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Title: Outcomes in Cognitive Impairment in Canterbury

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Introduction:

Dementia is a clinical syndrome very common in the elderly and symptoms progress as people age. It is common for them to experience a decline in cognitive mental ability but it is not a normal part of growing older. Symptoms of dementia can vary depending on underlying causes and various factors. The most common characteristics of cognitive impairment involve memory lapses, repeating stories, disorganised speech, mood swings, placing things in inappropriate places and poor hygiene. Dementia causes short-term memory loss which affects everyday activities of life such as managing finances or medications. The main cause of dementia is Alzhiemer's in 60% of cases and another 40% includes vascular dementia, Fronto-temporal dementia, Lewy body dementia, alcohol related dementia and dementia with Creutz-Jakob disease. Acute cognitive decline is often the first indicator of an underlying somatic imbalance such as dehydration and urinary incontinence. Cognitive impairment due to dementia may impact negatively on the effectiveness of treatments and interventions for other aging related diseases and also increases the length of hospital stays.

In New Zealand, 44,000 people have been diagnosed with dementia and this figure is likely to represent only 60% of actual cases. Equally as with most industrialized countries, New Zealand is expected to experience a significant increase in the aging population. The percentage of people aged 65 and over is expected to increase from 13% in 2009 to 21% in 2031. There will be one million people over the age of 65 in 2020, when they will outnumber the child population. As the aging population increases in New Zealand, the emotional, social and economic costs of dementia are expected to increase. It is crucial to understand the level of cognitive impairment due to dementia and the outcomes of cognitive impairment in the elderly population so as to help New Zealand population to grow healthier.

Aims:

To determine the effect of cognitive performance scale results on outcomes for elderly people with dementia in Canterbury.

Methods:

In this project, the data on elderly Canterbury residents with full interRAI MDS home care assessments and data on medium term outcomes using National Minimum Data Set (NMDS) were used.

The InterRAI assessment was developed by a multi-disciplinary collaborative network of academics and clinicians in over thirty countries committed to improving the care of older people. In 2008, the Ministry of Health in New Zealand implemented the interRAI assessments in 21 districts and assessments became compulsory for all applying to use care services or to enter residential care. NMDS is a national collection of public and private hospital discharge information, including coded clinical data for in-patients and day-patients.

Three thousand Canterbury residents had full interRAI MDS assessments, of these, 1846 gave informed consent to use their data for research purposes. After removing missing data and repeated entries, 1772 cases were used for final analyses.

The data on interRAi and national minimum dataset were linked using the NHI number. The outcomes such as requirements for residential care and mortality data were established for patients with different levels of cognitive performance. The elders' level of cognitive performance was derived from cognitive performance scale based on interRAI assessment. The association of cognitive impairment due to dementia with age, sex and ethnicity was assessed.

Results:

About 10% (n=179) of the sample population was diagnosed with dementia in the Canterbury region. Dementia was most commonly present in the elderly aged 75 and above. There is no significant difference between rates of dementia between Maoris and non-Maoris. However, prevalence of dementia was higher among females (11.5%) when compared to males (7.7%). The activity of daily living and cognitive performance scales were strongly associated with dementia. Almost 82% of dementia patients had moderate or severe cognitive impairment. The statistical analyses indicated that dementia with mild to severe cognitive impairment; and urinary and bowel incontinences were the major predictors of early admissions to residential care, when controlling for age, sex and ethnicity.

Conclusion:

The study results indicate that the prevalence of dementia is common among elderly in Canterbury and it was associated with mild to severe cognitive impairment. Dementia is one of the major causes of early institutionalisation. The results imply that the cognitive performance scale measured using interRai assessment could be used as an indicator of early admission to residential care. The result also implies that interRAI assessments could be used to identify dementia patients with cognitive impairment. Those who identified with mild or severe cognitive impairment should be targeted for appropriate intervention to prevent early admission to residential care. This information will be used to help improve the care of elders with dementia.