Estimating the economic and social costs of dementia in Ireland

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Background

- Dementia is a costly condition & one that differs from other conditions in the way these costs are distributed
  - Worldwide cost of dementia estimated at US$604 billion – with 42% attributable to informal care & 42% due to residential care (Wimo & Prince, 2010)

- In Ireland, community-based services for those with dementia are partial & fragmented
  → reliance on long-stay residential care & family caregivers
Aim of this study

To employ a cost-of-illness methodology to estimate the economic and social costs of dementia in Ireland in 2010
Cost of illness studies

- Require the identification, measurement and valuation of all resources related to a particular disease
- Provides an estimate of the total burden of a disease to society...
- ... and the distribution of costs across budgets and sectors of the community
Methods

- Unit cost data were applied to resource use for people with dementia in Ireland across 4 categories
  1. Informal care (family caregivers)
  2. Health and social care
  3. Long-stay care
  4. Productivity losses associated with premature death

- Societal perspective adopted
But….

- Lack of nationally available data on number & distribution of people with dementia as well as unit cost & resource use data for those with dementia
Methods

- Applying European prevalence rates for dementia to Irish population estimates – estimate of 41,470 people with dementia
- 26,104 estimated to reside in the community receiving an estimated average of 8 hours of care per day
- Data on community, primary, out-patient and medication usage derived from recent small-scale study
- Day-case & in-patient data derived from Hospital In-patient Enquiry scheme
- Psychiatric care – National Psychiatric In-patient Reporting system
- Remainder in Long-stay care – 14,266 – but number significantly higher than that from official government estimates

→ Much uncertainty surrounding estimates – explored in sensitivity analysis
### Results - Total cost of dementia in Ireland, 2010

<table>
<thead>
<tr>
<th></th>
<th>Total cost (€)</th>
<th>% of total cost</th>
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<tbody>
<tr>
<td>Informal care</td>
<td>807,499,128</td>
<td>48%</td>
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<tr>
<td>Health &amp; Social care</td>
<td>147,947,223</td>
<td>9%</td>
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<tr>
<td>Long-stay care</td>
<td>731,148,816</td>
<td>43%</td>
</tr>
<tr>
<td>Premature mortality</td>
<td>4,339,591</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Total</td>
<td>1,690,934,758</td>
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</table>
## Results – sensitivity analysis

<table>
<thead>
<tr>
<th></th>
<th>Impact on total cost (€)</th>
<th>Impact on distribution of costs</th>
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</thead>
<tbody>
<tr>
<td><strong>Base case analysis</strong></td>
<td>1,690,934,758</td>
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<tr>
<td><strong>Number with dementia in long-stay care = 5879</strong></td>
<td>-160,342,518</td>
<td>Residential care = 20% of costs; informal care = 69%</td>
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<tr>
<td><strong>Number of informal care hours = 11</strong></td>
<td>+258,826,251</td>
<td>Informal care = 55% of costs</td>
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<tr>
<td><strong>Number of informal care hours = 5</strong></td>
<td>-322,807,381</td>
<td>Informal care = 37% of costs</td>
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Discussion

- Total annual cost of dementia in Ireland approximately €1.69 billion, equating to cost per person with dementia of €40,500
- Significant economic burden of dementia compared to other diseases/conditions
- Consistent with various international studies
- However, large degree of uncertainty around estimates given paucity of data in the area