Mental Health in Primary Care – Update March 2006

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Objectives

At the end of this session, attendees will be able to:

- Describe common mental health disorders present in the primary care setting.
- List methods of identification and treatment for at least 2 common mental health disorders.
- Describe the components of effective systems for delivering care to primary care patients with mental health conditions.

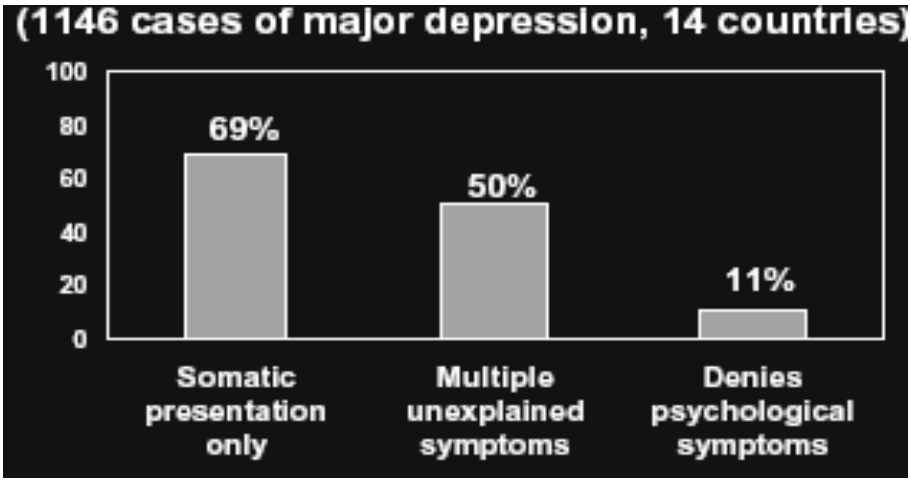
Common MH Disorders in 1^{o} Care

Rates vary depending on study source & population	Prevalence estimates	
	1 year	Lifetime
Major Depression	5-10%	15-20%
Dysthymia	3-5%	5 - 15%
Bipolar Disorder	1 -2%	1 – 4%
GAD	3 - 4%	5% - 7%
Panic Disorder	1 - 2%	2 - 13%
PTSD	2 – 4 %	10% (F), 5% (M)
Substance abuse	10-15%	14 – 24%

MDD in Primary Care

- Up to 82% with medical comorbidity
- >50% with psychiatric comorbidity, >1/3 w/3
  - Klinkman MS, J Clin Psychiatry 2003;64(supp 2):19-23.

Depression in Primary Care Presents Somatically



Simon G et al

Somatic presentation of MDD

- Associated w/ lower rates of MDD detection & treatment
  - Bridges KW, J Psychosom Res 1985
  - Susman JL, Arch Fam Med 1995
  - Freeling P, Br Med J 1985
- Many of these patients with MDD will acknowledge psychological sxs if asked
  - Williams JWJ, Am J Med 1999
  - Simon GE, N Engl J Med 1999

Somatic Symptoms & MDD Treatment

- 601 randomized MDD patient, 37 practices, tx w/ SSRIs for 9 months. 79% completion.
- 14 physical sxs: most common fatigue, sleep probs, HA, nausea, back pain
- Mood sxs improved throughout study
- Px sxs improved initially w/ plateau at 1 mo.

  – ARTIST Study. Greco T et al. J Gen Intern Med 2004;19:813-18.

MDD Response Rates

In RCTs and other controlled trials:

- 50-60% respond to the 1st antidepressant
- 60-70% response to antidepressants
- 50-70% response to psychotherapy
- In the 'best' circumstances, 30% may be resistant or refractory

MDD Response Rates in Primary Care

In the primary care clinical setting:

- Up to 46% may be non-responders
- An additional 32% may be partial responders

- Corey-Lisle PK; Arch Int Med 2004;164:1197-1204

Screen all adults?

- USPSTF: Screen all adults for MDD (B recommendation)
- NNT = 110-160

Identification Tools (selected)

- DSM-IV Criteria (DIGSPACES)
- Beck Depression Inventory (BDI)
- Center for Epidemiologic Studies Depression Scale (CES-D)
- Depression Arkansas Scale (D-ARK)
- Patient Health Questionnaire (PHQ-9)
- Primary Care Mental Disorders (Prime-MD)**
- Zung Self-Rating Depression Scale (SDS)
  - ** multiple modules for other diseases

MDD Criteria (DSM-IV):

2 or more weeks of:

- **D**epressed mood*
- **I**nterest loss*
- **G**uilt
- **S**leep Disturbance
- **P**sychomotor retard./agit.
  - * must include 1 or these
- **A**ppetite Changes
- **C**oncentration Difficulty
- Energy Decrease
- **S**uicidal

Screening instruments in primary care: screen all adults

- 8% prevalence of MDD in adult 1^{o} care
- 80% sens. (20% FN)
- 75% spec. (25% FP)
- 2000 adults/ practice:
- Miss 32 MDD
- 588 screen +, 78% FP (22% PPV)

	160 pts. +MDD	**1840 pts. - MDD**
Test +	**TP 128**	**FP 460**
Test -	**FN 32**	**TN 1380**

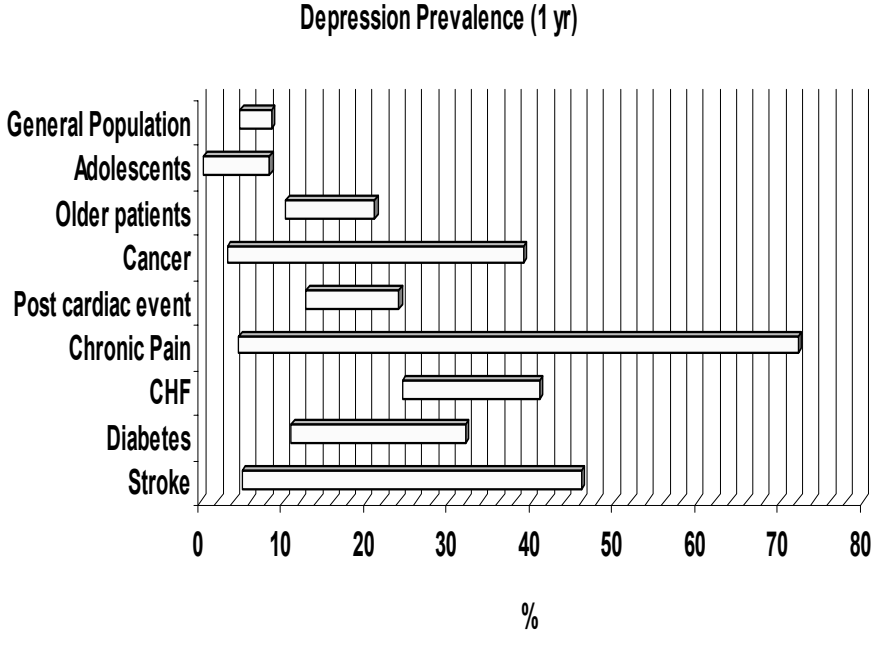
2 Question Screener

- **During the past month, have you often been bothered by feeling down, depressed, or hopeless?**
- **During the past month, have you often been bothered by little interest or pleasure in doing things?**
- Sensitivity 0.96 (4% false -) written, .97 oral
- Specificity 0.57 (43% false +) written, .67 oral

2 Question Screener in Primary Care: Screen All Adults

- 8% prevalence of MDD in adult 1^{o} care
- 2 question screen: 4% FN, 43% FP
- 2000 adults/ practice:
- Miss 6 MDD
- 945 screen +, 84 % FP (16% PPV)

	160 pts. +MDD	**1840 pts. - MDD**
Test +	**TP 154**	**FP 791**
Test -	**FN 6**	**TN 1049**



Screen high risk populations in primary care: diabetes

- 2000 adults/ practice:
- 6% prev. DM (NHANES)
- 20% prev. MDD in DM
- 3 question screen: 4% FN, 11% FP
- Miss 1 MDD
- 34 screen +, 32 % FP (68% PPV)

	24 DM adults +MDD	**96 DM adults - MDD**
Test +	**TP 23**	**FP 11**
Test -	**FN 1**	**TN 85**

Denial (not just a river in Egypt)

- Elderly patients who attribute depression to "normal aging" had a 4.3x greater odds than those attribute depression to illness to **not** believe discussing depression with a physician is important.
  - Sarkisian CA et al. JGIM Dec. 2003 (cross sectional study)

Screening -- other considerations

- Patients with PH of MDD
  - 50% recurrence after 1st episode
  - 70% recurrence after 2nd episode
  - 90% recurrence after 3rd episode

Physical Symptom Counts

# Symptoms	% Depression	% Anxiety
0-1	2	1
2-3	12	7
4-5	23	13
6-8	44	30
9+	60	48

- Kroenke et al, Arch Fam Med, 1994

Unexplained Physical Symptoms

	Depression	Anxiety
Abd. pain	63%	53%
Chest pain	66%	49%
Dizziness	58%	52%
SOB	63%	46%
Headache	53%	46%
Back pain	54%	46%

- Kroenke et al, Arch Fam Med, 1994, Am J Med 1997

Psychotherapy or Antidepressants?

- **For most outpatient primary care MDD patients, meds & psychotherapy are =**
  - Small + benefit combined treatment in mild to moderate MDD, but ? if worth added resources
- Combined is better in <u>severe, chronic, persistent, or recurrent MDD</u>
  - Combined tx vs. meds alone after 12 wks: non-responder dropouts (NNT=16) & sx improvement (NNT=20)

Shared Decision Making
No On-Site Mental Health

IM		FP
42%	Psychotherapy	49%
44%	Meds alone	42%
7%	Both	6%
7%	No tx	3%

Kaiser Colorado Data, Westminster Facility, 1999-2000

Shared Decision Making

Wells, et al, 2000

- 1200 primary care patients, 46 clinics across US
- 83% wanted tx for depression
- 67% of these preferred counseling over medications

If Meds, Which One?

- All meds are = effective
  - No consistent systematic evidence that dual action agents are clinically superior to single action agents
    - BMJ Clinical Evidence
    - Hansen et al Ann Int Med 2005;143:415-26) (systematic review of head-head trials of newer antidepressants)

If Meds, Which One?

- SSRIs better 6-12 wk. continuation than std. dose TCAs (NNT 20-33)
  - Caution, but naturalistic studies suggest similar long term differences as well

If Meds, Which One?

- Low dose TCAs (75-100 mg) may be effective
  - 35 studies (2013 pts) low dose TCA vs. placebo, 6 studies (551 pts) low vs. std dose TCA
  - Low dose = standard dose efficacy
  - Drop out rates higher in standard dose group
  - Variation in study quality & dx criteria
    - Furukawa T. Cochrane Database Syst Rev 2003;3:CD 003197

Cost of antidepressants

$	Fluoxetine
$	Desipramine
$	Nortriptyline
$ $	Mirtazapine (generic)
$ $$	Bupropion immediate release
$ $$$	Citalopram
$ $$$	Paroxetine (generic)
$ $$$$	Sertraline (generic in 2006)
$ $$$$	Bupropion XR, Venlafaxine, Escitalopram,
$ $$$$	Duloxetine

If Meds, Which One? Consider:

- Side effects
- Cost
- Suicidality
- Previous response

Antidepressant Non-adherence

- Stopping for side effects without follow-up
- Most patients who d/c SSRIs early do not recall being told to continue to take them even after feeling better!
    - S. Bull et al, JAMA, 2002

Enhance Antidepressant Adherence (adapted from Lin, et al)

- Take medication as prescribed.
- Antidepressants must be taken for 2 - 6 weeks to see a noticeable effect on depressive symptoms.
- Take your medication even after you feel better or else your depression can quickly come back.

Enhance Antidepressant Adherence (adapted from Lin, et al)

- Antidepressants must be taken for a minimum of 7 to 15 months.
- Most side-effects resolve w/in a few weeks. Call if you have concerns or or you can't tolerate them.
- Don't stop medication w/o checking w/ your PCP or a prescribing clinician.

John Doe Kaiser #123456789

November 15, 2002

Fluoxetine 10 mg #60

Sig: 2 po qd for major depression. Keep taking this medication even when you feel better, until <7-15 months>. Call before stopping.

David Price, MD

Refills # 6

St. John's Wort

- Not effective in moderate - severe MDD
- + evidence for "mild depression", but
  - poor quality studies (many pts. w/minor dep.)
  - ? standardization of OTC product
  - other available effective std txs
  - drug interactions
- Similar for SAM-e, though no drug reactions identified

Case

28 yo M with difficulty concentrating at his job as a middle manager (which he attributes to job stress), depressed mood, trouble staying asleep, & decreased appetite & energy. Reports loss of interest in sex with his wife of 3 years, has been staying out late at night instead.

Depression and Alcohol Abuse

- Alcohol abuse + dependence: 14%
  12- month/40% lifetime MDD prevalence
- Alcohol use disorder increases depression risk 2-4X
- Depression increases risk of alcohol misuse up to 4X

Treatment for Co-morbid Depression + Substance Abuse

- Substance elimination & abstinence
- Consider MDD if depressive symptoms persist 4 weeks after substance discontinued (expert opinion)
- ?Antidepressants?
  - fluoxetine, sertraline, imipramine, desipramine

Antidepressants for Co-morbid Depression + Substance Abuse

- Few small (lower quality) RCTs
- Most short term
- Varying outcome definitions
- Mixed effects on alcohol outcomes
- Overall minor effects on depression
  - mild some short term improvement in symptoms
  - little data on remission rates

Antidepressants for Co-morbid Depression + Substance Abuse

Intervention	Enrolled/ completed	Depression Improvement	Alcohol outcomes
Fluoxetine vs placebo,	N = 51/46 12 wks	-6 vs -2 point change in HAM-D	Fluox <50% # drinking days/ < 33% # drinks; 28% vs 15% abstain. (ns)
Desipramine vs placebo,	N = 71/16 6 months	82% vs 22% w/50% ↓ or HAM-D<10	8% vs 40% relapse rates (ns)

Antidepressants for Co-morbid Depression + Substance Abuse

Intervention	Enrolled/ completed	Depression Improvement	Alcohol outcomes
Imipramine + relapse prev psychotx vs placebo	N = 69/35 12 weeks	48% vs 31% w/50% ↓ or HAM-D; 37% vs. 28% depression remission (both NS)	Abstinant last week 44% vs. 22%; abstinance last 4 wks 31% vs 21% (NS
		Global response (depression + alcohol) 52% vs 21% for completers (P<.05)	
Sertraline + CBT vs. CBT + placebo	N = 82/57 12 wks	84% vs 70% w/50% ↓ in HAM-D (ns); 2.4 pt ↓ mean HAM-D & BDI in ♀ w/sertraline (sig)	2.3 vs 3.5 drinks per day (p<.05), no difference in abstinence or time to relapse

Case

25 yo F w/ongoing emotional “flatness”. Tx’d for depression w/ fluoxetine 20mg/d in 1997, got a little better, but stopped after 3 mo. when failed to further improve. Sad ever since then. Stared paroxetine 10 mg/d last month. Continues to be sad, w/ restless sleep, low energy, increased appetite, & 10 pound wt. gain over the last 1-2 months. Parents divorced in 1996; feels guilt about losing contact w/father. Function OK at work (accounting), but doesn’t want to socialize as much as she used to.

Dysthymia

- Depressed mood almost everyday for at least 2 years + 2 or more of:
- Poor Appetite
- Insomnia/hypersomnia
- Low energy/fatigue
- Low self esteem
- Poor concentration
- Feelings of hopelessness

Double depression

- MDD + dysthymia
- More difficult to treat
  - Consider referral to mental health

Dysthymia: Antidepressant Treatment

- Antidepressants effective vs. placebo (NNT=4 for 50% improvement) @ 4-12 wks.
  - DeLima MS. Cochrane Database Syst Rev 2000:4; CD001130.
- TCAs = SSRIs = MAOIs
  - DeLima MS. Cochrane Database Syst Rev 2003:3; CD00404.

Dysthymia: Psychotherapy vs. Wait List

- CBT ? (no syst. reviews)
- PST not effective alone (Clin Evid v11)

Dysthymia: Medication vs. Psychotherapy

- Paroxetine vs. PST-PC: dysthymia remission
- 11 wks treatment; 4 sites
- 4-6 visits PST-PC
- Paroxetine 10-40 mg/d
- Overall p = NS
- Response varied by site
  - Williams JW et al. JAMA 2000;284:1519-26.

Placebo	40.3%
PST-PC	50.8%
Paroxetine	45.6%

Dysthymia: Combination treatment

- Sertraline + IPT (58%) = sertraline (60%) > IPT (47%) at 6 mo.
  - p=0.02, NNT with drug = 8-9
  - 40% improvement in symptoms over 6 mo.
  - Low response threshhold favors drug tx
  - Pharma funded
    - Browne G et al. J Affect Dis 2002;68:317-330.

Case

53 yo M account executive w/sleeplessness & "stress". Worry about work stress for several months, now stressed about things at home. Depressed mood, decreased appetite, poor self-esteem, fatigue, trouble concentrating, & irritability. Intermittent epigastric discomfort; wonders if needs a refill on raniditine used in past for GERD. Had 1 prior episode of successfully treated MDD; off meds for 3 yrs.

Anxiety and Panic

- Up to 20% of primary care MDD patients meet criteria for panic disorder
- Up to 60% of primary care patients with MDD meet criteria for generalized anxiety disorder
- 36% 1 year and 40% lifetime prevalence of MDD in patients with anxiety disorders

Anxiety and Panic

- 50% of cases of depression and anxiety in primary care occur in the same patient at the same time
  - Sartorius, Brit J Psych, 1996

GAD

- Excessive worry > 6 months
- Several events or activities
- Not from substance, somatization
- Tends to recur

GAD -- “SCRIMF”

3 of:

- **S**leep disturbance*
- **C**oncentration difficulty*
- **R**estlessness
- **I**rritability
- **M**uscle tension
- Fatigue*

Tools to Identify Patients with GAD

- Zung Anxiety Scale
- Hamilton Anxiety Scale
- Prime-MD

Mixed-anxiety depression

- Treat the depression!

GAD Treatment – Likely Beneficial

BMJ Clinical Evidence v 13, 2005

- Cognitive behavioral tx
- Antidepressants (short term)
  - Paroxetine, imipramine, venlafaxine
  - May need higher antidepressant doses
- Hydroxyzine 50mg/d !! -- likely benefit
- Buspirone

GAD Treatment –

Trade off b/t benefit and harm

- Benzodiazepines likely work
- ?Kava
  - Short term benefit (4 wks)
  - ?longer term risk of hepatotoxicity
- Trifluoperazine

GAD Treatment –
Unknown effectiveness

- Beta-blockers
- Combining meds + therapy
- Abecarnil
- Applied relaxation

Case

21 yo M w/ 6 wk hx insomnia, racing thoughts, increased appetite, and trouble concentrating on his studies. Depressed & guilty b/c his grades aren't what he feels they should be. Soon to graduate & hasn't yet lined up a job. Friends think he's been irritable for the last few months. Several brief sexual encounters in the last year. Isn't suicidal. Mother & father both tx'd for depression & he was tx'd for depression w/ fluoxetine for 9 months during high school.

"DIGFAST" for Bipolar

Discrete periods > 1 week, 3 of

- **D**istractability
- **I**ndiscretion/**I**rritability
- **G**randiosity
- **F**light of ideas
- **A**gitation/**A**ctivity
- **S**leep (decreased need)/**S**peech
- **T**alkativeness/ **T**houghtlessness

Bipolar disorder

- 1-2% prevalence
- M=F, but F more likely to present with depression and cycle rapidly
- Peak age onset 15-19, 6-10% onset age >60
- 73% recurrence within 5 yrs (most w/in 2 yrs)
- 2/3 pts have multiple relapses
- Avg. 8 year delay before correct diagnosis

Bipolar disorder

- 35-50% have suicidal ideation
- Up to 20% successfully complete suicide
- 46% have co-morbid EtOH abuse
- 41% have co-morbid drug abuse

Bipolar vs. anxiety

- Some symptom overlap
- Mania usually euphoric
  - exception: irritability
- Anxiety by definition is dysphoric

Tools to diagnose bipolar disorder

- Clinical suspicion
- Mood Disorder Questionnaire (MDQ)
  - Low sensitivity (28% general screening in primary care; 58% in patients already on antidepressants), high specificity
- Behavioral health evaluation

Bipolar treatment – Mania

Clinical Evidence, v13, 2005

Beneficial	• Lithium • Olanzapine	• Valproate
Likely beneficial	• Carbamazepine • Clonazepam	• Haloperidol • Resperidone •Ziprasidone
Unknown	• Chlorpromazine • Quietiapine •Topiramate	•Lamotrigine •Gabapentin

Bipolar treatment – Depression

Clinical Evidence, v13, 2005

Likely Beneficial	•Antidepressants •Lamotrigine
Unknown (no RCTs)	• Carbamazepine • Lithium • Valproate • Psychologic treatments • Topirimate

Bipolar treatment – Depression

- Olanzepine/fluoxetine FDA approved
- Lithium + lamotrigine (APA guideline for mild/moderate episodes)
- ?Olanzepine alone (1 small RCT)
- Antidepressants alone not recommended due to risk of cycling (?? TCAs, venlafaxine >bupropion, SSRIs)

Bipolar treatment – Recurrence Prevention Clinical Evidence, v13, 2005

Beneficial	• Lithium	
Likely beneficial	• Carbamazepine • Patient education (sx recognition) • CBT	• Lamotrigine (depression) • Valproate
Unknown	• Antidepressants	• Family psycoeducation

Bipolar Depressed Patients & Antidepressant D/C

(After Successful Treatment)

	D/C w/in 6 mo	Cont. >12 mo	NNT
Depressive relapse	70%	24%	2.2
Mania relapse	29%	5%	4.2

- No differences based on #/type of mood stabilizer (small n = 84)
  - Altshuler L et al. Am J Psych 2003;160:1252-62.

Case

43 yo F teacher seen several times in last 3 mos. for stress related to divorce. Both teenage sons intermittent trouble w/school attendance & drug use, ex-husband not supportive. Has been depressed, poor self-esteem, guilt about her parenting skills & her marriage. Gained 15 pounds in last 3 mos. Trouble falling asleep & getting up in AM. In last 6 weeks has hot flashes, palpitations, & “sudden anxiety” that often occur while she is teaching. Marginally improved with fluoxetine 20 mg in the AM.

Panic Disorder

- Intense, discrete periods, peak within 10 min., last 60-90 min.
- Not due to substance, other disorder
- With or without agoraphobia
- Tends to relapse/recur

Panic Disorder

4 symptoms:

- palpitations, chest pain, SOB
- shaky, paresthesias, dizzy
- abdominal pain, nausea, choking
- chills/hot flushes
- loss of control, de-realization, fear of going crazy

Tools to Identify Patients with Panic Disorder

- 2 question screener
  - In the past 6 mo, did you ever have a spell or attack when all of the sudden you felt frightened, anxious, or very uneasy?
  - In the past 6 mo, did you ever have a spell or attack when for no reason your heart suddenly began to race, you felt faint, or you couldn't catch your breath?
- Prime-MD
- Panic disorder severity scale

Panic– Beneficial Treatment

Clinical Evidence, v13, 2005

- Antidepressants: SSRIs, TCAs (imipramine)
  - Start low, may initially increase panic
  - Bupropion can be agitating

Panic–Treatment

Clinical Evidence, v13, 2005

- Trade off between benefits and harms
  - Short term benzos (regularly, not “PRN”)
- Unknown effectiveness
  - Buspirone
  - MAOIs

CBT (Care Manager) + Antidepressants for Panic

NNT vs. usual care (Rx alone)	3 mo	6 mo	12 mo
Remission	12.5	10	7.5
Improvement	5	4	3

- No change in medication adherence! (only about 30% overall)
  - Roy-Byrne P et al. Arch Gen Psych 2005;62:290-98.

Case

40 yo M w/ hx paroxysmal a-fib controlled on atenolol. C/o difficulty concentrating, decreased self-esteem, loss of appetite, & loss of interest in previously enjoyable sports. Teenage daughter's (from previous marriage) trouble with his 2nd wife of 3 yrs. Current marriage supportive. Falls asleep easily, but awakens suddenly at 2 AM, usually after nightmares, & can't fall back asleep. Fatigued but attributes to poor sleep. Nightmares started 6 mos. ago after father died. Has avoided his mother since the funeral. Hx of addiction to speed, but has not used since 1991.

PTSD

- Threatening event
- Response fear, helplessness
- At least one month of:
  - Re-experiencing
  - Avoidance of triggers/detatchment
  - Arousal: poor sleep, irritable, anger, hypervigilant, startle

PTSD

- **D**etachment
- **R**e-experiencing
- **E**motional Impact
- **A**rousal
- **M**onth in duration
- **S**ympathetic hyperreactivity

PTSD

- Not just veterans
  - DV, sexual abuse, MVA, fires, etc.
- PTSD prevalence 1-12%, F > M
- PTSS -- not full criteria, but may be highly distressed
- High utilizers
- 60-90% have psych comorbidity

Tools to Identify Patients with PTSD

- Prime-MD
- PTSD checklist
- SPAN (Startle, Psychological arousal, Anger, Numbness) scale
- CAPS (Clinician Administered PTSD scale)

PTSD

- May see incomplete response if depression alone treated
- Psychotherapy usually indicated (multiple session)

PTSD Treatment
Clinical Evidence v13, 2005

Effective

- CBT
- EMDR

Likely beneficial

- SSRIs (fluoxetine, sertraline, paroxetine)
  - few studies

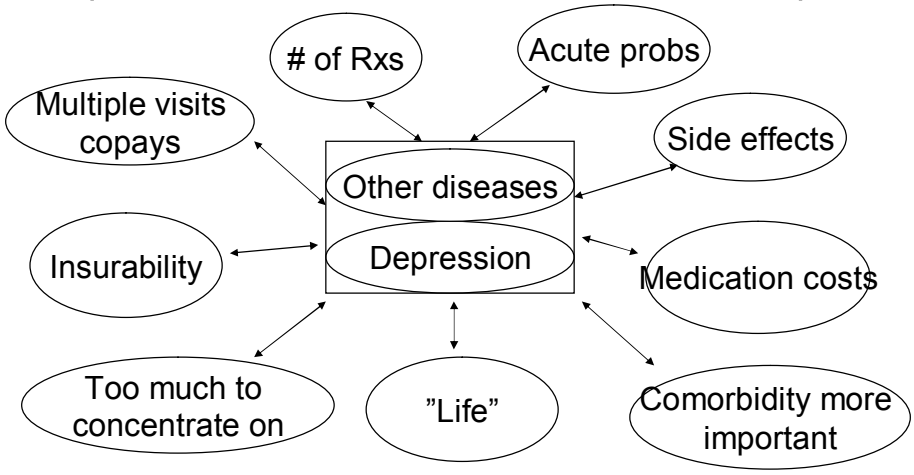
PTSD – Unknown Effectiveness Clinical Evidence v13, 2005

- Benzodiazepines
- Carbamazepine
- Group Therapy
- Hypnosis
- Internet-based psychotherapy
- Lamotrigine
- Mirtazepine
- Nefazodone
- Olanzepine
- Propranolol
- Risperidone
- Supportive tx
- TCAs

Other co-morbidities to think about

- Personality disorders
- OCD

Competing Demands & Co-morbidities (from our patients' perspective)



Price, D

Competing Demands & Co-morbidities (from our perspective)

Kroenke, K

Care Pathways Increase Effectiveness of Treatment

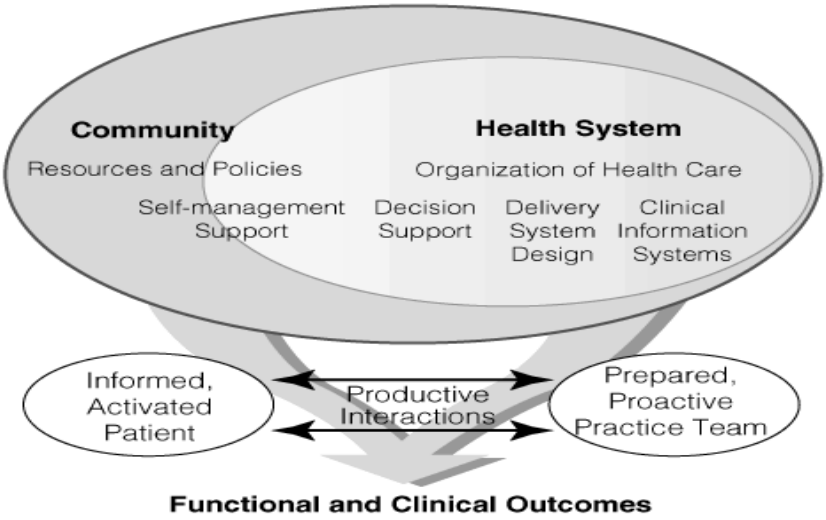
Effectiveness Studies of Depression in Primary Care

	Tx Guidelines	Case ID/ Screening	Patient Educ	Physician Educ	Tracking Systems	Tx Coord.	MH Spec.	Effective
Schulberg	+	+	+	+	+	+	++++	Yes
Mynors-Wallis	+	+	+	+	+	+	+++	Yes
Katon	+	+	+	+	+	+	++	Yes
Katzelnick	+	+	+	+	+	+	++	Yes
Rost	+	+	+	+	+	+	+/-	Yes
Hunkeler	+	+	+	+	+	+	+/-	Yes
Simon	+	+	+	+	+	+	-	Yes
Simon	+	+	+	+	+	-	-	No
Callahan	+	+	+	+	-	-	-	No
Goldberg	+	+	+	-	-	-	-	No
Dowrick	+	+	-	-	-	-	-	No

Simon GE

The Care Model

Wagner EH. Eff Clin Pract 1998;1:2-4



Care Model (Wagner et al) & Depression Treatment

- Delivery System Redesign
  - Care managers, team roles, proactive f/u, planned visits
- Self Management Support
    - Pt ed/activation, self management tools
- Decision Support
  - G/Ls, prompts, expert consultation

Care Model (Wagner et al) & Depression Treatment

- Clinical Information Systems & Registries
- Community Resources
- Health Care Organization
  - Leadership support, involved providers, system approach to improvement

Care Model & Depression Treatment

- 33 fair-good quality controlled depression studies (32 outpatient)
- 19 studies 0-6 months, 2 studies > 12 mo.
- 7 studies < 100 pts, 13 studies > 200 pts
- 13 studies 1 intervention, 7 w/2, 8 w/3, 5 w/4
  - Most studied delivery system design, self management support, decision support
    - Tsai et al. Am J Man Care 2005:11:478-88.

Care Model & Depression Treatment

- All interventions with some improvement in:
  - Depression sx scores
  - Depression remission
  - # pts receiving antidepressants
  - improved QOL (SF-36 MH scale)
- Small effect size

Care Model & Chronic Condition Tx

Tsai et al. Am J Man Care 2005:11:478-88.

- Delivery redesign, info systems, & self mgmnt support assoc. w/ ↑ processes & outcomes
  - Decision support w/ process improvement only
- Too few studies on health care org. or community resources to judge their relative effect
- No single element seemed to be essential
- ? is the required intensity of each element