The Costs of Care for Alzheimer’s Disease

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The burden of Alzheimer’s disease and other dementias is enormous. Given the ageing profile of western populations, and the resulting projected increases in prevalence levels, concerns are growing over the future costs of caring for affected individuals and the ability of already resource constrained formal and informal care systems to cope. New research by HEPA researchers focuses on examining costs of care, and their determinants, for Alzheimer’s disease in Ireland.

Key words: Alzheimer’s disease; cost; dependence; function.

INTRODUCTION AND CONTEXT

Alzheimer’s disease, the most common cause of dementia, is characterised by the gradual death of brain cells leading to the progressive decline of functions such as memory, orientation, understanding, judgement, calculation, learning, language and thinking. The burden of Alzheimer’s disease is enormous, affecting the individual, their families and friends, the healthcare system, and the state. Within this context, a field of research has emerged which examines the costs of formal and informal care for Alzheimer’s disease. In particular, the focus of analysis has been the relationship between disease severity, expressed in terms of functional capacity and dependence on others, and costs of care. In a recent study, researchers from HEPA, using data from the Enhancing Care in Alzheimer’s Disease (ECAD) study and published in The International Journal of Geriatric Psychiatry (Gillespie et al, 2013), examined this relationship as it arises in the Irish context. In doing so, the paper contributes to the growing international literature in this area and also provides evidence that will be of relevance to those charged with the design and planning of future service provision for patients with Alzheimer’s disease and other dementias in Ireland and elsewhere.

APPROACH AND FINDINGS

Data collected as part of the ECAD study were used in the analysis. In brief, 100 community dwelling participants with Alzheimer’s disease were identified and recruited from referrals to the memory clinic of a university teaching hospital in Dublin. A range of data on clinical and socio-demographic factors, health and social care utilisation and caregiving hours was collected for each participant via medical assessments and structured questionnaires with a primary caregiver.

Two cost variables were identified, estimated and examined in the analysis. These included: (i) formal health and social care costs; and (ii) informal care costs. Formal health and social care costs were estimated for a set of resource activities including general practice visits, hospitalizations, outpatient clinic consultations, accident and emergency visits, respite care, meals on wheels services and additional health and social care professional consultations. Data on utilisation over a 6 month period was collected using structured questionnaires completed by the primary caregiver and the total cost of care was estimated by applying the appropriate unit cost estimate for each resource activity. Informal care costs were calculated from estimates of caregiving hours provided by the primary carer for each patient. This included the total number of hours dedicated to basic activities of daily living, instrumental activities of daily living and supervising the patient. Hours of care per task per carer were summed to obtain an estimate of total daily caregiving hours per patient. Informal care was valued using the opportunity cost method. The daily cost of informal care was extrapolated to obtain an estimate of informal care cost over a 6 month period.

A multivariate statistical analysis was conducted to explore the effects of disease severity, measured using dependence and function, on costs of care, while controlling for a range of socio-demographic and other clinical measures. Patients’ dependence on others was measured using the Dependence Scale (DS), a 13-item measurement tool administered to a caregiver. Patient function was measured using the Disability Assessment for Dementia (DAD) scale, a 10-item measurement tool administered to a caregiver.

When all individual resource activities were costed and summed, the mean cost per patient of health and social care was €1,845 over 6 months. In respect of informal care, the mean cost per patient was €33 per day and €4,959 over 6 months. The multivariate analysis results for health and social care cost indicate that a one point increase in DAD, that is a one unit improvement in patient function, was associated with a €189 reduction in health and social care costs over 6 months. In respect of the results for informal care costs, a one point increase in DS, that is a one unit increase in patient dependence on others, was associated with a €667 increase in informal care costs over 6 months, while a one point increase in DAD, that is a one unit improvement in patient function, was associated with a €224 reduction in informal care costs over 6 months.

CONCLUSIONS AND POLICY IMPLICATIONS

Our findings suggest that levels of dependence and function for patients with Alzheimer’s disease were significantly associated with various components of the cost of care. We find that patient dependence and function were important predictors of informal care costs, while patient function was an important predictor of formal care costs. Thus, interventions that reduce patient dependence on others and functional decline may be associated with cost savings for both formal and informal care systems. Such information is of particular importance for clinicians and policymakers who are charged with planning for future care needs for patients with Alzheimer’s disease and other dementias in Ireland and elsewhere.

REFERENCES