Depression And Diabetes
A Visit To & From The Dark Side

Lawrence Fisher, Ph.D., ABPP
Department of Family & Community Medicine
University of California, San Francisco
This presentation is part of a library of presentations within the American Diabetes Association Academy
The American Diabetes Association Academy is supported by an unrestricted educational grant from Novo Nordisk, Inc.
Disclosures

No conflicts of interest.
OH GRANDPA....YOU'VE TOLD US ABOUT THE GREAT DEPRESSION A THOUSAND TIMES!!
# Prevalence of Depression in Diabetes

Meta-analysis of 42 studies with 21,351 patients. ~Double the risk of depression in PWD.

<table>
<thead>
<tr>
<th>Study subsets</th>
<th>Nondiabetic subjects</th>
<th>Diabetic subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Studies</td>
<td>11.4%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Type 1</td>
<td>8.6%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Type 2</td>
<td>6.4%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Male</td>
<td>9.3%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Female</td>
<td>16.3%</td>
<td>24.3%</td>
</tr>
<tr>
<td>Community</td>
<td>12.7%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Clinic</td>
<td>15.1%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Diagnostic Interview</td>
<td>5.0%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Self-report</td>
<td>14.4%</td>
<td>26.1%</td>
</tr>
</tbody>
</table>

Impact of Depression

- Poorer self-care & medication adherence
- Higher risk for obesity, sedentary lifestyle, smoking
- Greater risk for complications
- Higher health care service utilization
- Higher health care costs
- Decreased quality of life.

Confusion & Inconsistency

- Results vary significantly from study to study.
- Results vary significantly across different groups of patients.
- Results vary significantly across settings and measures.

What does a critical and comprehensive review of the literature tell us about depression & diabetes?
True/False:

1. The prevalence of depression among those with diabetes is high.
2. Depression is linked with diabetes management and A1C.
3. Reducing depression improves management and glycemic control.
Three Common Sense Questions

1. **Depression is highly prevalent among adults with diabetes.**

   - Depression is elevated only among those diagnosed, not among those with undiagnosed diabetes; among non-diagnosed, no higher than in other chronic diseases.
   - Depression elevated primarily among those on burdensome treatment regimens and among those with complications.

Nouwen, et al., 2011; Golden, et al., 2008; Mezuk, et al., 2013; Pan et al., 2010; West et al., 2008; Pouwer, et al., 2003.
1. Depression is highly prevalent among adults with diabetes.

Rates of current MDD in controlled research:

- Type 2 adults (CIDI): 3.6%
- Type 1 adults (PHQ8): 4.6%
- Type 1 adults (SCID): 3.5%
- Community (PHQ8): 4.1%

Trief, et al., 2014; Fisher, et al., 2010; Fisher, et al., 2015; CDC, 2014
Three Common Sense Questions

1. Depression is highly prevalent among adults with diabetes.
   - Prevalence is not uniform among patient groups and may reflect the burden of treatment, advancing disease or both.
   - Similar to other demanding chronic diseases.
   - The prevalence rates are not high relative to community standards.

**ANSWER: FALSE—AN OVERGENERALIZATION!!**
(counter to our general assumptions)
Three Common Sense Questions

2. Depression leads to poor diabetes management and poor glycemic control (mortality, higher costs, etc.).

• No associations found when gold-standard measures of depression are used (e.g., SCID, CIDI).

• Associations with affective variables are found when probable cases of clinical depression are excluded from analyses.

Three Common Sense Questions

2. Depression leads to poor diabetes management and poor glycemic control.

Some aspects of affective status (emotions) may be related to management, but not clinical depression *per se* when using gold-standard measures.

**ANSWER: FALSE!!**

*(counter to our general assumptions)*
Three Common Sense Questions

3. Treating depression successfully leads to improved diabetes outcomes.

- Reducing depression has no consistent effect on diabetes management or glycemic control.
- Improving glycemic control has no consistent effect on depression.
- Meta-analytic review: “… treatment of depression does not necessarily translate into improving glycemic control.” (van der Feltz, et al., 2010)

Williams, et al., 2004; Lin, et al., 2006.
Three Common Sense Questions

3. Treating depression successfully leads to improved diabetes outcomes.

• No direct evidence to support this statement.

ANSWER: FALSE!!
(counter to our general assumptions)
What might explain the lack of validation about what we might expect the relationship between diabetes and depression to be?
Why all the confusion? Two Kinds Of Imprecision!

1. How we define “depression”
2. How we measure “depression”
Problems Of Definition

- Descriptive
- Elevated depressive symptoms
- Major Depressive Disorder (MDD)
Problems Of Definition

9 DSM criteria for diagnosis of Major Depressive Disorder (MDD):

Persistence of at least 5 of 9 symptoms over at least two weeks.

- Depressed mood or irritability*
- Decreased interest or pleasure in activities*
- Change in weight or appetite
- Insomnia or hypersomnia

Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. American Psychiatric Association; 1994
Major Depressive Disorder (MDD)

9 Criteria for diagnosis (con’t):

- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness, guilt
- Inability to concentrate
- Thoughts of death or suicide

Presence of 5 of 9 = diagnosis of MDD - a major psychiatric disorder
Three Problems Of Definition

- Exclusively symptom based – does not imply etiology or disease process, and does not direct choices among treatment.
- Unanchored with respect to source or context (diabetes - hyperglycemia).
- Does not account for the heterogeneity of symptoms among patients who receive the same diagnosis (improved reliability at the expense of validity).

All problematic when applied to those with diabetes (e.g., symptoms of hyperglycemia).
Ways Depression Has Been Measured:

- Gold standard, structured clinical interviews based on DSM criteria: SCID, CIDI, MINI.
- Diagnoses recorded in clinical data bases (no validation).
- Symptom self-report scales NOT based on DSM criteria: CES-D, BDI.
Problems Of Measurement

• Each yields different prevalence rates (3.5%-48%) and associations with other variables.
• High rates of false positives among self-report scales (44%-77%). ACCORD = 54% false positives.
• Include items reflecting symptoms of hyperglycemia.
• Patients endorse depression items based on stressful diabetes experiences (contamination).

Summary

• Depression is defined and measured in very different ways in different studies – yet they all claim to assess ‘depression.’
• Very few studies use gold-standard measures of depression linked to diagnostic criteria (proxies).
• Most studies use self-report measures with high rates of false positives.
• Contamination due to context (diabetes).

Where do we go from here?
A Paradigm Shift!

“What’s that boy?! A paradigm shift?!”
An Alternative

- Instead of looking at things through the lens of “depression”
- Let’s look at things through the lens of “the emotional side of diabetes.”
An Alternative:
The Emotional Side Of DM

- Having DM is tough!!
- Managing DM is stressful!!
- There is lots to worry about:
  - Knowing that you have a chronic, progressive disease
  - Worrying about the possibility of complications
  - Persistent self-management demands & burdens
  - Health costs and access
  - Lack of support in managing diabetes
An Alternative: The Emotional Side Of DM

- Maybe the elevated emotional distress that many patients report is not “depression,” but the understandable distress that is related to their DM?

- “Diabetes Distress” (DD)

- **Definition:** DD refers to the expected worries, burdens, concerns, fears, and threats that are associated with struggling with a demanding and progressive chronic disease, its management, threats of complications, loss of functioning, etc..
An Alternative: The Emotional Side Of DM

- DD reflects a broader range of affective experience than MDD (9 potential symptoms).

- **Anchored**: focuses on an emotional experience (distress) linked to the specific situational contexts that produced it (diabetes): implies etiology, context and source, it directs intervention.

- Distress is viewed as an *expected* response to a health threat: does not imply psychopathology, is not viewed as a co-morbid disorder or condition.

  No stigma, *a return from the dark side!*
Three T/F Statements

1. The prevalence of diabetes distress among those with diabetes is high.

1. Diabetes distress is linked with diabetes management and A1C.

3. Reducing diabetes distress improves management and glycemic control.

Three T/F Statements

1. The prevalence of diabetes distress among those with diabetes is high.
   True! 42% – 44%

2. Diabetes distress is linked with diabetes management and A1C.

3. Reducing diabetes distress improves management and glycemic control.

Diabetes Care. 2012; 35: 259-264
Three T/F Statements

1. The prevalence of *diabetes distress* among those with diabetes is high. **True! 42% – 44%**

2. *Diabetes distress* is linked with diabetes management and A1C. **True!**

3. Reducing *diabetes distress* improves management and glycemic control.

Three T/F Statements

1. The prevalence of *diabetes distress* among those with diabetes is high.  
   **True! 42% – 44%**

2. *Diabetes distress* is linked with diabetes management and A1C.  
   **True!**

3. Reducing *diabetes distress* improves management and glycemic control.  
   **True and True!**

*Diabetes Care.* 2012; 35: 259-264
A Simple But Different Conversation

Have a conversation about how they are feeling about their DM; what is upsetting, scary and worrisome.
Conversation Starters

- Include an assessment of the emotional side of DM as part of ongoing care – *use it as a conversation starter.*

- Include a discussion of attitudes, expectations, mood, general and diabetes-related worries, fears, resources, etc. *e.g., What about your diabetes is driving you crazy? What else is going on in your life?*
How??

- Diabetes Distress Scale (17 items, 4 subscales)
- T1-Diabetes Distress Scale (28 items, 7 subscales)
- Problem Areas In Diabetes (PAID)
- PHQ9 (for depression symptoms only, correlation with DDS ≈ .60)

Polonsky et al. *Diabetes Care* 2005: 28; 626-631
When??

- Every visit!!!
- Shortly after diagnosis
- New or change in complications
- New or change in medications
- During hospitalization
- New care provider
- When patient raises concerns with
  - Glucose control
  - Quality of life
  - Self-management

Standards of Medical Care in Diabetes. *Diabetes Care* 2015; 38 (Suppl. 1): S1-S93
How ??

Have a personal, empathic conversation about the emotional side of diabetes.
How ??

- Active listening skills
- Talk less than 50% of the time
- Ask open-ended questions
- Summarize and reflect feelings, worries and concerns
- Label and re-label using feeling words
- Normalize frequently- this is to be expected
- Do not educate, problem solve, “fix”. 
A Return From The Dark Side

Thanks For Listening:
Questions, Comments