Health economic analysis on a psychosocial intervention for family caregivers of persons with dementia

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
The objective was to evaluate the cost-effectiveness of a psychosocial intervention, consisting of education and information for family caregivers of people with dementia. The authors concluded that there were no overall differences in costs and a significantly higher health-related quality-of-life for caregiver children and grandchildren receiving the intervention. The methods and conclusions were reasonable, but the results remain uncertain and may not be generalisable to other settings, including the UK.

Type of economic evaluation
Cost-utility analysis

Study objective
The objective was to evaluate the cost-effectiveness of a psychosocial intervention consisting of education and information for the family caregivers of people with dementia.

Interventions
The intervention was education and a support group for family caregivers. Each group comprised about eight family caregivers; most were spouses or adult children. There were five sessions, led by a registered nurse and a social counsellor. These included information and education about dementia disorders, depression, the symptoms of delirium, handling behavioural symptoms, medication, legislation and available services in the community. Groups met for two hours each week for five weeks. Each meeting was followed by a group discussion. Participants who were unable to join the groups had individual meetings with the nurse and counsellor for a total of four hours, and were invited to twice monthly counsellor group meetings over three months. Follow-up was conducted by the registered nurse, for each group, about 12 months after the fifth educational session. Family care givers in the intervention group could contact the physician, the nurse or the counsellor for further advice at any time over the 60 months of the study.

Family caregivers in the intervention and control (no intervention) groups received telephone interviews every six months throughout the study. During these interviews, the nurse was available to give information and advice.

Location/setting
Sweden/community.

Methods
Analytical approach:
The economic evaluation was undertaken as part of a quasi-experimental cohort study which was conducted over five years. The perspective was not reported.

Effectiveness data:
The main outcome was caregivers' health-related quality-of-life (HRQoL). Other outcomes considered due to the potential impact on costs and caregivers' HRQoL were survival and time before moving to a nursing home. These data were from the cohort study. Letters of invitation were sent to all those over 70 years old, who were receiving social services in two districts, which were selected based on their similar sociodemographic structures and levels of public service use. A formal process was followed to determine a diagnosis of dementia. For this study, the person with dementia and their family caregiver were a dyad. Dyads from the intervention district (n=153) were compared with
dyads from the control district (n=155). Family caregivers were categorised as spouses or cohabitants; children, children's spouses, grandchildren or siblings; and others.

Monetary benefit and utility valuations:
Caregivers' HRQoL was measured using EQ-5D utility outcomes. Two subsets were evaluated: people with dementia who lived at home; and people with dementia who had moved to a nursing home.

Measure of benefit:
The HRQoL results were presented separately and not combined with the costs to provide a summary outcome.

Cost data:
The cost categories were the costs of home help, adult day care, nursing home, and the intervention. Resource use for home help, adult day care and specific nursing home placement were collected annually by the district administrators. Tariffs from the local setting were used to value the resource use. Tariffs from home help services included the provision of a security alarm, meals on wheels and other services to support the person with dementia and family caregiver. Further resource use was obtained during the telephone interviews and questionnaires administered every three months. The intervention cost was based on labour. The costs for premises for meetings, and those of the caregiver in attending, were not considered. All tariffs and costs were adjusted to 2010 using the consumer price index. Costs were presented in Euros (EUR).

Analysis of uncertainty:
Variability in the data was presented, but no analysis of uncertainty was undertaken.

Results
Survival did not differ significantly between the two groups; 75% of those with dementia died within five years of the study starting. The time before the person with dementia moved to a nursing home did not differ significantly between the two groups.

In the analysis based on category of caregiver, where the caregiver was a spouse or cohabitant, there was a tendency for those in the intervention group to move into a nursing home earlier (mean 486 days) than those in the control group (mean 678 days; p<0.01). Where the caregiver was a child or grandchild, those in the intervention group moved into a nursing home later (mean 529 days) than controls (394 days; p=0.06). For other caregivers, no significant difference was found between the two groups; intervention mean 367 days compared with control mean 491 days.

Caregivers HRQoL whilst the person with dementia lived at home achieved an EQ-5D median value of 0.848 in the intervention group compared with 0.796 in the control group; a difference of 0.052 (p<0.01). After a person with dementia had moved to a nursing home, caregivers achieved an EQ-5D median value of 0.866 in the intervention group compared with 0.796 in the control group (p=0.16). Results differed depending on caregiver category.

People with dementia who were enrolled in the intervention group remained in the study longer, than those in the control group. The median total costs weighted for study length did not differ between the two groups; intervention group median EUR 1,926 (IQR 1,043 to 2,588) compared with control group median EUR 1,860 (IQR 864 to 2,577).

Authors' conclusions
The authors concluded that there were no overall differences in costs and a significantly higher HRQoL for caregiver children and grandchildren receiving the intervention.

CRD commentary
Interventions:
The intervention was described with sufficient detail and appears to have been a realistic option for the authors' setting. The content of normal care was not clear, but the analysis suggested that no alternative support was offered. The generalisability of the conclusion is affected by the content of the comparison care.

Effectiveness/benefits:
The study was reported in detail. Participant selection details were fully discussed and appear to have been appropriate.
As discussed by the authors, the nature of the study means that despite their best attempts to minimise selection and participation bias, some uncertainty remains. The survival analysis and the analysis of the EQ-5D data were appropriate, but it was unclear what differences the study was powered to detect, and many of the sub-analyses were for small groups. This limitation was highlighted by the authors.

Costs:
The costs appear to have been limited to those relevant to the municipality, or the payer, and were a mix of tariffs and labour costs. The costs were well reported and appropriately adjusted. Both the resource use and the unit costs were from sources appropriate to the study setting and population. The costing methods generally appear to have been good.

Analysis and results:
The results were well presented and supplementary information was available. The authors presented the cost and EQ-5D index value, which represented the utility over the duration of the study. Quality-adjusted life-years were not calculated and not presented. QALYs would have allowed a cost per QALY to be derived, to facilitate comparison with a broader range of interventions. It was unclear how meaningful the change in EQ-5D score would be in reality. Further discussion on this issue was warranted and would allow consideration of changes in context. Appropriate statistical analysis was undertaken, but sensitivity analyses to assess uncertainty in the data were not performed.

Concluding remarks:
The methods and conclusions were reasonable, but the results remain uncertain and may not be generalisable to other settings, including the UK.

Funding
Funded by Lund University, Sweden.

Bibliographic details

PubMedID
24157891

DOI
10.1159/000355365

Indexing Status
Subject indexing assigned by NLM

MeSH
Adult; Aged; Aged, 80 and over; Caregivers /economics /psychology; Cost of Illness; Dementia /economics /mortality /psychology; Female; Humans; Kaplan-Meier Estimate; Longitudinal Studies; Male; Middle Aged; Nursing Homes /economics /statistics & numerical data; Quality of Life /psychology; Resource Allocation /economics /statistics & numerical data; Social Support; Spouses /psychology; Sweden /epidemiology; Taxes /economics

AccessionNumber
22013047293

Date bibliographic record published
03/12/2013

Date abstract record published
25/02/2014