

Screening For Dementia: Evidence on Costs and Benefits

Modelling a one-off screen for dementia
for all 75 year olds in the UK
(England and Wales)

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Dementia (England and Wales)

- 710,000 people living with dementia
- Less than half have a diagnosis
- Impact on quality of life
- Costs society £23 billion a year
- Costs fall primarily to people with dementia, their families & social care
- PM Challenge - target of two-thirds 'to be identified and given appropriate support' by 2015

What did we look at?

- One-off cognitive test for people age 75
- Possibly as part of another appointment such as a health check
- ‘Timely’ diagnosis (MMSE <24)
- 391,400 people age 75
- 16,800 (4.3%) with dementia
- 9400 do not have a diagnosis

Cognitive testing

- Primary care setting
- MMSE standard 15 minute appointment (or as part of other appointment)
- Clinical nurses and GPs
- 19% refuse a cognitive test (Holsinger et al., 2011)
- 89% sensitivity (11% with dementia not identified)
- 95.5% specificity (4.5% without dementia identified)
- 311,000 receive a cognitive test
- Cost - £10 million

Further diagnostic tests

- 2 specialist visits
- MRI or CT for 75% of people
- Average £540 per person
- 48% might refuse further diagnostic tests (Boustani et al., 2005)
- 10,600 go for further diagnostic testing
- Cost - £6 million

Interventions (person with dementia)

- Medications
 - 12 month treatment, £815
 - delay to residential care of 47 days (marginal cost of care £46 per day)
- CST
 - 8 week treatment, £300
 - cognition (0.48 SMD), communication (0.44 SMD) and quality of life (0.38 SMD).

Interventions (caregiver)

- Multi-component support
 - 0.39 resident caregivers, 0.32 non-resident adult children, 0.15 no caregiver, 14% other
 - 75% take up, 18% drop-out (52% of people diagnosed)
 - 10 hours counselling/ support, £475
 - median delay to residential care, 557 days (20% benefits for non-resident), £46 marginal cost of care per day

Interventions (caregiver)

- Psychological therapy
 - 33% in distress, £412
 - Reductions in depression (0.66 SMD), anxiety (0.21 SMD)

Results

As a result ...

- 3,500 people would receive diagnosis (3395 to 7592)
- 2150 otherwise would never be diagnosed
- Remaining 1350 diagnosed earlier
- 13,650 'false positives' (3,035 to 24,282).

Costs and savings

- Potential societal net costs associated with the screening programme of £236,012 were identified (almost cost-neutral)
- In sensitivity analyses, ranged from net costs of £3,649,794 to net savings of £4,685,768.

Conclusion

- Limited amount of robust evidence
- Limitations of model (e.g. no dynamic factors)
- Importance of caregiver support
- Highly conservative assumptions
- Excludes many potential harms and benefits

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