Quality Improvement in Mental Healthcare:
The Measures Matter

Richard Hermann, MD, MS
Associate Professor of Medicine and Psychiatry
Tufts University School of Medicine
Center for Quality Assessment & Improvement in Mental Health
at Tufts-New England Medical Center
www.cqaimh.org
Overview

- Quality of mental healthcare in the US
- Movement toward measurement-based quality improvement (MBQI)
- Implications for patient care & clinical practice
Quality problems are everywhere...
Between the health care we have and the care we could have lies not just a gap, but a chasm.
IOM Crossing the Quality Chasm (2005): Adaptation to Mental Health/Addictive Disorders

- Many with severe illness receive no treatment
- Inappropriate variation from provider to provider
- Inconsistent use of evidence-based practices
- Medical errors threaten patient safety
- Opportunities for prevention often missed
# Quality of Mental Health Care

<table>
<thead>
<tr>
<th>Evidence-based Guidelines</th>
<th>Conformance Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td></td>
</tr>
<tr>
<td>medication management</td>
<td>31-35% (Wells, 1999)</td>
</tr>
<tr>
<td>psychotherapy / counseling</td>
<td>16-24% (Wells, 1999)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td></td>
</tr>
<tr>
<td>medication management</td>
<td>29-92% (Lehman, 1999)</td>
</tr>
<tr>
<td>psychosocial treatment</td>
<td>10-45% (Lehman, 1999)</td>
</tr>
<tr>
<td>Bipolar disorder – med. mgmt.</td>
<td>36-39% (Unutzer, 2000)</td>
</tr>
<tr>
<td>Severe mental illness – evid. based care</td>
<td>4-19% (Wang, 2002)</td>
</tr>
</tbody>
</table>
Gaps in Other Processes of Care

Prevention
- 30-50% primary care pts w/ MDD not detected

Assessment
- Among pts. hospitalized for MDD, only 46% had documented assessment for SI, 50% for psychosis

Continuity
- Among pts. hospitalized for SPMI, btw 33-53% lacked an ambulatory follow-up visit w/in 30 days

Coordination
- 29-84% of patients hospitalized for a psychiatric disorder lacked a scheduled OP appt. at discharge
IOM Crossing the Quality Chasm (2005): Adaptation to Mental Health/Addictive Disorders

**Recommendations:**
Clinicians & provider organizations should measure and continuously improve the quality of the care they provide.

- consensus-based development of core measures
- validation of measures
- models for their use in QI
Why QI, Why Now?

- Accumulation of quality of care research
- Concerns of business community
  - rising costs
  - absence of information on value
  - “accountability”
- Concerns of consumers & clinicians
  - impact of cost-containment, managed care
- Rise of the machine
  - integrated health systems
  - information systems
A ‘March’ toward Empiricism?

- Criteria-based diagnosis
- Controlled trials of interventions
- Practice guidelines
- Measuring guideline conformance
- Narrowing gaps between actual & guideline-based care
What is Measurement-based QI?
Principles of Measurement-Based QI

- Health care as series of processes
- Quality as problems in processes
- Use of measurement & statistical analysis
- Focus on improving process & outcomes
- Organization-wide involvement
Model for Measurement-based QI

Aim

Intervene

Measure

Plan

Diagnose
Role of Measurement in Quality Improvement

- Internal quality improvement
  - incremental MBQI
  - system redesign

- External quality improvement
  - reporting and feedback
  - collaborative partnerships
  - consumer & purchaser choice
  - contractual goals
  - accreditation standards
"Pay for Performance"

**Goal:** align payment incentives w/ higher quality

**Mechanisms:**
- higher payments for meeting quality standards
- incentives for improvement
- “tiered co-payments” for consumers

**Status:**
- hundreds of programs nationwide
- federal demonstration projects; legislation pending
- broader use expected
Concerns about Measurement-Based QI

- Regulatory compliance or real work?
- QI or cost containment?
- Are we measuring what’s important?
- Are the measures & data adequate to the task?
- Is what’s measured under our control?
- My patients are sicker…
Meanwhile…
Standardization of Quality Measures

NQF  AQA

NCQA  JCAHO  NOMs  PAYERS

Health Systems  Clinician Organizations  SAMHSA  Researchers  Measurement Vendors
Measure Selection: Why it Matters

- What problems will be addressed?
- Where will resources be directed?
  - Direct cost of QI to hospitals: $200,000 / year
  - Indirect costs: clinician & administrative time
  - Opportunity costs: other QI, clinical care, other
- How will we be reimbursed, accredited, credentialed?
<table>
<thead>
<tr>
<th>Structure</th>
<th>Technical Process</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinicians</td>
<td>Prevention</td>
<td>Δ in symptoms</td>
</tr>
<tr>
<td>Facilities</td>
<td>Access</td>
<td>Δ in functioning</td>
</tr>
<tr>
<td>Plans</td>
<td>Assessment</td>
<td>Δ in quality of life</td>
</tr>
<tr>
<td>Financing</td>
<td>Treatment</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Communities</td>
<td>Coordination</td>
<td>Adverse effects</td>
</tr>
<tr>
<td>Patients</td>
<td>Continuity</td>
<td>Mortality</td>
</tr>
<tr>
<td>Illnesses</td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Interpersonal Process</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Decision-making</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interpersonal style</td>
<td></td>
</tr>
</tbody>
</table>
NCQA’s HEDIS Measures for Health Plans

Major Depression: % of patients with...
- ≥12-week continuation after antidepressant initiated
- ≥ 6-month continuation after antidepressant initiated
- 3 follow-up visits during 12-week acute phase

ADHD: % of children with...
- ≥1 follow-up visit w/in 30-day after initiation of medication
- ≥ 2 additional follow-up visits w/in subsequent 9 months

Aftercare Post-Hospitalization:
- % patients with a follow-up visit within 7 & 30 days
JCAHO Candidate Core Measures for Inpatient Psychiatry

% of hospitalized patients with:
- assessment of risk, substance abuse, trauma & strengths
- discharged on multiple antipsychotic medications
- hospital data provided to their OP clinician after discharge

Per Inpatient Stay:
- hours of restraint use
- hours of seclusion use
Surveys of Patient Experience

- Experience of Care & Health Outcomes Survey (ECHO)
- MHSHIP Consumer Survey
- Perceptions of Care Survey
- Press-Ganey Survey
Outcome Measures in Use in Massachusetts

- Brief Psychiatric Rating Scale (BPRS)
- Treatment Outcomes Package (TOP)
- Behavior & Symptom Identification Scale (BASIS)
- Life Status Questionnaire (LSQ)
- Patient Health Questionnaire (PHQ)
Attributes Informing Measure Selection

Maximize Measure Attributes

### Meaningful
- stakeholder needs
- clinically important
- evidence-based
- valid
- comprehensible

Feasible
- precisely specified
- data available
- affordable
- accurate
- reliable
- case mix adjustment
- pt. confidentiality

### Actionable
- quality problem
- under user’s control
- interpretable
- results
- norms
- benchmarks
- standards

### Domains of Process
(prevention, detection, access, assessment, treatment, continuity, coordination, safety/errors)

### Clinical Population
(diagnostic groups, comorbidities, prevalence, morbidity)

### Vulnerable Groups
(children, elderly, racial/ethnic minorities)

### Modalities
(medication, psychotherapy, other somatic, other psychosocial)

### Clinical Setting
(inpatient, ambulatory, residential, partial, emergency service)

### Purpose of Measurement
(internal QI, external QI, consumer selection, purchasing, research)

### Level of Health Care System
(population, plan, delivery system, facility, provider, patient)

Represent Mental Health System Broadly

Hermann and Palmer, Psychiatric Services, 2002
To search for measures, please select at least two of the following search criteria.

- Diagnosis: Not Specified
- Special Populations: Not Specified
- Data Source: Not Specified
- Evidence Level: Not Specified
- Treatment: Not Specified
- Domain of Quality: Not Specified
- Clinical Setting: Not Specified

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National Inventory of Mental Health Quality Measures

Process Measures Assessing Quality (n=308)

- Prevention
- Coordination
- Assessment
- Access
- Continuity
- Safety
- Treatment

Number of Measures
<table>
<thead>
<tr>
<th>Treatment Modalities Assessed</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication</td>
<td>81</td>
<td>26</td>
</tr>
<tr>
<td>Psychosocial</td>
<td>97</td>
<td>32</td>
</tr>
<tr>
<td>Psychotherapy</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Assertive community treatment</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Substance abuse counseling</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Other psychosocial</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Other modality</td>
<td>43</td>
<td>14</td>
</tr>
<tr>
<td>Not applicable</td>
<td>121</td>
<td>39</td>
</tr>
</tbody>
</table>
### Diagnostic Groups Addressed

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>35</td>
<td>11</td>
</tr>
<tr>
<td>Depressive disorders</td>
<td>43</td>
<td>14</td>
</tr>
<tr>
<td>Substance abuse / dependence</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Dementia</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Personality disorders</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Across diagnoses</td>
<td>119</td>
<td>39</td>
</tr>
</tbody>
</table>
# Vulnerable Populations Addressed

<table>
<thead>
<tr>
<th>Population</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPMI</td>
<td>35</td>
<td>11</td>
</tr>
<tr>
<td>Elderly</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>Children &amp; adolescents</td>
<td>49</td>
<td>16</td>
</tr>
<tr>
<td>Dual diagnosis</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Comorbid medical conditions</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>
Most Measures Lack Supporting Research

- Level A: Good research-based evidence (e.g., RCTs)
- Level B: Fair research-based evidence (e.g., observational data)
- Level C: Little research evidence, based principally on clinical opinion
Testing of Measures

<table>
<thead>
<tr>
<th>Test Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability testing</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Validity testing</td>
<td>34</td>
<td>11</td>
</tr>
<tr>
<td>Cost assessment</td>
<td>53</td>
<td>17</td>
</tr>
</tbody>
</table>
Evidence for Measurement-based QI

Efficacy

- Review of 55 controlled trials of QI showed “pockets of improvement” rather than widespread change across hospitals and QI objectives (Shortell, 1998)
Evidence for Measurement-based QI

Effectiveness

- Routine QI is not well studied
- Published case reports of successful initiatives
- Little improvement seen in results of national measurement initiatives
National HEDIS Results:
Acute-Phase Antidepressant Adherence

Average performance for ~300 plans
Determinants of QI Effectiveness: Prior Research

- Environment
- Culture
- Structure
- Organizational Strategic Technical

Hospital QI Implementation

QI Outcomes

Shortell, 1995
The Mental Health QI-Fit Study

- NIMH-funded study of 32 hospitals in MA & CA
- What are hospitals’ QI objectives for inpatient psychiatry?
  - EBPs -- patient-centered care
  - effectiveness -- equity
  - access -- efficiency
  - safety
- Are hospitals achieving improvement?
- Hypothesis: effectiveness is influenced by the fit between the hospitals & their QI objectives
Determinants of QI Effectiveness: QI-Fit Study

Environment

Culture

Organizational

Structure

Leadership

Resources

Selected Aims & Measures

QI Progress
- Diagnose
- Measure
- Intervene
- Plan

QI Outcomes

Hermann, 2005
Evidence-based Improvement Interventions

- Audit & feedback
- Local opinion leaders in guideline implementation
- Academic detailing
- Reminders & prompts
- Multimodal programs for improving depression care
  - Collaborative management
  - Chronic disease model
  - Partners in Care training model
- Relapse prevention programs for schizophrenia
- Open access for ambulatory care
Conclusion

Current Status
- 100s of measures—need for further development & testing
- MBQI not proven—need to improve effectiveness

Meanwhile…
- need for the “good enough” measure
  - trade-offs
  - combined approaches
- measure selection is a political process
  - educate, advocate, negotiate
  - can’t beat something with nothing
  - need for clinician input & leadership
- accountability works both ways