Depression Treatment in Primary Care: Role of the PHQ-9

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Disclosures

- Nothing to disclose

- Many people to thank as I borrowed slides from presentations over the years used with ICSI, AIMS, and here at Mayo.
MINNESOTA: COME FOR THE CULTURE
STAY BECAUSE YOUR CAR WON'T START
Why Depression Care is Important

- Prevalence rates are approximately 2.3–3.2% in men and 4.5–9.3% in women
  - Prevalence in primary care 10-13%

- Lifetime risk for developing an episode of 7–12% for men and 20–25% for women

- World-wide is the 4th most disabling medical condition, climbing to 2nd by 2020

- Primary care provides at least 50 – 90 % of care for depressed outpatients
The Burden of Depression

- Depressed adults have twice the annual health care costs as non-depressed.
- Under-treated condition.
  - only 46-57% of the 12 million cases in the United States are receiving treatment for major depression.
  - only 18-25% is adequately treated.
Challenges in primary care

- Limited time and competing priorities
- Limited follow-up -> early treatment dropout
- Staying on ineffective treatments for too long
- Limited access to mental health services
Importance of Common Metrics Such as PHQ-9 for Improved Communication

• Patient - Clinician
• Primary care - mental health specialty
• Aggregate data for quality improvement
Vital sign for depression?

• Hypertension – systolic blood pressure, diastolic blood pressure
• Diabetes – Hgb A1C
• Asthma – peak flow?
• Hyperlipidemia – LDL, HDL
• Depression – PHQ-9
  • Establishes that the patient is endorsing having the symptoms that fit with the diagnosis
Advantages of the PHQ-9

• Self-report, in person, by phone, on-line, interactive voice-response

• Multiple languages

• Multiple patient populations (elderly, those with medical problems, etc)

• Over 700 articles published on use of the tool in various settings.
  - Pinto-Meza A et al, Assessing depression in primary care with the PHQ-9: can it be carried out over the telephone? JGIM 2005 Aug;20(8):738-42.
STEP 1:
SCREENING
US Preventive Services Task Force, 2009

(We) recommend screening adults for depression when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up.

Questions arise –

• screen everyone?
• If not, screen which people?
Recognition

• Look for red flags and illnesses where depression is frequently co-morbid

• Red flags:
  • History of depression
  • Multiple unexplained somatic symptoms
  • Recent major stressor or loss
  • High healthcare utilizer
  • Chronic pain
  • Chronic illness(es)
  • Chief complaint of sleep disturbance, fatigue, appetite or weight change
  • Post partum
  • Domestic Violence
PHQ 2

• First two questions on the PHQ-9
  • Feeling down, depressed, or hopeless
  • Little interest or pleasure in doing things
    • Score each 0-3 based on frequency
  • Score ≥ 3 shown to provide
    • Sensitivity of 83%
    • Specificity of 92% for Major Depression

• Kroenke K et al, The Patient Health Questionnaire-2: Validity of a Two-Item Depression Screener, Medical Care: November 2003 – Vol 41(11); 1284-1292.
Alternative examples of PHQ-9 implementation

**Screen everyone**
- PHQ-2 verbally as they are being roomed or on the phone
- PHQ-9 when positive
  - Need a plan to handle positives
- Danger of over treating patients with temporary mood symptoms
- Challenge of burnout on the forms for frequent patients
- Still need another system to follow patients

**Support provider identification**
- Incentive to get a PHQ-9
  - Care coordinator will take this patient off your hands
- Make it easy to give a PHQ-9 in current practice
  - Paper, electronic version
- Create system to follow any score ≥ 10
- Add extra screening for vulnerable patients
  - Post-partum women
Assessment and Monitoring: PHQ-9

- Systematic tracking of symptoms
- Quick and easy to administer
- Assists in treatment modification
- Simply DSM criteria
PHQ-9 broken down…

- Diagnosis of Major depression
  - 5 or more of 9 symptoms
  - Present for ‘more than half the days’ in the past 2 weeks
  - One of these symptoms is depressed mood or anhedonia

- Item 9 – pay attention to suicidality
  - May not indicate immediate suicidal risk but could represent a vulnerability
AAFP/APA/ACP Initiative to Improve Depression Care

a. Do Psychiatrists Find PHQ-9 Scores Valuable In Their Practice?

b. What % of Treatment Decisions are Altered Based on PHQ-9 Score

Duffy, Psychiatric Services 2008
Helpfulness of PHQ-9 in Psychiatric Treatment Decisions
n = 6096 Patient Contacts

• PHQ-9 was helpful in Tx decisions 93%

• How did PHQ-9 influence Tx?
  • Change Tx 40%
  • Confirm Tx 60%

Duffy, Psychiatric Services 2008
STEP 2: DIAGNOSIS
PHQ 9 and Major Depression

- Major depression is diagnosed if
  - 5 or more of the 9 depressive symptom criteria have been present at least “more than half the days” in the past 2 weeks, and
  - 1 of the symptoms is depressed mood or anhedonia.

- One of the 9 symptom criteria (“thoughts that you would be better off dead or of hurting yourself in some way”) counts if present at all, regardless of duration.
### Guideline for Using the PHQ-9 for Initial Management

<table>
<thead>
<tr>
<th>Score/Symptom Level</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 No depression</td>
<td></td>
</tr>
<tr>
<td>5-9 Minimal</td>
<td></td>
</tr>
<tr>
<td>10-14 Mild</td>
<td></td>
</tr>
<tr>
<td>15-19 Moderate</td>
<td></td>
</tr>
<tr>
<td>20-27 Severe</td>
<td></td>
</tr>
</tbody>
</table>
PHQ-9 scores ≥ 10

- Sensitivity of 88% and a Specificity of 88% for Major Depressive Disorder.
  - Sensitivity – how well does this test pick up or miss people who have depression?
  - Specificity – how well does the test distinguish true depression from something similar?

- Metanalysis of cut-off scores for diagnosing depression with PHQ-9
  - For detecting Major Depression, suggest cut-off scores between 8-11.

Using the cut-off score of 10 in different settings

### Table 2: Pooled estimates of the sensitivity, specificity, positive and negative likelihood ratios and diagnostic odds ratios of the brief Patient Health Questionnaire (PHQ-9) for diagnosing major depressive disorder, by setting

<table>
<thead>
<tr>
<th>Setting</th>
<th>No. of studies</th>
<th>No. of patients</th>
<th>Sensitivity (95% CI)</th>
<th>Specificity (95% CI)</th>
<th>Positive likelihood ratio (95% CI)</th>
<th>Negative likelihood ratio (95% CI)</th>
<th>Diagnostic odds ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care</td>
<td>6</td>
<td>1994</td>
<td>0.89 (0.66–0.97)</td>
<td>0.88 (0.80–0.93)</td>
<td>7.56 (3.93–14.55)</td>
<td>0.11 (0.02–0.45)</td>
<td>65.26 (9.17–464.47)</td>
</tr>
<tr>
<td>Hospital</td>
<td>5</td>
<td>1730</td>
<td>0.74 (0.55–0.86)</td>
<td>0.89 (0.87–0.91)</td>
<td>7.29 (5.68–9.37)</td>
<td>0.28 (0.15–0.52)</td>
<td>25.43 (11.35–57.00)</td>
</tr>
</tbody>
</table>

Note: CI = confidence interval.

- Diagnostic odds ratio - ratio of the odds of the test being positive if the subject has a disease relative to the odds of the test being positive if the subject does not have the disease.

- Manea L, Gilbody S, McMillan D (2012). Optimal cut-off score for diagnosing depression with the Patient Health Questionnaire (PHQ-9); a meta-analysis. CMAJ, Feb 21, 2012, 184(3); 191-196.
Setting can be important

- Pooling all settings
  - Cut off score of 11 had best sensitivity (0.89) and specificity (0.89) combination
- Cut off score of 10
  - False negatives possible in the hospital setting
  - False positives may be seen in primary care
Depression Diagnostic Codes

- 296.2x
  - Major Depressive Disorder, Single Episode
  - **First episode of major depression**
- 296.3x
  - Major Depression Disorder, Recurrent Episode
  - **Second episode of major depression**
- 300.4
  - Dysthymic Disorder
  - Depressed mood for most of the day, for more days than not, as indicated either by subjective account or observation by others, for at least 2 years
STEP 3: TREATMENT
Treatment Goals

- Remission of symptoms (PHQ-9 <5)
- Return to previous level of function
- Patient satisfaction
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<td><strong>Consider other diagnoses</strong></td>
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</table>
| 5-9 Minimal         | - Consider other diagnoses  
                     - **If diagnosis is depression, watchful waiting is appropriate initial management** |
| 10-14 Mild          | - **Consider watchful waiting**  
                     - Consider function score when deciding whether to treat  
                     - If active treatment is needed, medication or psychotherapy is equally effective; |
| 15-19 Moderate      | - Active treatment with medication or psychotherapy is recommended  
                     - **Medication or psychotherapy is equally effective** |
| 20-27 Severe        | - **Medication treatment is recommended**  
                     - For many people, psychotherapy is useful as an additional treatment  
                     - People with severe symptoms often benefit from consultation with a psychiatrist |
Evidence-based treatments

- Antidepressants
  - Response in 4-8 weeks at effective doses

- Psychotherapy
  - Cognitive Behavioral Therapy (CBT)
    - 8-12 sessions
  - Others
    - IPT (Interpersonal therapy)
    - Mindfulness training

- Behavioral activation
  - More powerful than you think and helps with depression and medical illnesses
“Of course you feel great. These things are loaded with antidepressants.”
Why use antidepressants?

- Effective in 70% of patients with major depression (eventually)
- Effective in 4-12 weeks
- Evidence shows reduced relapses of those who stay on antidepressants
  - Also those getting CBT have fewer episodes
- Depression is a chronic illness
  - Returns 50% of the time after 1 episode
  - More frequently with each episode.
Antidepressant Adherence Message for your patients…

Key messages:

- Take medication daily
- Wait 2-4 weeks for effect
- Side effects can occur, but often resolve in 1-2 weeks
- Keep taking medication even if better
- Check with MD before stopping
- Not addicting

Lin EH. *Med Care*. 1995; 33:67
Resources

• A video example is available at the AIMS center of a patient getting a PHQ-9 initially and on follow up
  • http://uwaims.org/tools/phq.html
Questions?