

and 7,668 euros respectively. For the replacement approach the costs for severe, moderate and mild patients were 25,333, 16,631, and 9,932 euros respectively. Informal support and costs, in terms of ADL, IADL, Social/recreation and Behaviour increased with Alzheimer severity. **CONCLUSIONS:** This study gives some new perspectives on informal care giving for persons with Alzheimer. Informal care for Alzheimer represent a significant hidden cost to Spanish society. This aspect of caring must be addressed by the development of well-targeted respite and relief support programmes. Because the Spanish community is rapidly aging, this informal care burden may increase significantly in the future.

PNM10**COST EFFECTIVENESS OF MEMANTINE IN THE TREATMENT OF MODERATELY SEVERE AND SEVERE ALZHEIMER'S DISEASE IN SPAIN**

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OBJECTIVES: Placebo-controlled clinical trials have demonstrated the efficacy of memantine versus placebo in moderately severe and severe Alzheimer's disease. A modelling approach has been adopted to estimate costs and outcomes of memantine treatment in clinical practice in Spain. **METHODS:** A Markov model simulated moderately severe and severe patients' progression through levels of combinations of severity, autonomy, and setting over five years. Model inputs include clinical trial results and measurement of patient and caregiver resource utilisation from a societal perspective using literature and expert data. The main outcome measures were time spent in autonomy (patient's ability to accomplish activities using the ADCS-ADL scale) and time to institutionalisation. This cost-effectiveness study compared the memantine treatment strategy to that of no pharmacotherapy and to donepezil for patients with moderately severe AD followed by no pharmacotherapy when patients reach the severe AD level. **RESULTS:** The time spent in autonomy for patients treated with memantine is 14% longer in duration than for patients treated with donepezil and 25% longer than for patients without pharmacotherapy. The delay time to institutionalisation was 8% longer with memantine compared with donepezil and 12% longer with memantine compared with no treatment. Over a 5-year period, patients treated with memantine showed a decrease of €268 and €511 in total Health care costs, compared with donepezil and no treatment, respectively. Robustness of the results was validated by a comprehensive sensitivity analysis. **CONCLUSION:** Memantine is more effective in increasing time spent in autonomy and in reducing Health care costs compared with donepezil or no pharmacotherapy.

PNM11**IMPACT OF DEEP BRAIN STIMULATION (DBS) OF THE SUBTHALAMIC NUCLEUS (STN) ON HEALTH-RELATED QUALITY OF LIFE (HRQOL) AND HEALTH CARE RESOURCE USE IN ADVANCED PARKINSONIAN PATIENTS**

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OBJECTIVES: To assess the impact of DBS of the STN on HRQOL and on Health care resource use in French advanced parkinsonian patients and to estimate the cost of the procedure. **METHODS:** SPARK is an observational prospective multicentre study using a before-after methodology carried out between November 1998 and March 2002 in a cohort of 88 patients with severe Parkinson's disease (PD). Quality of life was assessed before surgery and at 12-month follow-up using a specific instrument, the PDQL 37 (Parkinson's Disease Quality of Life) that has a 3-month recall period. The resource use data were monthly collected from individual questionnaires. Two periods of observation were considered: the first 6 months prior surgery and from the 6th to the 12th month after surgery. The cost of the procedure (surgery, material and checkups over 1 year) was assessed from data collected in the 4 centres. The economic analysis was performed from a Health Insurance perspective. **RESULTS:** About 66% of patients were men. The mean age of patients was 57.3 ± 7.7 years with a mean duration of PD of 13.9 ± 5.0 years. At 12-month follow-up after surgery, the quality of life was significantly improved (+28%, $p < 0.0001$). All the PDQL subscores were concerned by this improvement, especially the social dimension (+43.5%, $p < 0.0001$). The average 6-monthly cost decreased from $\text{€}10,087 \pm 4,887$ prior surgery to $\text{€}1,673 \pm 2,111$ after surgery ($\text{€}-8,415 \pm 4,438$, $p < 0.0001$). Taking into account costs related to adjustments of the parameters of the stimulator, the difference was reduced but remained significant: $\text{€}-7,275 \pm 5,128$ ($p < 0.0001$). The most important savings came from a dramatically decrease in medication use. **CONCLUSIONS:** Our findings showed a significant impact of DBS on HRQOL and on medical resource use in patients with PD.

PNM12**EARLY DECISION MAKING MODELLING IN PARKINSON'S DISEASE—THE CASE OF NEURAL TRANSPLANTATION IN PATIENTS WITH ADVANCED PARKINSON'S DISEASE**

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OBJECTIVES: The purpose was to develop an early decision-making model for Parkinson disease (PD) and to assess the cost-effectiveness of neural transplantation (NT) compared to standard treatment in PD.