Mental Health Service Delivery In Nursing Homes

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Overview

• Prevalence of mental health disorders in nursing homes
• Is there unmet need?
• Models of mental health services in nursing homes: What do we know?
• Shifting demographics and the challenge of serious mental illness in nursing homes
Disclosures

• NIMH
• CDC
• New Hampshire Endowment for Health
• SAMHSA/NASHPD
• HRSA
Overall Prevalence Rates of Mental Health Disorders

- 68% to 91% of residents have a mental disorder (including dementia)
  - 68% Linkens, 2006; 80.2% Rovner, 1990; 91% Parmelle, 1989; 94% Chandler, 1988

- Most have a diagnosis of dementia
  - 70-80% dementia
  - 20% depression
  - Kraus 1998, Medical Expenditure Panel Survey
2004 National Nursing Home Survey: Prevalence of Psychiatric Disorders

- Dementia 52%
- Behavioral sx in Dementia 37%
- Major Depression 1.3%
- Depressive Sx 35%
- Mood sx 42%
- Bipolar disorder 1.5%
- Anxiety Disorder 11.7%
- Alcohol Dependency/abuse 1%
- Schizophrenia 3.6%
Recent Trends 2005
Mental Health Admissions > Dementia

• Of the 996,000 new admissions:
  • 12% had dementia only
  • 19% had mental illness other than dementia

• Among “first time” nursing home admissions:
  24% diagnosis of schizophrenia, bipolar disorder, depression or anxiety disorder

(Fullerton et al 2009)
Unmet Need for Mental Health Services in Nursing Homes

- Over one month: 4.5% of mentally ill nursing home residents received mental health services  
  (Burns et al., 1993)

- Over one year: 19% in need of mental health services receive them. Least likely: Oldest and most physically impaired  
  (Shea et al., Smyer et al., 1994)
Mental Health Service Use: Following OBRA ‘87 and ‘89

- OBRA 1989- Removal of Annual Cap, Provider Status: Social Workers, Psychologists

- 1991-1993: Increase by 244% for 5 Most Common Mental Health Billing Codes In Nursing Homes (20.8 to 71.7 million)
Operation “Restore Trust”: OIG 1996 Report On Mental Health Services in Nursing Homes

- 32% of mental health services in nursing homes “medically unnecessary”, including:
  - 58% of mental health services to Alzheimer’s
  - 62% of Mental Health Services to the old (85+)
  - 80% of psychological testing
  - 75% of group therapy (especially group therapy for dementia without mental illness)
  - 59% of longer session (> 30 minutes) psychotherapy
Operation “Restore Trust”: OIG 1996 Report On Mental Health Services in Nursing Homes

• ……However 78% of Nursing Facility Respondents cited Barriers to Residents Receiving Needed Mental Health Services

• Barriers: Geographic Unavailability, Stigma, Refusal by Families, Refusal to Order Needed Services by Attending Physician, Lack of Awareness of Mental Health Problems by Staff, Underdiagnosis and Misdiagnosis
Unmet Need

Survey of Nursing Homes in 6 States:

• **38%** of Nursing Home Residents Judged to be in Need of Psychiatric Evaluation

• **1/2** have “Adequate” frequency of psychiatric consultation

• Greatest Unmet Need: Rural and Small Nursing Homes

• Consultation on Non-pharmacological interventions and Staff Education- Inadequate in **3/4** of homes

(Reichman et al., 1998)
Unmet Need

55% of Residents have unmet Mental Health Service Needs Among Those Referred for Evaluation

(Borson et al., 1997)
1992 National Telephone Survey of Nursing Homes

Medicare & Medicaid-Certified NHs in 50 states

• **46%**: MH specialists resistant or hesitant to serve NH residents

• **75%** residents with MH problems served outside of the facility

• **53%** difficult to obtain psychiatric services
  – Low Reimbursement and Scarcity of Geriatric Psychiatrists

(Lombardo & Sherwood ‘92)
Quality of Intrinsic Psychiatric Services: Staff and Facility

• N=51 N.H. Nursing Homes Surveyed (1995)
• Anonymous Responses by Head Nurses
• Quality of Mental Health Services
• Training, and Capacity to Provide Services to for Dementia with Agitation and Older Persons Severe Mental Illness

(Bartels, 1995)
Staff Training in Providing Behavioral Health Care (n=51 N.H. Nursing Homes)

Staff Training in:

... Managing Aggressive Behavior in Dementia

- Very Poor - Fair: 63%
- Good - Excellent: 37%

... Managing Residents with Severe Mental Illness

- Very Poor - Fair: 74%
- Good - Excellent: 26%
Facility Ability to Provide Behavioral Health Care (n=51 N.H. Nursing Homes)

Facility Ability to:

... Manage Aggressive Behavior in Dementia

- Very Poor - Fair: 57%
- Good - Excellent: 43%

... Manage Problem Behaviors in Severely Mentally Ill

- Very Poor - Fair: 64%
- Good - Excellent: 34%

Availability of Alternative Long-term Placements for Severe Problem Behaviors Needing a Secure Setting

- Very Poor - Fair: 84%
- Good - Excellent: 16%
Conclusions

• Unmet Need Remains
• Financial Incentives Drive Services
• Most Appropriate and Effective Services Not Reaching Residents Most in Need
Evidence for Effectiveness of Mental Health Services in Nursing Homes

What Do We Know?
Effectiveness of Mental Health Services In Nursing Homes

• Data on Impact of Services in 4 Outcome Areas:
  1) Resident Symptoms and Functioning
  2) Resident Acute Service Use
  3) Nursing Home Staff Functioning
  4) Physician Prescribing
Extrinsic Professional Models

Mental Health Services Provided By External Providers

- Psychiatric Consultation-Liaison
- Nurse-Centered Consultation
- Multidisciplinary Team
- Staff Education and Training
Effectiveness of Extrinsic Mental Health Service Models On Resident Symptoms and Functioning: Uncontrolled, Descriptive Studies

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Model</th>
<th>Method</th>
<th>Improved</th>
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</thead>
<tbody>
<tr>
<td>Goldberg (1970)</td>
<td>40</td>
<td>Psychiatrist/ Psych. Nurse</td>
<td>Provider Descriptive</td>
<td>78%</td>
</tr>
<tr>
<td>Santmyer (1991)</td>
<td>100</td>
<td>Nurse-Centered &amp; Psychiatrist</td>
<td>Provider Descriptive</td>
<td>68%</td>
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<tr>
<td>Swartz (1999)</td>
<td>32</td>
<td>Psychiatrist</td>
<td>Provider 7-Point</td>
<td>51%</td>
</tr>
<tr>
<td>Samter (1994)</td>
<td>108</td>
<td>Nurse-Centered &amp; Psychiatrist</td>
<td>Provider Descriptive</td>
<td>51%</td>
</tr>
</tbody>
</table>
Effectiveness of Extrinsic Mental Health Services on Resident Symptoms and Functioning: Randomized-Controlled Studies

Aimes (1990): n=93

**Model:** Psychogeriatric Consultation Team

**Method:** Randomized Controlled Study

Depression rating and ADL performance

**Intervention:** Psychogeriatric Team Recommendations vs. Usual Care

**Outcome:** No Difference Between Intervention and Control Group-- However, only 1/3 (27 of 81) Recommended Interventions Implemented
Effectiveness of Mandated Review and Recommendations for Mental Health Services

Snowden (1998): n=523 (statewide sample)

Model: Mandated PASSAR Level I Screens
Outcome: Compliance Rates with Recommendations

Alternative Placement: 29%
New Mental Health Services: 35%
(73% for Medications, 7% for Psych. Evaluation)
Effectiveness of Mental Health Services: Resident Acute Service Use

Model: Mental Health Consultation

Method: Descriptive, (non-randomized, no comparison group, small study samples)

Outcomes:

Reduced Acute Hospitalization

Reduced Acute Emergency Service Use
  (Walter 1976; Tourigny-Rivard 1987)
Effectiveness of Mental Health Services: Resident Mortality

- Descriptive 2 year follow-up 1985, 1987 NNHS (N=4,646 residents)
- Psychiatric Disorders: Received vs. Not Received MH Specialist Tx.
- **26% lower Mortality** for Schizophrenia, other psychoses, and anxiety disorders
- No differences Overall or other Diagnoses after Controlling for Resident-facility Characteristics

(Castle & Shea, 1997)
## Effectiveness of Educational Intervention on Physician Prescribing of Psychiatric Medications: Randomized Clinical Trials

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<thead>
<tr>
<th>Model</th>
<th>Method</th>
<th>Outcomes</th>
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</thead>
<tbody>
<tr>
<td>Avorn (1992)</td>
<td>Educational Academic Detailing</td>
<td>RCT</td>
</tr>
<tr>
<td>Ray (1993)</td>
<td>Educational</td>
<td>RCT</td>
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## Effectiveness of Extrinsic Mental Health Service Models On Nursing Staff Functioning: Uncontrolled, Descriptive Studies

<table>
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<tr>
<th>Model</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>Sbordone (1983)</td>
<td>12-week Consultation &amp; Training Program</td>
</tr>
<tr>
<td></td>
<td>Staff Turnover 74% &gt; 34%</td>
</tr>
<tr>
<td>Smith (1994)</td>
<td>Train-the-Trainer Nurse-Centered</td>
</tr>
<tr>
<td></td>
<td>Improved Staff Knowledge/Performance</td>
</tr>
<tr>
<td>Smyer (1993)</td>
<td>CNAs Skills Training &amp; Job Re-design</td>
</tr>
<tr>
<td></td>
<td>Improved Staff Knowledge/Performance</td>
</tr>
</tbody>
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Summary of Models of Mental Health Service Delivery in Nursing Homes

• Extrinsic Professional Services

• Intrinsic Services

• Mixed Models
Extrinsic Professional Models

- Psychiatric Consultation-Liaison
- Nurse-Centered Consultation
- Multidisciplinary Team
- Staff Education and Training
Psychiatric Consultation Model

Traditional Model of Consultation-Liaison

• Onsite Consultation by Psychiatrist or Other Independent Mental Health Professional

Outcomes:

• Decreased Hospitalization, Increased Therapeutic Programming, Improved Staff Compliance with Treatment Recommendations (Goldberg, 1970; Freedberg, 1975; Tourigny-Rivard, 1987)
Nurse-Centered Consultation

• Clinical Nurse-Specialist: Conducts Evaluations and Works with Staff to Develop and Institute Interventions

• Consultation and Supervision by Psychiatrist
  (Santmyer & Roca, 1991; Smith et al., 1990)
Multidisciplinary Team

• Psychiatrist, Social Worker, Psychologist, Psychiatric Nurse or Nurse Practitioner, Physician Assistant, Case Manager

• Identification, Triage, Assessment, Treatment Planning, Ongoing Treatment, Consultation, and Follow-up
Staff Education and Training

• **Nursing and Social Work Staff:**
  - **Assessment:** Recognition and Monitoring of Symptoms, Behaviors, and Treatment
  - **Services:** Behavioral Management, Psychosocial Rehabilitation, Pharmacological

• **Physician Staff:**
  - Clinical Assessment and Pharmacological Management: Effectiveness of Ongoing Feedback on Prescribing Practices
Intrinsic Models

• Special Care Units
• Nurse Specialists and Social Workers
• Psychosocial Rehabilitation Programs
Mixed Models

• Traditional Consultation and Training by Extrinsic Mental Health Professionals
• Combined with Intrinsic Psychiatric Nurse Specialist on Nursing Home Staff
• Triage, Treatment Planning, Coordination, Monitoring and Ongoing Training Provided by Nurse Specialist

(Joseph et al., 1995)
Model Descriptions: Converging Themes

- Limits of Traditional Consultation-Liaison
- Importance of Staff Training- Especially of Front-line Staff (e.g. CNAs etc.)
- Value of Multidisciplinary Team Model: Differential Contributions and Assets
- Synergy of Extrinsic and Intrinsic Models:
  - Psychiatric Nurse Specialist >> Nursing Staff
  - Psychiatrist >> M.D.s / Prescribing
  - Psychology >> Behavioral Programming
Summary

• Descriptive Research Studies Support Effectiveness of Mental Health Services
• 1/2 to 3/4 of residents improve--Multidisciplinary treatment favored
• Promising Finding on Decreasing Hospitalizations, Emergency Services
• Educational/Training Programs Appear to Improve Staff Knowledge, Performance, and Decrease Turnover
Conclusions

• Current Services: Generally Inadequate

• Least Effective: “As needed” Traditional Single Visit C-L Model

• Most Effective: (1) Routine Presence of Multidisciplinary Team, (2) Discipline-specific Consultation and Training, complemented by (3) “Train-the-trainer” On-site Nurse Specialist
2005 Update: 9 RCTs of Psychiatric Service Models in NFs

- Mixed Model: Liaison services with education, use of treatment guidelines, ongoing involvement of mental health staff

  >>>>> More effective than conventional case-based NH consultation services

(Draper and Low, 2005)
Recent Review of Models of Mental Health Services in Nursing Homes
(Snowdon 2010)

1. Consultative: assessment and recommendations
2. Consultation-Liaison: ongoing follow-up
3. Nurse-centered mental health service
4. Facility-based staff-member responsible for mental health screening, coordination
5. Externally-based multidisciplinary team
6. Telepsychiatry consultation liaison services
Rehabilitation Services for Adults with Serious Mental Illness: A New Frontier for Mental Health Services in Nursing Homes?

The Context

- Increasing admissions of adults with SMI
- Olmstead decree and state class action suits
- “Money Follows the Person”
- State Medicaid budget cuts and the erosion of community mental health services
Early, Disproportionate, and Inappropriate Institutionalization in Nursing Homes
Institutional Placements of Older Adults with SMI

- 89% in Nursing Homes
- 8% in State and County Hospitals
- 3% in VA, General or Other Hospitals

(Burns & Taube, 1990, 1991, Rovner et al., 1990)
Risk Factors for Nursing Home Placement Among the Elderly With SMI

Older adults with SMI are at increased risk of institutional care due to:

- **Medical Comorbidity** (McCarrick et al., 1986)
- **Functional and Cognitive Deficits & Greater Problem Behaviors** (Bartels et al., 1997)
- **Inadequate Social Support** (Speers, 1992; Semple et al., 1997; Meeks et al., 1990)
Age-Adjusted Annual Rates of Institutionalization for Dually-Eligible (Medicaid and Medicare) Elderly in New Hampshire in 1995 (age 60-79, mean age 68)

<table>
<thead>
<tr>
<th>Institutional Service Use</th>
<th>SMI Only (n=301)</th>
<th>All Dual Eligibles (n=1016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Home Admission</td>
<td>26.5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Psychiatric Hospitalization</td>
<td>20.2%</td>
<td>3.45%</td>
</tr>
<tr>
<td>Medical Hospitalization</td>
<td>53.9%</td>
<td>45.47%</td>
</tr>
<tr>
<td>Any Hospitalization</td>
<td>59.2%</td>
<td>46.44%</td>
</tr>
<tr>
<td>Nursing Home or Any Hospitalization</td>
<td>65.8%</td>
<td>49.38%</td>
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</table>
Depression: Hazard Plots

Overall

Ages 40-64

Age 65+

OR=1.1
95% CI=0.9-1.5

OR=0.9
95% CI=0.6-1.4

OR=1.5*
95% CI=1.1-2.1

Andrews et al., 2009
Schizophrenia: Hazard Plots

Overall

OR=1.9***
95% CI=1.5-2.2

Age 40-64

OR=3.6***
95% CI=2.8-4.7

Age 65+

OR=1.1
95% CI=0.8-1.4

Andrews et al., 2009
Most Recent 2008 MDS Study of New Admissions to Nursing Homes

- **Schizophrenia:** Majority < age 65
- **Depression:** Majority > age 65

- **Younger vs. Older schizophrenia admissions**
  - less cognitive impairment
  - lower rates of chronic medical illness
  - more likely to be low care status

(Aschbrenner et al. 2011)
Nursing Home Residents in Higher Level of Care than Appropriate

- Schizophrenia: 60%
- Depression: 50%
- Bipolar: 40%
- Other: 30%
- Other: 20%
- Other: 10%
- Other: 0%
Characteristics of inappropriately placed nursing home residents with SMI

- Less Severe Problems in Cognition, Behavior, Social Skills, and Function
- No Difference in Severity of Depression or Negative Symptoms
- More Positive Symptoms
- No Difference in Age
Most Appropriate Residential Setting for Older Adults with SMI Currently Residing in a Nursing Home

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Home/Apartment</th>
<th>Group Home</th>
<th>Nursing Home</th>
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</thead>
<tbody>
<tr>
<td>Consumer</td>
<td>36.8%</td>
<td>3.8%</td>
<td>59.4%</td>
</tr>
<tr>
<td>Clinician</td>
<td>3.8%</td>
<td>47.7%</td>
<td>49.1%</td>
</tr>
</tbody>
</table>

Implications for Long-term Care Services for Older Persons with SMI

- Appropriate Community-based Alternatives for the Rapidly Increasing Number of Aging Persons with SMI are Lacking
- Need for Innovative Rehabilitation, Community Support, and Integrated Medical Services Specifically Tailored for the Older Person with SMI

(Bartels et al., 1999)
HOPES
Helping Older Persons Experience Success

• **Multi-site RCT (n=183, mean age 60):**

• **Rehabilitation:** Skills Training Groups to Teach Community Living Skills, Social Skills, and Health *Self-Management* Skills

• **Health Management:** Health Education, and Monitoring, Facilitation, & Coordination of Primary & Preventive Health Care by HM Nurse

*Rehabilitation and Health Care for SMI: NIMH R01 MH62324 (PI Bartels)*
Curriculum:
7 Skills Training Modules

1. Making the Most of Leisure Time
2. Communicating Effectively
3. Using Medications Effectively
4. Living Independently in the Community
5. Making and Keeping Friends
6. Making the Most of Health Care Visits
7. Healthy Living
Health Management

• Comprehensive initial evaluation of health and receipt of preventive health services
• Establishment of medical problem list and health care goals
• Tracking & promotion of preventive health care, acute problems, chronic medical illnesses
Health Management

- Monthly 1:1 meetings of nurse and client for 18 months then group meetings for 6 months
- Communication and coordination with other care providers
- Scheduling and taking clients to appointments
- Role-play before appointments
Results at Two and Three-Year Follow-up

- Improved Community Functioning
- Improved Independent Living Skills
- Improved Self-efficacy
- Less Severe Psychiatric Symptoms and Negative Symptoms
- Greater Preventive Health Care
- 2x Greater Advance Directives
Summary

• Nursing homes (along with prisons) provide the largest amount of institution-based settings for persons with mental illness

• Conventional consultation mental health services are inadequate and minimally effective

• Preferred: Multidisciplinary team models with embedded nurse “train the trainer” expertise

• Improving specialty access with telepsychiatry

• Embedded psychosocial rehabilitation for the growing population of persons with SMI
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