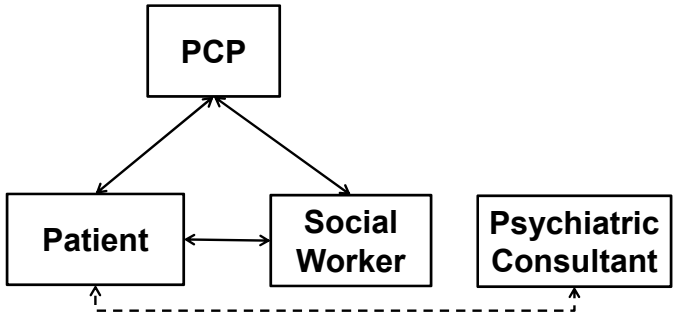
Can collaboration improve depression outcomes?

- Traditionally, behavioral health care has been isolated.
- Integrated care unites behavioral health and medical care.
- The Collaborative Care Model is the best studied model of integration.
  - Patient-centered, team-based care that is…
    - Evidence-based
    - Measurement-based
    - Population-based

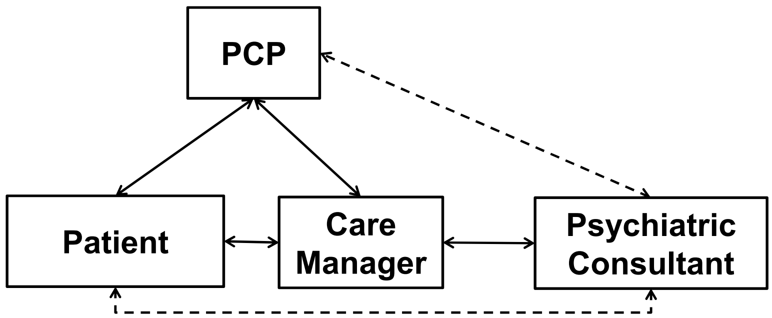
Traditional Care Team



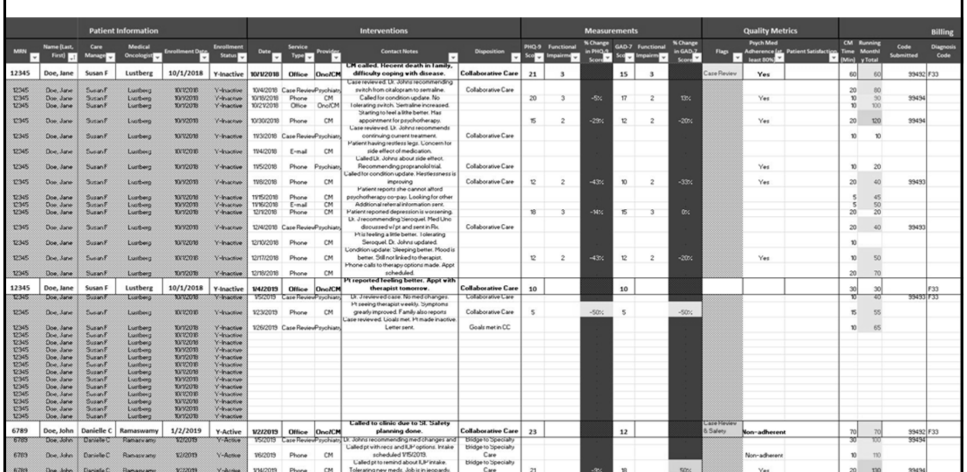
Integrated Behavioral Health Team



Collaborative Care Team



Population-Based Care



Collaborative Care Evidence

- IMPACT Trial – RCT of 18 primary care clinics in 5 states
  - 1801 patients 60 or older w/ MDD, dysthymia, or both randomly assigned to IMPACT (CoCM) or usual care for 12 months
  - 45% of CoCM patients responded compared to 19% in usual care.
  - 25% of CoCM patients remitted compared to 8% in usual care.
- >80 RCTs and multiple meta-analyses have shown CoCM to be more effective than usual care.
- Improved patient satisfaction, improved provider satisfaction, health care savings.

Funding Collaborative Care

- New CPT codes: 99492-99494.
  - Covers monthly care manager activities.
  - Billed under treating provider.
- CMS providing reimbursement starting January 2018.
- Private payers starting to participate.
- The AIMS Center - aims.uw.edu

Conclusions

- **Major depressive disorder is a devastating and costly complication of medical illness.**
- **Recognizing depression can facilitate medication and non-medication treatment options.**
- **Providers prescribing antidepressants should consider how they interact with co-morbid medical illnesses and other medications.**
- **Team-based, collaborative approaches can improve depression outcomes in primary care.**

Case 1

- **50 year old man with diabetes and heart failure**
- **Unkempt-appearing with poor eye contact**
- **Loss of interest in usual activities x 1 month**
- **Difficulty concentrating**
- **Increased sleep**
- **50 pound weight gain**
- **Resumed smoking**

Case 2

- 76 year old woman with idiopathic pulmonary fibrosis
- Life-expectancy of 3 – 5 years
- Losing weight
- Lack of motivation
- Poor sleep
- Feeling “blue”
- Feels guilty for disrupting family life due to using home oxygen

Case 3

- 58 year old woman with breast cancer and rib metastases
- Weight loss
- Cancer appears stable
- Loss of appetite
- Poor sleep
- Subjectively increased rib pain
- Flat affect
- Considering giving up on effective chemotherapy

Case 4

- 65 year old woman with heart failure and atrial fibrillation
- Treated with sotalol
- Frustrated by limitations imposed by heart disease
- 25 pound weight gain
- Binge eating
- Drinks 4-5 beers a day
- Suicidal ideation

Case 5

- 82 year old man
- Hypertension and diabetes
- Wife died a year ago
- Tearful and still feels a sense of loss
- Loss of appetite and weight loss
- Stopped going to church 6 months ago
- Insomnia

Case 6

- 30 year old woman with Crohn's disease
- Currently on azathioprine and infliximab
- Loss of appetite and weight loss
- Has a gun in the home
- Suicidal ideation