multidisciplinary team on these wards, record patients’ consent to involvement in future research and facilitating reporting on service performance issues. This project will be undertaken over the next 12 months. **Results:** There are likely to be a number of benefits flowing from this project for clinical staff and researchers interested in aged care and dementia. These include the convenience of a single point of access to comprehensive data describing service performance, patients’ clinical information including assessment results and summary information for specific clinical research projects. This information may be provided in routine reports and on an “on demand” basis to appropriate staff. **Conclusions:** This exciting project will place these clinical services and WDREC researchers in a position to be able to conduct a variety of valuable clinical research projects that are likely to enhance service provision and improve the care of older adults in the future.

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**LIFESPAN MENTAL ACTIVITY PREDICTS DIMINISHED RATE OF HIPPOCAMPAL ATROPHY**

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**Background:** Epidemiological studies suggest that complex mental activity may reduce the risk for dementia, however an underlying mechanism remains unclear. Our objective was to determine whether lifespan complex mental activities were linked to altered rates of hippocampal atrophy. **Methods:** Complex mental activity was estimated using the Lifetime of Experiences Questionnaire (LEQ) in healthy elderly controls from the Sydney Stroke Study, a 5-year longitudinal study (N = 70). Manual tracing of hippocampal volume and semi-automated quantitation of whole brain volume (WBV) and white matter hyperintensities (WMHs) was completed on MRI scans at baseline and 3-year follow up. Individuals were median-split into high and low LEQ groups, whereby high LEQ was indicative of greater mental activities. **Results:** Partial correlation analysis found those with higher LEQ scores experienced less hippocampal atrophy over the follow-up period (r = 0.37, p = 0.036). High LEQ individuals had less than half the hippocampal volume decline of low LEQ individuals in a multivariate analysis (F = 5.97, p = 0.02). No parallel changes were found in measures of WBV and WMHs. **Conclusions:** High level of complex mental activity across the lifespan was related to a reduced rate of hippocampal atrophy. This finding could not be explained by general differences in intracranial volume, larger hippocampi at baseline, presence of hypertensive disease or low mood. Our results suggest that neuroprotection in medial temporal lobe may be one mechanism underlying the link between mental activity and lower rates of dementia observed in population-based studies.

**A COMMUNITY-BASED EXERCISE PROGRAM TO IMPROVE COGNITIVE FUNCTION IN PEOPLE WITH MILD TO MODERATE ALZHEIMER’S DISEASE: FEASIBILITY AND SAFETY STUDY**

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**Background:** There is growing evidence that physical exercise may improve functioning in people with dementia, however there are few exercise programs specifically designed to meet the needs of people with dementia. The aim of this pilot study was to assess the feasibility and safety of a community-based exercise program for people with dementia, developed at the Launceston General Hospital. **Methods:** Twelve patients diagnosed with mild to moderate Alzheimer’s disease from the hospital’s memory disorders clinic participated in an 8-week trial of the exercise program. The program involved home-based daily exercises and walking, supported by a weekly group exercise session. All patients exercised and information about compliance and their experience of the program was collected through a daily diary and a program evaluation. Safety was monitored throughout the trial. **Results:** Participants were 5 men and 7 women with mild to moderate Alzheimer’s disease, mean age 76.5 years (range 70-87 years) and mean Mini Mental State Examination score of 21.3 (range 13-28). The program proved to be feasible, with 11 of the 12 participants (92%) completing the trial, exercising 4-5 times every week on average. The program evaluations indicated that participants and their carers enjoyed the program. No safety issues were identified. **Conclusions:** This pilot study demonstrated that the exercise program for people with dementia, developed at the Launceston General Hospital, is both feasible and safe. A larger randomised, controlled trial is now underway to assess the impact of the program on cognition, physical functioning, behaviour and sleep in people with dementia.