Mental Illness in Nursing Homes

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Acknowledgments

• **Funding:** National Institute on Aging; National Institute of Mental Health

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  – Stephen Bartels, Dartmouth
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  – Catherine Fullerton, Harvard
  – Thomas McGuire, Harvard
  – Vincent Mor, Brown
  – Vincent Rome, Harvard
MI in Nursing Homes

- 560,000 individuals reside in NHs with mental illnesses (excl. dementia)
  - vs. 51,000 individuals in psychiatric hospitals
  - Exceeds all other health care institutions combined

- MI is one factor—often the decisive factor—in predicting NH placement

- Relatively little health services research on mental illness in nursing homes
A Bit of History…

• 1960s-1970s: Closure/downsizing of many state psychiatric hospitals
• Many states were ill equipped to provide community alternatives
• NHs became the de facto destination for many persons with mental illness
  – Elderly persons in psych hospitals declined by ~40%; MI popn in NHs increased by ~100%
    (IOM, 1986)
History (cont.)

• PASRR legislation enacted under OBRA 1987
  – Identify residents with MI or MR/DD
  – Assess if NH appropriate and whether specialized services needed

• NHRA act of 1990
  – Prohibits inappropriate use of restraints and antipsychotics

• Olmstead decision of 1999
  – Under the ADA, states must administer services, programs and activities in most integrated setting appropriate to people’s needs
Community vs. NH

- Two-fifths of NH residents with SMI preferred community settings (Bartels et al. 2003)

- Clinicians judged community to be most appropriate for half of NH residents with SMI (Bartels et al. 2003)
Today’s Objectives

• Document the diagnosis and treatment of major mental illness in the NH population

• Review quality of mental health care in NHs
  – Structural measures (e.g., presence of staff)
  – Process-based measures (e.g., PASRR)
  – Outcome-based measures (e.g., psychiatric hospitalizations)

• Review predictors of MH quality in NHs
  – Resident welfare (e.g., SES)
  – Provider norms (e.g., locality)
  – Financial implications (e.g., payer mix)

• Implications for PASRR
Data

• Minimum Data Set (MDS) assessments for all first-time nursing home admissions for the period 1999 through 2005

• MDS includes all residents in all Medicare-Medicaid certified facilities nationwide
  – Total sample = 7,364,470
### MDS 2.0 and Disease Diagnoses

**SECTION I. DISEASE DIAGNOSES**

Check only those diseases that have a relationship to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death. (Do not list inactive diagnoses)

<table>
<thead>
<tr>
<th>1. DISEASES</th>
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<tr>
<td><strong>ENDOCRINE/METABOLIC/NUTRITIONAL</strong></td>
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<td>Diabetes mellitus</td>
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<td>Hypothyroidism</td>
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<td>Quadriplegia</td>
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<td><strong>HEART/CIRCULATION</strong></td>
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<td>Arteriosclerotic heart disease (ASHD)</td>
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<td>Seizure disorder</td>
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<td>Cardiac dysrhythmias</td>
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<td>Transient ischemic attack (TIA)</td>
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<td>Congestive heart failure</td>
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<td>Traumatic brain injury</td>
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<td>Deep vein thrombosis</td>
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<td>Hypertension</td>
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<td>Manic depression (bipolar disease)</td>
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<td>Hypotension</td>
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<td>Schizophrenia</td>
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<td>Peripheral vascular disease</td>
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<td><strong>PULMONARY</strong></td>
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<td>Other cardiovascular disease</td>
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<td>Asthma</td>
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<td>MUSCULOSKELETAL</td>
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<td>Arthritis</td>
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<td>Emphysema/COPD</td>
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<td>Hip fracture</td>
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<td>Missing limb (e.g., amputation)</td>
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<td>Cataracts</td>
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<td>Osteoporosis</td>
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<td>Diabetic retinopathy</td>
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<td>Pathological bone fracture</td>
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<td>Glaucoma</td>
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<td>NEUROLOGICAL</td>
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<td>Alzheimer's disease</td>
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<td>Macular degeneration</td>
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<td>Aphasia</td>
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<td><strong>OTHER</strong></td>
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<td>Cerebral palsy</td>
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<td>Allergies</td>
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<td>Cerebrovascular accident (stroke)</td>
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<td>Anemia</td>
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<td>Dementia other than Alzheimer's disease</td>
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<td>Cancer</td>
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Other Measures

- Race (Black, White)
- Age
- Medications
  - Number
  - Antidepressant use (%)
- Treatments
  - Skills training to return to the community (%)
  - Evaluation or therapy by licensed mental health professional (%)
MI and Dementia: 2005

Dementia Only: 6%
MI Only: 19%
Both: 12%
Neither: 63%

Fullerton et al., 2008, Psychiatric Services
MI and Dementia: Trends (99-05)

Figure 1
Proportions of persons newly admitted to nursing homes with dementia, mental illness, or both, 1999–2005, by length of stay

Fullerton et al., 2008, Psychiatric Services
MI Trends in Nursing Homes

Fullerton et al., 2008, Psychiatric Services
Diagnoses by Age

EXHIBIT 2
New Nursing Home Admissions, By Age Categories, Among People With Mental Illness (Broad), Mental Illness (Narrow), And No Mental Illness, 2005

Percent
50

40

30

20

10

0

Mental illness (narrow)
Mental illness (broad)
No mental illness

SOURCE: Authors’ calculations using the Minimum Data Set, Centers for Medicare and Medicaid Services.
NOTE: For more details about the broad and narrow mental illness definitions, see text.

Grabowski et al., 2008, Health Affairs
Skills Training to Return to the Community, by MI

- SZ: 36%
- BPD: 54%
- MDD: 59%
- Anx: 55%
- No MI or Dementia: 60%

Fullerton et al., 2008, Psychiatric Services
Evaluation or therapy by a licensed mental health professional, by MI

- SZ: 19%
- BPD: 15%
- MDD: 5%
- Anx: 4%
- No MI or Dementia: 1%

Fullerton et al., 2008, Psychiatric Services
Percentage of New Admissions with Mental Illness (Narrow) as Percent of the Total Population Aged 18+

Grabowski et al., 2008, Health Affairs
Magnitude of State Differences

• If the 0.11% admission rate in WY was applied to the entire country, then 19,522 fewer admissions would have occurred in 2005.

• If the 0.54% admission rate in CT was applied to the entire country, then 24,592 more admissions would have occurred in 2005.

Grabowski et al., 2008, Health Affairs
Percentage of New Nursing Home Admissions (During 2004) with Mental Illness (Narrow) Becoming Long-Stay Residents

National mean = 45.6% (vs 24.1% for those without MI)

Grabowski et al., 2008, Health Affairs
Potential Measurement Error

• Misreporting of mental illness is an important concern within the MDS

• We need additional studies comparing MDS versus other sources (e.g., PASRR assessments!)

• MDS 3.0 is coming online
A12. Preadmission Screening and Resident Review (PASRR)—Complete only if A9a = 01, 03, or 04

Has the resident been evaluated by Level II PASRR, and determined to have a serious mental illness and/or mental retardation or a related condition?

- 0. No
- 1. Yes
- 9. Not a Medicaid certified unit

<table>
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<tr>
<th>Psychiatric/Mood Disorder</th>
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<tr>
<td>43. Anxiety Disorder</td>
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<tr>
<td>44. Depression (other than Bipolar)</td>
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<tr>
<td>45. Manic Depression (Bipolar Disease)</td>
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<td>46. Schizophrenia</td>
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Cross-data Comparisons

<table>
<thead>
<tr>
<th>Study</th>
<th>Data Set(s)</th>
<th>Year(s)</th>
<th>Prevalence Estimates</th>
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<tbody>
<tr>
<td>Prevalence estimates of mental illness</td>
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<tr>
<td>Goldman et al.</td>
<td>NNHS</td>
<td>1977</td>
<td>51.3%</td>
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<tr>
<td>Mechanic and McAlpine</td>
<td>NNHS</td>
<td>1985</td>
<td>44.4%</td>
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<tr>
<td>Mechanic and McAlpine</td>
<td>NNHS</td>
<td>1995</td>
<td>58.1%</td>
</tr>
<tr>
<td>Bagchi et al.</td>
<td>NNHS</td>
<td>1999</td>
<td>7% Primary diagnosis; 33.1% Any diagnosis</td>
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<tr>
<td>Bagchi et al.</td>
<td>MDS</td>
<td>1999</td>
<td>Not measurable through this data set</td>
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<tr>
<td>Bagchi et al.</td>
<td>MAX</td>
<td>1999</td>
<td>4.4% Primary diagnosis; 7% Any diagnosis</td>
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<tr>
<td>Fullerton et al.</td>
<td>MDS</td>
<td>1995-2005</td>
<td>24% had a nondementia psychiatric illness (at admission)</td>
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<tr>
<td>Prevalence estimates of depression</td>
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<tr>
<td>Mechanic and McAlpine</td>
<td>NNHS</td>
<td>1985</td>
<td>4.1%</td>
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<tr>
<td>Mechanic and McAlpine</td>
<td>NNHS</td>
<td>1995</td>
<td>12.1%</td>
</tr>
<tr>
<td>Jones et al.</td>
<td>MEPS-NHC</td>
<td>1996</td>
<td>20.3%</td>
</tr>
<tr>
<td>Brown, Lapane, and Liusi</td>
<td>MDS</td>
<td>2002</td>
<td>10.9%</td>
</tr>
<tr>
<td>Fullerton et al.</td>
<td>MDS</td>
<td>1999</td>
<td>11% (at admission)</td>
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<tr>
<td></td>
<td></td>
<td>2005</td>
<td>15.5% (at admission)</td>
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Note: NNHS = National Nursing Home Survey; MAX = Medicaid Analytic eXtract; MDS = minimum data set; MEPS-NHC = Medical Expenditure Panel Survey–Nursing Home Component.
NH Quality

Poor quality of care has been documented for decades
Quality of Mental Health Care in Nursing Homes

• We conducted a literature review of 35 studies published between 1980-2008 (Grabowski et al., 2010 MCRR)

• More (and better) studies needed!
  – Studies often based on limited designs
  – Need to consider alternate outcomes and predictors
Structure-Based Outcomes: NH Staff

• Most NHs have limited access to mental health providers with training in psychiatry and MH treatment
  – Shea et al. (2000) report 80% of NH residents with MI did not receive services from MH professional

• Services often provided by consultants who are not full-time members of staff (Moak et al. 2000)

• Front-line NH staff receive little training in detection, treatment and management of MI (Beck et al. 2002; Mercer et al. 1993)
Process-Based Measures: PASRR

- PASRR has not been found to be effective at ensuring appropriate placement/treatment of persons with MI
  - **Screening**: OIG (2001) reports less than half of NH residents with SMI receive appropriate preadmission screening
  - **Delivery of Services**: Linkins et al. (2006) found that PASRR process does not ensure NH residents receive proper MH services
  - **Compliance**: Snowden and Roy-Byrne (1998) found compliance with only 35% of written treatment recommendations for MH services in Level I screens and only 29% compliance with recommendations for alternate placements
  - **Unintended consequences?**: Mechanic and McAlpine (2000) suggest NHs may use PASRR to deny admission to costliest (less profitable) residents
Process Based Measures: MDS

- MDS has been criticized on grounds of reliability and validity
  - Depression (Wagenaar et al. 2003)
  - Schizophrenia (Bowie et al. 2006)
- Use of MDS for payment and quality reporting may also distort accuracy (Bellows & Halpin 2006)
Other Process-Based Measures

• Psychiatric Medications
  – Inappropriate prescribing to sedate residents shown to be prevalent (Hughes & Lapane 2005; Briesacher et al. 2005; Stevenson et al. 2010)

• Use of Psychotherapy
  – Underutilized in NHs (Bharucha et al. 2006)

• Mental health consultations
  – Post OBRA87, 20% of NH residents receive consultation in 1-month period (Fenton et al. 2004)
Outcome-based Measures

• Psychiatric hospitalizations
  – 9 per 1,000 residents (Becker et al. 2009)

• Survey deficiencies
  – Approximately one-fifth of all NHs receive a survey deficiency citation each year for mental health care (Castle et al. 2001)
Predictors of MH Quality

• Resident Welfare
  – Age (Becker et al. 2009; Shea et al. 2000)
  – MH diagnosis (Smyer et al. 1994)
  – Education (Levin et al. 2007)
  – Race (Levin et al. 2007)
  – NH Staff (Hughes et al. 2000; Svarstad et al. 2001; Castle & Myers 2006)

• Provider norms
  – Local practice patterns matter! (Shea et al. 1994; Fenton et al. 2004; Reichman et al. 1998)

• Financial Implications
Bottom Line

• Many individuals admitted to NHs with mental illnesses
• High likelihood of transitioning to long-stay status
• Much cross-state variation in MI admissions and transitions to long-stay status
  – PASRR?
  – Medicaid NH payment?
  – HCBS alternatives?
  – Psychiatric hospitals?
• Quality of care a significant concern
Implications for PASRR

• Existing (albeit limited) data suggest PASRR could be made more effective…
  – Better enforcement of existing PASRR process?
  – Design of better PASRR process?

• We need better data to make this determination
New Data Linkages

- Link MDS/claims data with detailed PASRR data
  - Are electronic PASRR data available?
- Straight forward analysis: Comparison of MDS vs PASRR
  - Could help determine where screening is/isn’t working
- More complicated analysis: Detailed MH information from PASRR and detailed quality data from MDS
  - Could help determine who is/isn’t getting necessary services
Thank you!

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