THE QUALITY OF CARE FOR PEOPLE WITH COGNITIVE IMPAIRMENT IN HOSPITAL

Melinda Martin-Khan
Research Fellow, Centre for Research in Geriatric Medicine
Overview

- Where can we target our efforts to improve the quality of care for people with cognitive impairment in hospital?

  - Projects
    - Development of Quality indicators
  
  - Results
    - The concept of targeting using QI development
    - Emergency Department
    - Acute Care General Medicine Wards
Two Projects


**Method – Developing Indicators**

- Review relevant literature using a focused literature review process
- Summarise the literature
- Present to the Expert Panel
  - Develop preliminary indicators
- Carry out Field Work
- Present field work to the panel for indicator refinement
- Final Voting
Method: the value of field study data

- HOW DOES THE PANEL USE THE FIELD DATA....

  - Refinement of indicators: Adjusting the indicator definition (more generalisable)

  - Identification of target areas for improvement (targets aspect of care where there is potential for improvement)
Emergency Care Panel

Canberra Hospital and Australian National University
A/Prof Drew Richardson
Dr. David Elliot

Consumer Dementia Research Network, Australia
Ms Marilyn Wagland

Gold Coast University Hospital, Southport
A/Prof Julia Crilly

Ipswich Hospital, Ipswich and Royal Brisbane Hospital, Brisbane
Dr. Alison Cutler

John Hunter Hospital, Newcastle
Dr. Carolyn Hullick

Princes Charles Hospital, Brisbane
Dr. Fran Kinnear
Dr. Jeffrey Rowland

Princess Alexandra Hospital, Brisbane
Ms Elizabeth Donegan
Dr. Lyndall Spencer
Ms Dawn Bandiera

Queensland Health and the University of Queensland, Brisbane
Prof Leonard Gray

Redlands Hospital, Brisbane
Dr. Chris May

Royal Melbourne Hospital, Melbourne
A/Prof Caroline Brandt
A/Prof Tony Schnell

Royal Perth Hospital, Perth
A/Prof Glenn Arendts

Queensland University of Technology, Brisbane
Prof Elizabeth Beattie

Southern Cross University, Tweed Heads
Prof Colleen Cartright
## Acute Care Panel

<table>
<thead>
<tr>
<th>Institution</th>
<th>Panel Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monash University, Centre for Research Excellence in Patient Safety</td>
<td>A/Professor Caroline Brand</td>
</tr>
<tr>
<td>Austin Health, Austin Hospital</td>
<td>A/Professor Michael Dorevitch</td>
</tr>
<tr>
<td>The University of Queensland, Centre for Research in Geriatric Medicine</td>
<td>Professor Len Gray</td>
</tr>
<tr>
<td>The University of Queensland, School of Human Movement</td>
<td>Dr Nancia Peel</td>
</tr>
<tr>
<td>The University of Queensland, School of Human Movement</td>
<td>Dr Olivia Wright</td>
</tr>
<tr>
<td>Queensland Health</td>
<td>Trish Haroower</td>
</tr>
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<td></td>
<td>Dr Alison Mudge</td>
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<td></td>
<td>Donna O’Sullivan</td>
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<td>Susanne Pearce</td>
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<td></td>
<td>Dr Jeff Rowland</td>
</tr>
<tr>
<td>Northern Health, Northern Hospital</td>
<td>Dr Kwang Lim</td>
</tr>
<tr>
<td>Melbourne Health, Royal Melbourne Hospital</td>
<td>Professor David Russell</td>
</tr>
</tbody>
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# Dementia Care Panel

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<thead>
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<tbody>
<tr>
<td>Alzheimer’s Australia</td>
<td>Cathy Dancer, Catherine Sherlock</td>
</tr>
<tr>
<td>Monash University</td>
<td>A/Professor Caroline Brand</td>
</tr>
<tr>
<td>The University of Queensland</td>
<td>Professor Len Gray, Professor Nancy Pachana, Professor Gerard Byrne</td>
</tr>
<tr>
<td>Queensland Health</td>
<td>Dr. David Lie, Dr. Eddie Strivens, A/Prof Paul Varghese, Donna Maria Spooner, Dr. Catherine Yelland</td>
</tr>
<tr>
<td>Queensland University of Technology</td>
<td>Professor Elizabeth Beattie</td>
</tr>
<tr>
<td>Melbourne Health</td>
<td>Dr. Tony Snell</td>
</tr>
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RESULTS
Results

- In the process of developing quality indicators, we identified:
  - A stepped approach to quality (each area of care involves a range of steps for guidelines of care to be fully implemented)
Example: Delirium

- Steps in implementation

- Screen
  - Assess
  - Interpret
  - Respond

- Act

- Review
  - Evaluate
Example: Delirium

Percentages of patients with cause investigated for suspected or definite delirium

Hospital IDs

A  B  C  D  E  F  G  H  I

%
Example: Delirium

Percentages of patients screened for delirium

Screen
• Evaluate

Act
• Assess
• Interpret
• Respond

Review
• Evaluate

Hospital IDs

Percentages (%)
Results

- In the process of developing quality indicators, we identified:
  - A stepped approach to quality (each area of care involves a range of steps for guidelines of care to be fully implemented)
  - Variation in practice (indicates opportunities for improvement)
  - Potential to target the area where improvement is possible (in the short term) to maximise improvement in practice
EMERGENCY DEPARTMENT

Acknowledge with thanks the work of Linda Schnitker and Ellen Burkett
Cognitive Screening

- **Proportion of older people who received cognitive screening in ED**

![Bar chart showing percentage triggered in ED departments 1 to 8.](chart-image-url)
Delirium Screening

- Proportion of older people who received a screen for delirium in ED
Delirium: Acute Change

- Proportion of older people with cognitive impairment in ED whose cognition was assessed for an acute change.
Pain Assessment

- Proportion of older people with cognitive impairment who were assessed for pain in ED
Notifying Proxy

- Proportion of older people with cognitive impairment in ED where the ED provider ensured those close to the patient were notified.

![Bar chart showing percentage triggered by ED Department.](chart.png)
Structural Quality Indicators

The Pain Assessment in Advanced Dementia (PAINAD) Scale

<table>
<thead>
<tr>
<th>Pain Item</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasional labored breathing. Short periods of hyperventilation.</td>
<td>Neutral</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
<tr>
<td>Occasional cyanotic flush. Long periods of hyperventilation. Cyanosis</td>
<td>Normal</td>
<td>Neutral</td>
<td>Alerted</td>
</tr>
<tr>
<td>None</td>
<td>Normal</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
<tr>
<td>Ongoing distress, low levels of speech with a negative or disapproving</td>
<td>Normal</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
<tr>
<td>Quality. Hold breath, gulping, nodding, twitching.</td>
<td>Normal</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
<tr>
<td>Facial expression and language</td>
<td>Normal</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
<tr>
<td>Irritable</td>
<td>Normal</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
<tr>
<td>Incontinent of urine, diarrhea</td>
<td>Normal</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
<tr>
<td>No need to console</td>
<td>Normal</td>
<td>Alerted</td>
<td>Severe</td>
</tr>
</tbody>
</table>

Notes:
1. Pain is assessed by a trained observer.
2. Each item is scored on a scale of 1 to 3.
3. A total score of 8 or more suggests the presence of pain.

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## Structural Quality Indicators

<table>
<thead>
<tr>
<th>Domain</th>
<th>Quality Indicator: The ED has a policy outlining......</th>
<th>Triggered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Impairment</td>
<td>The management of older people with cognitive impairment during the ED episode of care</td>
<td>25% (2/8)</td>
</tr>
<tr>
<td>Carer friendly environment</td>
<td>Issues relevant to carers of older people with cognitive impairment, encompassing the need to include the (family) carer in the ED episode of care</td>
<td>12.5% (1/8)</td>
</tr>
<tr>
<td>Assessment and management of behavioural disturbances</td>
<td>The assessment and management of behavioural symptoms, with specific reference to older people with cognitive impairment</td>
<td>37.5% (3/8)</td>
</tr>
<tr>
<td>Delirium prevention</td>
<td>Delirium prevention strategies, including the assessment of delirium risk factors</td>
<td>43% (3/7)</td>
</tr>
<tr>
<td>Pain assessment and management</td>
<td>Pain assessment and management for older people with cognitive impairment</td>
<td>43% (3/7)</td>
</tr>
</tbody>
</table>
Acute Care

Acknowledge with thanks the work of Catherine Travers, Jo Tropea, and Mark Rozario
Cognition Assessment*

Percentages of documented assessment of cognitive ability within 48 hours of hospital admission

Hospital IDs

Percentages (%)

A
B
C
D
E
F
G
H
I
Delirium Screening*

Percentages of patients screened for delirium

Hospital IDs

Percentages (%)

0 10 20 30 40 50 60 70 80 90 100

A B C D E F G H I

The University of Queensland
Centre for Research in Geriatric Medicine
Depression Screen

Percentages of patients with mood or depressive symptoms assessed for depression

Percentages (%)

Hospital IDs

A  B  C  D  E  F  G  H  I
Cognitive Impairment Investigated

Percentages of patients with newly evident cognitive impairment and cause investigated

Percentages (%)

Hospital IDs

A B C D E F G H I
Treatment of Behavioural Symptoms

Percentages of patients with dementia and behavioural symptoms documented and treated

Hospital IDs

Percentages (%)

A  B  C  D  E  F  G  H  I
Evaluation of Capacity to Consent

Percentages of patients with evaluation of capacity of consent to healthcare decisions

[Bar chart showing percentages for hospitals A to I]
Percentages of patients with impaired capacity to consent with documentation of appropriate substitute decision maker

Hospital IDs

Percentages (%)
Communication

Percentages of patients with impaired cognition and had staff communicating with appropriate substitute decision maker
Outcome Indicators  (Applies to older patients in general medical wards)
Outcome Indicator: Delirium

- Patients with delirium indicating behaviours at discharge

![Bar chart showing percentages of patients with delirium for different hospital IDs. The chart indicates that hospital C has the highest percentage of delirium cases, followed by hospitals G and I, while hospital E has the lowest percentage.]
Primary Limitations

- For patients with dementia or cognitive impairment
  - Primary study selection criteria was ‘older persons’;
  - Goal: Larger sample with more generalisable results would be available in a study where the population had ‘cognitive impairment’ as an inclusion criteria

Figure: Proportion of sample with cognitive impairment in Acute Care Study
Primary Limitations

- **Scoring using chart audit data**
  - We are aware that identification of CI is poor (lowers the denominator and minimises the number reported as ‘missed’. Results are under reporting the outcomes.

<table>
<thead>
<tr>
<th>Hospital</th>
<th>TOTAL</th>
<th>Hospital 1</th>
<th>Hospital 2</th>
<th>Hospital 3</th>
<th>Hospital 4</th>
<th>Hospital 5</th>
<th>Hospital 6</th>
<th>Hospital 7</th>
<th>Hospital 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital 1</td>
<td>219</td>
<td>32</td>
<td>15</td>
<td>28</td>
<td>15</td>
<td>34</td>
<td>31</td>
<td>29</td>
<td>35</td>
</tr>
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**Figure: Identification of cognitive impairment in Emergency Department Study**
Conclusion

- OPPORTUNITIES TO IMPROVE CARE
  - Primary Issue
    - Recognition of cognitive impairment, delirium, or dementia

  - For people with cognitive impairment
    - Appropriate assessment of capacity (relative to significance of the decision making; ensuring respect)
    - Ensuring support people (family, carers, etc)/nominated decision makers are contacted when in ED/Acute Care
    - Consideration of acute change and the causes

- QUALITY INDICATOR RESEARCH
  - Enables a focused approach to targeting efforts to improve care
  - A way to measure improvement
Research Support

Co-Investigators
Professor Len Gray
Dr Nancy Pachana
A/Professor Gerard Byrne
A/Professor Richard Jones
Professor John Morris
A/Professor Caroline Brand
Dr Olivia Wright
Dr Catherine Travers
Ms Jo Tropea
Dr. Ellen Burkett
Professor Elizabeth Beattie
Ms. Linda Schnitker

Financial Support

- NHMRC Project Grant
- The Wicking Trust
- Alzheimer’s Australia Viertel Foundation Post-Doctoral Fellowship
- Queensland Emergency Medicine Research Foundation