Measurement-based Care in Psychiatry: Why Measures Matter!

Whitney E. Black, MD, Assistant Professor
David Nagarkatti-Gude, MD, PhD, PGY-3
Disclosures

• We have no financial relationships to disclose.

• We will be discussing implementation of a commercial product, Owl Insights.
Objectives

• Define measurement-based care (MBC)
• Explain evidence-supported benefits for implementing MBC in mental healthcare
• Discuss potential gains from collection of data via MBC
• Explore implementation of MBC at OHSU
Bruce’s Story
Suicide Deaths per 100,000

Suicide Rates in Oregon vs US, 2003-2014

Suicide in Oregon

Top 10 Leading Disease/Disorder Categories Contributing to Global YLDs (2010)

1. Neuropsychiatric Disorders
   - Mental and Behavioral Disorders: 22.7
   - Neurological Disorders: 5.5

2. Musculoskeletal Disorders: 21.3

3. Other Non-communicable Diseases: 11.2

4. Diabetes, Urogenital, Blood, and Endocrine Diseases: 7.3

5. Nutritional Deficits: 6.4

6. Chronic Respiratory Diseases: 6.3

7. Unintentional Injuries (Other than Transport Injuries): 3.4

8. Neglected Tropical Diseases and Malaria: 2.9

9. Cardiovascular and Circulatory Diseases: 2.8

10. Diarrhea, Lower Respiratory Infections, Meningitis, and Other Common Infectious Diseases: 2.6

Percent of Total Global YLDs

Data courtesy of WHO
<table>
<thead>
<tr>
<th>Rank</th>
<th>Disease/Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Falls</td>
</tr>
<tr>
<td>9</td>
<td>Diabetes Mellitus</td>
</tr>
<tr>
<td>8</td>
<td>Migraine</td>
</tr>
<tr>
<td>7</td>
<td>Anxiety Disorders</td>
</tr>
<tr>
<td>6</td>
<td>Other Musculoskeletal Disorders</td>
</tr>
<tr>
<td>5</td>
<td>Chronic Obstructive Pulmonary Disease</td>
</tr>
<tr>
<td>4</td>
<td>Neck Pain</td>
</tr>
<tr>
<td>3</td>
<td>Iron-deficient Anemia</td>
</tr>
<tr>
<td>2</td>
<td>Major Depressive Disorder</td>
</tr>
<tr>
<td>1</td>
<td>Low Back Pain</td>
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Data courtesy of WHO
Why is this story important?

MORTALITY FROM MEDICAL CAUSES

Peak 1965–1995

Current 2009–2012

Suicide

Stroke (~20,000)

AIDS (~30,000)

Heart Disease (~1.1 Million)

ALL (Leukemia) (~6,000)

Insel, T. Tedx Caltech, 2013.
What does a measurement look like?
What does a measurement look like?

### The Patient Health Questionnaire (PHQ-9)

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<tr>
<th>Over the past 2 weeks, how often have you been bothered by any of the following problems?</th>
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What can we screen for and measure?

• ADHD
• Anger
• Borderline Personality Disorder
• Anxiety Disorders
• Bipolar Disorder
• Couples (relationship)
• Depression
• Domestic Violence
• Eating Disorders
• Emotion Regulation
• Gambling
• Obsessive Compulsive Disorder
• PTSD
• Social Anxiety
• Social Supports
• Substance Use
• Suicide and Self-Harm
• Medication Side Effects
• Emotion Regulation
• Therapeutic Alliance
Checking back in with Bruce...

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What might we gain from incorporating Measurement-Based Care?

- Detect worsening and non-response
  - Hatfield et al. 2010
- Identify relapse
- Demonstrate that mental health treatment works
  - Vos et al. 2012
  - Melek et al. 2014
- Integrative care
  - Unützer et al. 2012
“Of course I’m listening to your expression of spiritual suffering. Don’t you see me making eye contact, striking an open posture, leaning towards you and nodding empathetically?”
Feasibility

- Behavioral Health Data Portal (BHDP)
- Care Management Tracking System (CMTS)
- Behavioral Health Laboratory (BHL)
- Kaiser Permanente Health Connect
- STAR*D
- STEP-BD

Fortney et al 2017
Feasibility

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Time to response reduced from 64 weeks pre-implementation to 25 weeks post-implementation.

Fortney et al 2017
## Stages of Grief Quality Improvement

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Acceptability

• Patient perspective:
  • Better understand illness
  • Improved ability to express concerns

• Provider perspective:
  • Transdiagnostic
  • Transtheoretical

Dowrick et al 2009; Goldstein et al 2011; Scott et al 2015
Acceptability

• Patient perspective:
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• Provider perspective:
  • Transdiagnostic
  • Transtheoretical
  • Focused assessment

27% of disability due to MH issues; only 6.8% of healthcare spending towards MH treatment.

Dowrick et al 2009; Goldstein et al 2011; Scott et al 2015
MBC helpful for...

- Monitoring treatment response: 100%
- Assessing severity: 94%
- Tailoring treatment: 82%
- Monitoring suicide risk: 71%
- Improving therapeutic alliance: 53%
- Making treatment decisions: 93%
- Treatment change: 40% of patient encounters

Katzelnick et al 2011
The Joint Commission announces revisions effective January 1, 2018, to Care, Treatment, and Services (CTS) Standard CTS.03.01.09 for accredited behavioral health care organizations. Whereas the standard currently requires organizations simply to assess outcomes of care, treatment, or services, the revisions require organizations to assess outcomes by using a standardized tool or instrument. The results of these assessments will be used to inform goals and objectives for in individual plans of care, treatment, or services (as well as to evaluate outcomes of services). The revision believes that the enhancements to this standard will help accredited customers increase the quality of the care, treatment, and services they provide.

The revisions to Standard CTS.03.01.09 consist of the following:

- Revised element of performance (EP) 1 that requires organizations to use a standardized tool or instrument to track an individual’s progress.
- EP 2 that requires organizations to analyze the data generated by their activity and use the results to inform the decision-making process.
Owl Workflow: Screen, Treat, Track and Analyze

- Screens new patients for possible behavioral health issues
- Generates a behavioral health screen report
- Aggregates patient & clinic data for administrator review and analysis
- Selects individualized patient-reported outcome measures (PROM)
- Delivers clinical decision-making support at point of care
- Schedules & reminds patients to complete PROM throughout treatment
- Alerts clinicians when patients endorse suicidal ideation
- Scores, norms & graphs patients’ progress
- Notifies & invites clinicians to view their patients’ results

Efficient | Collaborative | Intelligent
How does this work?
OHSU Psychiatry: Future State

*Enhance treatment*

*Improve population health*

*Empower future research*
Research Agenda Moving Forward...

• What is the impact of routine interval follow-ups (set intervals) with MBC on depression outcomes in the acute phase of treatment as compared to MBC with "care as usual" (no set time interval for appointments)?

• How do initial patient/provider knowledge, attitudes, and experience with MBC affect fidelity of use of a measurement feedback system (i.e: Owl)?

• Does use of a measurement feedback system (i.e. Owl) change patient reported symptoms (i.e. frequency and severity) as compared with care as usual?

(Black, Fagan, Rieckmann, Liu, and Nagarkatti-Gude)
References