Depression Screening- Why is it important for the Indian health system?

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Overview

- Epidemiology
- Etiology
- Morbidity
  - Quality of life
  - Effect on other illnesses
- Recent changes in USPSTF screening
- Primary care intervention
- Screening tools

Epidemiology

In general US population:

(National Comorbidity Survey Replication, 2005)

Condition	12-month prevalence
Major Depressive Disorder	6.7%
Dysthymic Disorder	1.5%
Bipolar Disorder (I and II)	2.6%
Total	10.8%

- Lifetime prevalence approximately double 12-month prevalence
- Females have about double the rate of depression as males

AI/AN Epidemiology

- No comprehensive epidemiologic studies in AI/AN studies
- Existing data discrepant

AI/AN Epidemiology

- One study in two large tribes which was meant to replicate the NCS-R methodology found 12-month prevalence of MDD a little lower: 5.5-6.0% (Beals, Manson, Whitesell, et. al., Am J Psychiatry. 2005, 162:1713-1722)

- Another large study, which was had alcohol misuse as its focus , showed a rate higher for MDD than national average at 8.9% (Hasin, Goodwin, Stinson, Grant, Arch Gen Psychiatry. 2005, 62:1097-1105)

Etiology

- Frequently conceptualized via a stress – diathesis model
- Depression is the prototypical bio-psychosocial disease

Etiology - Genetics

- First degree relative of probands about twice as likely to develop depression
- Twin studies have demonstrated a difference of transmission between monozygotic and dizygotic twins of about 40%
- Considered moderately heritable compared to other mental health conditions (e.g. autistic spectrum disorders 75%, bipolar 65%)

Etiology- pathophysiology

- "Monoamine hypothesis" (1960-70s)
- Dysregulation of hypothalamic-pituitary-adrenal (HPA) axis (1970-80s)
- Other chemical messengers (e.g. Brain-derived Neurotrophic Factor (BDNF) (2000s)
- Genetic linkage studies implicating differential risk with serotonin transporter polymorphisms (2000s)

Etiology - psychological

- Neuroticism, i.e., the tendency for perfectionism, rumination and self-consciousness appears to be inherited along with depression
- Cognitive style, with distortions such as catastrophizing, dichotomous thinking, misattribution of causality
- External locus of control and learned helplessness

Etiology - environmental

- The Adverse Childhood Experience (ACE) study demonstrated the following correlation between # of categories ACE and adult depression risk (categories incl physical, emotional, sexual abuse, witness to violence, and mental illness, substance abuse or incarceration of parent):

Number of ACEs	Odds Ratio
1	1.5
2	2.4
3	2.6
4	4.6

Source: Felliti et. al, Am J Prev Med. 1998; 14 (4): 245-258

Diagnosis-
Major Depressive Disorder

- It is diagnosed based on symptoms, no diagnostic tests available to diagnose

1. Must have either sad/ angry mood, or
2. Loss of interest in pleasurable things,

<u>and</u> 4 of the following, most of the day for two weeks:

3. Sleep disturbance
4. Appetite disturbance
5. Energy level disturbance
6. Concentration/ memory disturbance
7. Feelings of hopelessness/ worthlessness
8. Psychomotor retardation or activation
9. Suicidal thoughts

- Above signs and symptoms along with functional impairment

Diagnosis-
other depressive disorders

- Dysthymic disorder- milder, but more chronic than major depressive disorder

- Bipolar disorder- Most cases have major depressive symptoms, plus symptoms of mania

Impact of depression on patient

- Depression is the **2nd** leading cause of disability in industrialized countries

- Depression associated with:
  - **2x** increased risk of death all causes
  - **10-20x** increased risk of suicide
  - About 4% of depressed individuals eventually commit suicide

- Impaired social functioning

Impact on healthcare system and economy

- Depressed patients visit primary care provider **3x** more than non-depressed patients
- **2-5x** increase in days absent from work
- Cost of depression in US over **$45 billion annually**

Impact of depression on chronic medical illness

Common co-morbidities

- Depression occurs in a third of individuals with other medical conditions
- Occurs in 50% individuals with cardiac, renal, Parkinson's, post-stroke, chronic pain, and rheumatoid arthritis illnesses

Complicates management of common conditions

- Amplification of symptoms in depressed patients of conditions to include hepatits C, inflammatory bowel, CAD, diabetes, chronic pain

- Depressed patients found to have worse self care and adherence to medical treatment including poor diet, exercise and medication compliance

(Katon, Ciechanowski, J Psychosom Research. 2002; 53: 859-863)

Impact of depression on diabetes

- Depressed patients less compliant with treatment regimens (non-compliance double)

- Diabetic patients with depression have higher HbA1Cs

- Diabetic complications and mortality more frequent in depressed patients. One recent study showed the following outcomes in a 5 year follow-up of depressed diabetics:
  - 36% increase in microvascular complications
  - 24% increase in macrovascular complications

    Lin et. al., Diabetes Care. 2010; 33 (2): 264-269

Impact of depression on coronary artery disease

- Depression 3x more frequent in post-MI patients
- Depressed patients at double the risk of adverse cardiac events 1-2 years post-MI
- Mechanism suggested include increased HR variability, HPA dysfunction, increased platelet activation, impaired vascular function, increased CRP, and increase fibrinogen levels

  (Lichtman et. al., Circulation. 2008; 118: 1768-75)

Effect of depression treatment on medical illness outcome

- RCTs demonstrating improvement in outcomes with treatment of depressed CAD patients have been inconclusive (some trending, but none with statistical significance)

- Recent RCT in depressed diabetics showed statistically significant improvement ($p<0.001$) in HBA1C in those randomized to sertraline= -2.0; vs placebo= -0.9 (Echeverry et. al., Diabetes Care. 2009; 32 (12), 2156-60)

- Improvement in secondary measures such as self care have been demonstrated

- Routine screening of diabetic and cardiac patients for depression recommended by ADA and AHA, respectively

Recent Changes in United States Preventive Services Task Force (USPSTF) Recommendations

- The USPSTF recommends screening adults for depression when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up.
  Grade: B recommendation

- The USPTF recommends against routinely screening adults for depression when staff-assisted depression care supports are not in place. There may be considerations that support screening for depression in an individual patient.
  Grade: C recommendation

- The USPSTF recommends screening of adolescents (12-18 years of age) for major depressive disorder (MDD) when systems are in place to ensure accurate diagnosis, psychotherapy (cognitive-behavioral or interpersonal), and follow-up.
  Grade: B recommendation

Practical primary care management

- The salience of staff assisted depression care means a minimum of close follow-up. Multidisciplinary management is best (nurse case manager, and/or behavioral health). Plus psychoed and cognitive therapy even better
- For adults treated with medication, should have close follow-up (2 and 4 weeks) for treatment-emergent side effects and efficacy.
- USPSTF states no harm from screening

Depression Tx in Primary Care

- Depression- Doing something is almost always more therapeutic than doing nothing
- Spontaneous remission rate of depressive episode is 15-20% over 10 weeks (1) compared with 55-60% for pharmacotherapy in PC setting (2)
- Interestingly, in anti-depressant trials, placebo cases do better than wait list controls. The healing determinant of placebo effect is likely the recognition and validation of the problem, and the perception of receiving help

1. Posternak MA and Miller I, 2001, Untreated short-term course of major depression: a meta-analysis of outcomes from studies using wait-list groups, Journal of Affective Disorders, Volume 66, Issues 2-3, October 2001, P139-144
2. Robinson DW, et. al., 2005, Depression Treatment in Primary Care, Journal of the American Board Family Medicine, 18(2):79-86

Combined therapy for depression

- Combined therapy (meds and talk therapy) generally has an effectiveness rate of 75-80% in primary care setting, compared with 55% for meds only

Adolescent depression treatment

- In 2004, FDA required "black box" warning for all antidepressants regarding increased suicidal ideation in adolescents

- AACAP/APA recommend that adolescents treated with medication, should have close follow-up for treatment-emergent suicidal ideation, once per week for 4 weeks, then biweekly for the next 4 weeks. Referral for psychotherapy is highly recommended, especially in the younger adolescent

- Strongly recommend medications FDA-approved for depression treatment in this age group, i.e. fluoxetine or escitalopram

Depression Treatment tips for primary care

Meds

- Patient non-compliance part of variance between medication response rate in primary care 55%, and psychiatric clinics 75%
- Good informed consent and follow-up within two weeks can mitigate much non-compliance, appointment specifically for depression preferable
- Medication should be given adequate trial, i.e. 6 weeks before trying another med

Therapy

- Therapy doesn't have to be complicated. Non-judgmental, client-enabled problem solving can go a long way (brief supportive therapy)
- Therapeutic alliance is one of main determinants of improvement from psychotherapy
- Expectation of health and patient possessing locus of control
- Large amounts of literature are available for bibliotherapy (good for motivated patients)

Screening and Diagnosis

- Depression is difficult to diagnose in primary care and often goes undetected:
  - depressed mood typically not presenting complaint
  - competing demands (acute and chronic illnesses)
  - limited resources and time
- Screening improves detection

Screening tools

- Choice of tool up to the clinician

- Strongly recommended that evidence-based tools be used

Recommended tool

- PHQ2 or PHQ9
  - Evidence based
  - Very brief
- Derived from the PRIME-MD
- PHQ2 has sensitivity of 83% and specificity of 92% using a cut-off of 3, on 0-6 scale

PHQ-2 Scaled Version

Over the last two weeks, how often have you been bothered by any of the following problems?

- Feeling down, depressed or hopeless
  - Not at all Value: 0
  - Several days Value: 1
  - More than half the days Value: 2
  - Nearly every day Value: 3

- Little interest or pleasure in doing things
  - Not at all Value: 0
  - Several days Value: 1
  - More than half the days Value: 2
  - Nearly every day Value: 3

- Total PHQ-2 score possible: Range: 0-6

PHQ-2 Scaled Version Scores and the exam code

- 0 – 2 = Negative

  Depression Screening Exam Code Result: NEGATIVE

- 3 – 6 = Positive; further evaluation is indicated

  Depression Screening Exam Code Result: POSITIVE

Documenting Screening in RPMS

- Exam Code #36 provides best evidence of intentional screening and captures the screening *result*

- CRS will currently accept:
  - Diagnosis– Including ICD-9, IHS-specific POVs
  - Patient education no longer counted as positive

Documenting PHQ-2 Screening (paper PCC)

- Indicate result of screen
  - Positive or Negative
  - Recommended to document name of tool used (PHQ-2)
    - Can capture this in COMMENT section of Exam Code

- PCC documentation should include actions taken (PHQ-9 results, treatment, referral, etc.) in response to a Positive PHQ-2 screen

Documenting Depression Screening in EHR

Travel Time 0 (minutes)

Reproductive LMP=03/25/2003; Contraceptive Method=Surgical Streilization

Health Factors Add Edit Delete

Visit Date	Health Factor	Category	Comment
06/04/1999	Non-tobacco User	Tobacco	
12/12/2003	Current Smoker	Tobacco	

Immunization Forecast

Contraindications Add

Add Exam

Exam: DEPRESSION SCREENING

Result: NEGATIVE

Comment: PHQ-2 negative

Provider: PROVIDER,GENERIC

Add Cancel

Education Show Standard Add

Visit Date	Education Topic	Con
07/21/2004	Tobacco Use-Quit	PO
07/21/2004	Tobacco Use-Lifestyle Adaptations	PO
07/21/2004	Medications-Information	FAI
12/12/2003	Wellness-Screening	GO
07/22/2003	Medications-Information	FAIR
07/21/2003	Womens Health-Pap Smear	GOOD

Volume	Inj. Site	Lot	VIS Date
		968370	
		1525W	
		0802A	

Exams Add Edit Delete

Visit Date	Exams	Result	Comments	Provider	Location
05/10/2000	BREAST EXAM				DEMO IN
10/30/1998	BREAST EXAM				DEMO IN
10/30/1998	PELVIC EXAM				DEMO IN

Visit Date	Skin Test	Location	Age@Visit	Result	Reading	Read Date	Reading Provider
12/05/2003	PPD	Demo Indian Hospital	38 yrs	Pending	0		
09/27/2002	PPD	Demo Indian Hospital	37 yrs	Pending	0		
12/11/2001	PPD	Demo Indian Hospital	36 yrs	Pending	0		
12/15/2000	PPD	Demo Indian Hospital	35 yrs	Pending	0		
03/08/2000	PPD	Demo Indian Hospital	34 yrs	Pending	0		
12/15/1998	PPD	Demo Indian Hospital	33 yrs	Pending	0		
04/13/1998	PPD	Demo Indian Hospital	33 yrs	Pending	0		
09/04/1997	PPD	Demo Indian Hospital	32 yrs	Pending	0		
03/20/1997	PPD	Demo Indian Hospital	31 yrs	No Take		03/20/97	
07/24/1996	PPD	Demo Indian Hospital	31 yrs	No Take		07/24/96	
02/26/1996	PPD	Demo Indian Hospital	30 yrs	Negative	0	02/28/96	

Notifications | Cover Sheet | Prob/POV | Services | Notes | Orders | Medications | Labs | Wellness | D/C Summ | Reports | Consults | BH

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Depression Screening Measure

- Definition: "Address the proportion of adults ages 18 and over who are screened for depression"

- Target: During GY10, achieve a 53% screening rate (9% over last years performance of 44%). CAO able to negotiate target of 42% (which is 2% above last years CAO performance of 40%)

- California Area GY 2010 Q3 performance currently 31%, whereas GY2009 Q3 was 30% (11% improvement needed between now and June 30)

Depression Screening Measure Logic

- Numerator: Patients screened for depression during reports period or diagnosed with mood disorder
- Denominator: Active clinical patients over 18

Summary

- Depression causes significant morbidity and mortality and complicates the management of other common conditions seen in primary care
- Many cases of depression can be effectively managed in the primary care setting
- Depression screening important part of good primary care