“Emerging data from the Cork Dementia study”

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Why should we prioritise improving dementia care in acute hospitals?

- Common
- Costly
- Could do better
- Change practice
Extrapolating from elsewhere....

25% of acute hospital beds are occupied by a person with dementia (UK Alz Soc 2009)

Sampson et al, 2009: 40% of older medical admissions in a teaching UK hospital had dementia. Only 50% had a previous diagnosis.

Travers et al, 2013: 21% of older admissions to general medical, surgical and orthopaedic wards of four Queensland acute hospitals had dementia.
Cork Dementia Study, 2012-13

- Two weeks of admissions to six hospitals in Cork county...
Demographics

- 50% non-drinkers; 6% alcohol issues
- 45% married; 42% widowed
- Age 70-99: median 79
- 7% current smokers
- 6% in Nursing Homes
- 51% female
N= 676 non-day case admissions, age >70

N= 10 missed / discharged prior to screening

N= 666 initial contact made for screening (98.5%)

N= 58 not screened: Refused, n = 51
Actively dying, n = 7

N= 606 screened for dementia (90%)
N= 676 non-day case admissions, age >70

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MMSE 27/30 cutoff
Collateral history (IQCODE)
Delirium and depression
Expert panel consensus

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Expert panel consensus

N= 8 not possible to reach consensus diagnosis

N= 598 assigned diagnosis (88% of all admissions)
N = 598 assigned diagnosis (88% of total cohort)

N = 325 no cognitive impairment (54%)

N = 149 dementia (25%)

N = 119 cognitive impairment not reaching criteria for dementia (20%)
N= 598 assigned diagnosis (88% of total cohort)

N= 119 cognitive impairment not reaching criteria for dementia (20%)

N= 149 dementia (25%)

N= 325 no cognitive impairment (54%)

56% of cases were mild
28% moderate
16% severe
Age

N=231
32% had dementia

N=340
13% had dementia

N=54
63% had dementia

90+

70-79

80-89
Co-morbidities / functional status
<table>
<thead>
<tr>
<th></th>
<th>Cumulative Index Rating Scale</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cardiac (heart only)</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>2.</td>
<td>Hypertension</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>3.</td>
<td>Vascular</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>4.</td>
<td>Respiratory</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>5.</td>
<td>EENT (eye, ear, nose, throat, larynx)</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>6.</td>
<td>Upper GI</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>7.</td>
<td>Lower GI</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>8.</td>
<td>Hepatic</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>9.</td>
<td>Renal</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>10.</td>
<td>Other GU</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>11.</td>
<td>Musculo-skeletal</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>12.</td>
<td>Neurological</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>13.</td>
<td>Endocrine-Metabolic</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>14.</td>
<td>Psychiatric/Behavioral</td>
<td>0 1 2 3 4</td>
</tr>
</tbody>
</table>
CIRS-G: range 1-29 (max 56).
Median score: 9.7 controls v. 11.7 dementia, p < 0.0001

Barthel Index: range 0-20 (max 20)
Median score: 20 controls v. 11 dementia, p<0.0001

OR of dementia with higher Barthel: 0.8 (0.77-0.84)
Hospital variations

All public hospitals: 29% had dementia

Rural hospitals: 37%

Urban hospitals: 27%

Private hospital: 8% \( p < 0.0001 \)

Public hospital: OR of dementia: 2.6 (1.2-5.8)
Acute v elective admissions

- 30% of admissions were elective
- Acute admissions: 29% had dementia
- Elective admissions: 16% had dementia \( p < 0.001 \)

(Difference explained by age and poorer function)
Medical versus surgical patients

OR dementia in medical v. surgical patient: 2.4 (1.1-5.0)
Pre-admission Abode

- Home alone: 18%  \( p<0.0001 \)
- Home with another: 23%
- Sheltered accom: 39%
- NH: 77%
What independently predicted dementia...

- Age
  OR 1.1 (1.07-1.15)

- Barthel Index
  OR 0.8 (0.77-0.84)

- Medical admission
  OR 2.4 (1.1-5.0)

- Public hospital
  OR 2.6 (1.2-5.8)
Awareness of dementia:

Of 149 people with dementia,

- 53 had a previous diagnosis of dementia (36%), especially Nursing Home residents (p<0.04)
- 18 had some mention of “cognitive impairment” (12%)
- 16 were noted to be confused on admission (11%)

62 had no mention of any cognitive issue (42%)

In 27% of missed cases, the dementia was moderate/ severe
In-hospital course

- “Challenging behaviour” / staff burden
- Falls/ injuries/ iv antibiotics/ catheters/ enteral feeding

LOS: 5 days controls v. 6 days dementia, p = 0.07
Discharge destination

Of those admitted from home/sheltered accommodation:

- Dementia (n=113): 12% discharged to NH; 68% to home
- Control (n= 433): 2% discharged to NH; 87% to home
Place of abode at 1 year

- 69 people with dementia, admitted from home were alive at one year:
  - 23 were now in a Nursing Home (33%)

- 210 controls, admitted from home, were alive at one year:
  - 7 were now in a Nursing Home (3%)
At one year, 98 patients (16%) were dead

In-hospital: 8.7% of those with dementia and 2% of controls

At one year: 27% of those with dementia and 13% of controls

43% of controls died of cancer versus 10.5% of dementia patients
### Place of death....

<table>
<thead>
<tr>
<th></th>
<th>Dementia n= 149</th>
<th>Control n = 450</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total deaths</td>
<td>40 (27%)</td>
<td>58 (13%)</td>
<td>98 (16%)</td>
</tr>
<tr>
<td>Acute hosp</td>
<td><strong>26 (65%)</strong></td>
<td><strong>26 (45%)</strong></td>
<td>53%</td>
</tr>
<tr>
<td>Hospice</td>
<td>2 (5%)</td>
<td>13 (22%)</td>
<td>15%</td>
</tr>
<tr>
<td>LTC</td>
<td>7 (18%)</td>
<td>3 (5%)</td>
<td>10%</td>
</tr>
<tr>
<td>Home</td>
<td>5 (13%)</td>
<td>13 (22%)</td>
<td>18%</td>
</tr>
</tbody>
</table>
• Co-investigators:
  • Prof. Suzanne Cahill, Social studies TCD
  • Mr. John Linehan HSE manager
  • Prof. Will Molloy, Geriatrician
  • Dr. Kathleen O’Sullivan, Statistics
  • Dr. Noel Woods, Health Economist
  • Prof. David Meagher, psychiatrist
  • Dr. Aoife NiChorcorain, psychiatry of old age

• Researchers:
  • Mr. Ed Manning
  • Ms. Vanessa Browne
  • Ms. Aoife Barrett