Quality of life for long-term care residents: predictors, disparities, and directions for the future

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Outline

• Question 1: how is nursing home quality of life measured in Minnesota (MN)?

• Question 2: what resident and facility factors influence quality of life (QOL) scores?

• Question 3: Are there disparities in QOL by race/ethnicity? If so, what factors play a role?

• What are the implications for policy and future work?
Nursing Home Care

• Over 1.6 million older adults receive nursing home (NH) care; this is projected to increase to 3 million by 2030.
• 45% percent of Americans over the age of 65 will spend time in a NH.
• 24% will stay a year or more, usually at the end of their lives.
• Public dollars fund the majority of NH care
QOL matters for NH Quality

• QOL—psychological and social well-being; non-medical aspects of life in the facility

• Reduced QOL in NHs due to:
  - Deteriorated health
  - Changes in living environment
  - Rigid daily routines
  - Disrupted social interaction

• Improving QOL is the focus of person-centered approaches

• QOL has implications for payment and policy initiatives
Question 1:

- Q1: How is nursing home quality of life measured in Minnesota (MN)?
QOL Assessment Tool

- 52 questions on various aspects of QOL
- 12 domains: Comfort, Environment, Privacy, Dignity, Activity, Food, Autonomy, Individuality, Security, Relationships, Satisfaction, Mood
- Random sample of residents in all Medicaid-certified NHs
- Survey could be administered to respondents with mild to moderate cognitive impairment.

• The tool has been validated and used in Minnesota since 2005.
**Resident Quality Of Life - Details**

<table>
<thead>
<tr>
<th>Domains</th>
<th>Facility</th>
<th>State</th>
<th>Facility rank (#1 is best)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Percent Positive</td>
<td>82.4%</td>
<td>82.7%</td>
<td>215 of 374</td>
</tr>
<tr>
<td>Comfort</td>
<td>80.0%</td>
<td>81.6%</td>
<td>266 of 374</td>
</tr>
<tr>
<td>Environment</td>
<td>83.8%</td>
<td>89.6%</td>
<td>343 of 374</td>
</tr>
<tr>
<td>Privacy</td>
<td>88.7%</td>
<td>89.4%</td>
<td>210 of 374</td>
</tr>
<tr>
<td>Dignity</td>
<td>96.7%</td>
<td>96.2%</td>
<td>138 of 374</td>
</tr>
<tr>
<td>Activity</td>
<td>72.5%</td>
<td>73.6%</td>
<td>206 of 374</td>
</tr>
<tr>
<td>Food</td>
<td>77.9%</td>
<td>85.5%</td>
<td>333 of 374</td>
</tr>
<tr>
<td>Autonomy</td>
<td>87.9%</td>
<td>86.9%</td>
<td>119 of 374</td>
</tr>
<tr>
<td>Individuality</td>
<td>80.0%</td>
<td>83.2%</td>
<td>278 of 374</td>
</tr>
<tr>
<td>Security</td>
<td>91.1%</td>
<td>88.2%</td>
<td>57 of 374</td>
</tr>
<tr>
<td>Relationships</td>
<td>84.6%</td>
<td>82.4%</td>
<td>76 of 374</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>89.8%</td>
<td>83.4%</td>
<td>6 of 374</td>
</tr>
<tr>
<td>Mood</td>
<td>73.5%</td>
<td>71.1%</td>
<td>97 of 374</td>
</tr>
</tbody>
</table>
QOL in the Policy Context

- Give providers valid, relevant and reliable results to guide their quality improvement efforts.

- Inform consumer decision making - NF Report Card.

- Offer financial incentives for better care.

From MN DHS
From MN DHS
Question 2: What are key predictors of QOL?

- What are resident and facility factors associated with lower QOL scores?

- What is the relationship between facility characteristics and change in QOL scores over time?
Data

Three sources:
   - Response rate: 85%
   - 356 facilities for 2015
2. Resident clinical data from the Minimum Dataset
3. Facility-level characteristics from facility reports to the DHS

The combined data set consisted of 11,147 residents in 356 Minnesota nursing facilities.
Question 1: Key Findings

• Resident characteristics influence QOL
  - Across multiple domains
  - Limitations in ADLs
  - Alzheimer’s disease, low cognitive scores
  - Anxiety/mood disorders
  - Diagnoses of mental illness

• Facility characteristics, too
  - Medicaid payment source
  - Staff hours per resident day (especially RN & activity staff)
  - Quality improvement score
  - Administrative turnover
Question 2

- To examine the relationship between NH facility-level characteristics and change in facility QOL over time
Question 2, Full Sample

• **Structural characteristics:**
  - greater resident acuity and larger facility size had a significant negative effect on facility-aggregated resident QOL.

• **Non-profit status** (as compared to for-profit) was positively associated with higher resident QOL.

• **Organizational characteristics** had the most consistent effects across multiple QOL domains.
  - Staff hours of direct care (especially activity staff and RN hours) and quality improvement score had positive effects on QOL for a number of domains.
Disparities in QOL

- Racial/Ethnic Differences in QOL
The proportion of minority older adults in nursing homes (NHs) has increased dramatically, and will surpass that of white adults by 2030.

Changes in the number of NH residents by race/ethnicity 1998-2008:
- Increase of 54.9% for Hispanic older adults
- Increase of 54.1% for Asian older adults
- Increased of 10.8% for African American older adults
- Decrease of 10.2% for White older adults

Yet, little is known about these groups’ unique experiences related to QOL.

QOL is a patient-centered measure capturing multiple aspects of well-being and is distinct from quality of care.
MN is changing too

Percentage of Non-White Nursing Home Residents, 2008-2013

- Minnesota
- United States

- 2008
- 2013
Racial disparities in nursing home care

- Findings on quality of care show that:
  - Minority older adults are more likely to postpone entry into LTC and to reside with extended family.
  - Non-white older adults are more likely to be placed in lower-quality NHs, receive poorer quality of care, and have access to fewer resources.
  - Disparities in quality of care are linked to racial and socioeconomic segregation of NHs, rather than within-provider discrimination.
Research questions

1. Compared to white nursing home (NH) residents, do non-white residents experience lower QOL?
   - If so, are the differences explained by resident characteristics (e.g., health)?

2. Do NHs with lower proportions of non-white residents have better aggregate QOL than NHs with higher proportions of non-white residents?

3. What is the relationship between individual race/ethnicity and facility racial/ethnic make-up for resident QOL?

4. How do minority residents experience QOL and what is the role of race/ethnicity and facility racial composition?
Sample

- 356 LTC facilities
- MN NH residents in 2015 (n=11,147)
  - 10,455 White, Non-Hispanic residents
  - 692 non-white residents
    - 122 Native American
    - 65 Asian American/Pacific Islander
    - 415 Black/African American
    - 70 Hispanic/Latino
    - 20 Multiracial, Non-Hispanic
# QOL items

<table>
<thead>
<tr>
<th>Domain</th>
<th># items</th>
<th>Alpha</th>
<th>Sample items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>4</td>
<td>0.7351</td>
<td>Is it easy for you to get around in your room by yourself? Are your personal items arranged so you can get to them? Can you get to the personal items you want to use in your bathroom?</td>
</tr>
<tr>
<td>Personal Attention</td>
<td>6</td>
<td>0.7131</td>
<td>Do the people who work here treat you politely? Are you treated with respect here? Do the people who work here handle you gently?</td>
</tr>
<tr>
<td>Food</td>
<td>3</td>
<td>0.7042</td>
<td>Do you like the food here? Do you enjoy mealtimes here? Do they serve your favorite foods here?</td>
</tr>
<tr>
<td>Engagement</td>
<td>9</td>
<td>0.7356</td>
<td>Are there things to do here that you enjoy? Do the people who live here know you as a person? Do the people who work here ever stop by just to talk?</td>
</tr>
<tr>
<td>Negative mood</td>
<td>6</td>
<td>0.7706</td>
<td>In the past two weeks, how often have you been bored? In the past two weeks, how often have you been angry? In the past two weeks, how often have you been sad?</td>
</tr>
<tr>
<td>Positive mood</td>
<td>3</td>
<td>0.6078</td>
<td>In the past two weeks, how often have you been peaceful? In the past two weeks, how often have you been interested in things? In the past two weeks, how often have you been happy?</td>
</tr>
</tbody>
</table>
## Racial differences in QOL

<table>
<thead>
<tr>
<th></th>
<th>Range</th>
<th>White</th>
<th>Black</th>
<th>Native American</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment</strong></td>
<td>0-4</td>
<td>3.379</td>
<td>3.182**</td>
<td>3.495</td>
<td>3.387</td>
</tr>
<tr>
<td><strong>Personal attention</strong></td>
<td>0-6</td>
<td>5.530</td>
<td>5.031***</td>
<td>5.103**</td>
<td>5.229**</td>
</tr>
<tr>
<td><strong>Food</strong></td>
<td>0-3</td>
<td>2.448</td>
<td>2.025***</td>
<td>2.213*</td>
<td>2.169**</td>
</tr>
<tr>
<td><strong>Engagement</strong></td>
<td>0-9</td>
<td>7.109</td>
<td>6.360***</td>
<td>6.147***</td>
<td>6.572**</td>
</tr>
<tr>
<td><strong>Negative mood</strong></td>
<td>0-6</td>
<td>3.913</td>
<td>3.805</td>
<td>3.438**</td>
<td>3.825</td>
</tr>
<tr>
<td><strong>Positive mood</strong></td>
<td>0-3</td>
<td>2.271</td>
<td>2.159**</td>
<td>2.183</td>
<td>2.056**</td>
</tr>
<tr>
<td><strong>Summary score</strong></td>
<td>0-31</td>
<td>24.650</td>
<td>22.560***</td>
<td>22.580*</td>
<td>23.238**</td>
</tr>
</tbody>
</table>
Minority residents have different needs

- Age
- Gender
- Length of stay
- ADLs
- Cognitive Impairment
- Severe Mental Illness
- Behavioral symptoms
And They Live in Different Facilities

- Twin Cities vs other location
- For profit vs non-profit
- Facility size
- Medicaid patient day
- Staff retention
- Staff hrs per resident day
RQ1: Compared to white nursing home (NH) residents, do non-white residents experience lower QOL?

- Significant differences between white and non-white residents, even accounting for other factors.
  - Black residents had lower satisfaction with environment (5.5% difference), attention from staff, food enjoyment and overall summary score vs. White residents.
  - AI/AN residents had lower scores on attention from staff, social engagement (8.8% difference), negative mood (reverse coded) and overall summary score vs White residents.
  - Significant differences in summary score for “other” vs. White residents.
RQ2. Do NHs with lower proportions of non-White residents have better aggregate QOL scores than NHs with higher proportions of non-White residents?

- Higher proportion of non-white residents at the facility level is a significant predictor of lower QOL for food enjoyment, social engagement, and overall summary score, controlling for all other variables.

• Higher proportion of Black residents at the facility level was associated with significantly lower scores on environment, positive mood and overall summary score.
Key Findings 4: QUALITATIVE

4. How do minority residents experience QOL and what is the role of race/ethnicity and facility racial composition?
Data

• Ethnographies of 5 high proportion minority NHs (just recruited 6th facility)
  - 3 months of participant observation in each facility
  - Interviews with 81 residents
  - Interviews with 51 staff
  - Exit interviews with team members

• Focus groups in each community where NH is located
  - 36 focus group participants
Themes

I. Language concordance

II. Racial concordance

• “Say we have a resident ... we get quite a few Somali or Ethiopian residents who maybe speak very little English. I think that our staff who are Somali or Ethiopian do a really good job of taking care of them and do a really good job of translating for them and making sure their needs are met.”
Themes, cont.

• III. High social complexity as well as physical needs
  - Lack of family supports
• Homelessness

• IV. Importance of community engagement and transparent culture of care
  - Facilities that have few or no volunteers make it difficult for residents to connect with members of the community.
Implications for the Future
Summary

• Complex nature of QOL for NH residents.

• Policy and program interventions may include:
  - Increase mandated number of hours for activities staff (and/or increase funding for such staff).
  - Structure activities and NH environment to better accommodate more frail/sicker residents.

• Facility capacity may be vital not only in meeting physical needs and care but also in providing a nurturing social environment.

• Interventions need to address diverse resident needs within facilities.
  - Work with community organizations and facilities to improve QOL for vulnerable and complex residents, especially in facilities with low capacity to do so.
Thank you and Questions?

For further information:

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