

The ageing population and the burden of chronic disease are firmly entrenched as challenges for the Australian healthcare system. Caulfield Hospital provides health care services across Rehabilitation, Aged Care, Residential Care and Aged Psychiatry in both inpatient and community and ambulatory settings, and is therefore well placed to meet these challenges.

During 2010, Caulfield Hospital continued to foster and develop a growing research culture. It is intended that this will contribute significantly to the implementation of effective translational research and interdisciplinary and person centred models of care, with links to defined clinical outcomes in areas of greatest need.

One of the key achievements in 2010 was the development of the 2011-2013 Caulfield Hospital Research Strategy, building on the achievements of the 2007-2011 Caulfield Hospital Research Strategy. Research Program Areas were identified which reflected the range and diversity of Caulfield Hospital services across medicine, nursing and allied health, and outlines the priorities and drivers of research fundamental in delivering the aims outlined in Alfred Health's strategic plans. The following Research Program Areas will become the focus for research activity over the next three years:

- Innovative models of care
- Management of chronic disease
- Mental health and cognition
- Health promotion
- Improving physical and functional outcomes
- Pain management and treatment

The evolution of a nationally recognised research culture at Caulfield Hospital continues with the following notable achievements in 2010:

- Caulfield Hospital Grants Program awarded \$50,000 in internal grant funding to Caulfield staff facilitating four new small projects and one major new research project
- Seven externally funded research projects attracting \$790,311 and two clinical trials funded for \$182,383 during 2010

Dr Ettie Ben-Shabat (left) and Dr Mithu Palit investigate the effects of botulinum toxin A injections for treatment of lower limb dystonia.



- A regular, committed and ongoing Caulfield Hospital Research Interest Group with monthly meetings held and monthly research newsletters distributed to all Caulfield staff
- Greater focus on research as a part of Caulfield Week and the implementation of the Caulfield Week Mini Poster Presentation session
- Development of a Research Coordinator role to assist in the implementation of the Caulfield Hospital Research Strategy: Nicole Austin commenced in this position in January 2010 and has provided extensive support to research activities across the hospital and its programs

Aged Care Services

One of the key priorities for Aged Care Services was the development of discrete projects that allowed advanced trainee geriatric medicine registrars to complete their research projects, while still ensuring the overall goals of the clinical program were met. During 2010, the areas of aged psychiatry, trauma in the elderly, osteoporosis, falls/nutrition/sarcopenia, and community geriatrics were identified. Research projects were undertaken within these areas to ensure the continued development of an effective skill and knowledge base in 2011. Of note was the award to Dr Chris Moran by the Australian Society for Geriatric Medicine (Victorian Committee) for the most outstanding advanced trainee presentation on 'Outcomes of cervical spine immobilisation post fracture in older people'.

Rehabilitation Services The Spinal Rehabilitation Unit

The Spinal Rehabilitation Unit offers a specialised statewide interdisciplinary clinical service for individuals with non-traumatic spinal conditions, including multiple sclerosis, transverse myelitis, spinal cord ischaemia, cancer related spinal impairment, spinal infections and spina bifida. Research activity is strong, with the following projects completed for publication in 2010:

- Costs and adverse events associated with hospitalisation of patients with spinal cord injury (SCI) in Victoria (New PW, Jackson T)
- A multidisciplinary consultation team to address the unmet needs of hospitalised SCI patients (New PW)
- The importance of early diagnosis of herpes zoster myelitis (Ong LWO, Churchyard AC, New PW)

Ongoing research in the Spinal Rehabilitation Unit includes:

- Comparison of traumatic and non-traumatic SCI
- Quality of life in adults with SCI
- Survival after rehabilitation for SCI due to tumour
- Comparison of the management of the patient in specialised and non-specialised rehabilitation units
- Management of the SCI patient during admission and discharge
- Rehabilitation outcomes of SCI due to tumour
- Bladder and urodynamics outcomes in a retrospective case series of patients with non-traumatic SCI
- Functional outcomes of the SCI patient with acute spinal cord ischemia
- Improving outcomes of the SCI patient in the acute setting

Aged Psychiatry

An investigator initiated study investigating the neuropsychological characteristics of patients referred with senile squalor (Macfarlane S, Kotsios C, Mastwyk M) is under way. Participation in clinical trials into Alzheimer's disease included:

- Effect of passive immunisation on the progression of Alzheimer's disease: solanezumab (LY2062430) versus placebo (Macfarlane S)
- Exploratory study of S38093 versus placebo in patients with mild to moderate Alzheimer's disease (Macfarlane S)

Clinical Innovations and Interdisciplinary Projects

The Clinical Innovation and Interdisciplinary Projects team supports quality improvement projects across the hospital and its programs, and is also responsible for the management of the research strategy implementation and the Advance Care Planning program. In addition to the valuable work of the Research Coordinator in developing and driving the research strategy for Caulfield Hospital, a number of research projects have been generated.



Findings from the under nutrition pilot study are translated into a Lunch Club initiative at the Glen Eira Nursing Home. Residents are encouraged to eat in a social setting, free from interruption.

The results from the pilot study 'Reducing functional decline due to under nutrition in older patients' (Marshall K, Hunter P, Gill L, Gordon A) were incorporated into the Victorian Department of Health's Best Care for Older People Everywhere toolkit. This exciting initiative was launched in 2010 and designed to assist health services by identifying tools and resources to assist them in the provision of improved care for the older person while in hospital and following discharge. Furthermore, the findings from this pilot study are being expanded to include residential care at Caulfield Hospital. Findings were presented at the Best Care for Older People Conference in September 2010.

Other current projects include:

- Does offering an advance care planning service to people recently diagnosed with dementia or mild cognitive impairment by the Cognitive, Dementia and Memory Service clinic lead to completion of advance care planning documentation? (Nicholes M, Lewis M, Rand E, Mullaly L, Macfarlane S, Hunter P)
- Advance care planning and pulmonary rehabilitation: a pilot project (Holland A, Miller B, Lee A, Nicholes M, Burge A, Purcell S)

Community and Ambulatory Services

Community and Ambulatory Services provide community based therapeutic interventions that may improve function and/or prevent the deterioration of existing conditions.

The Cardiac Rehabilitation Unit (CRU)

The CRU provides a comprehensive multidisciplinary approach to rehabilitate patients who have experienced a cardiac event, heart failure or require risk factor modification. Research projects include:

- Phase 3 Cardiac Rehabilitation – a collaborative pilot project between CRU and Caulfield Community Health Service (Wise F, Sheppard R, Patrick J, Corben K)
- Determination of the minimal clinically important difference for the 6 minute walk test in heart failure (Wise F, Holland A, Sheppard R)

Caulfield Pain Management and Research Centre

The centre provides specialist assessment and treatment for adults with chronic non-malignant pain and cancer survivors with chronic pain, and conducts research on outcomes of pain treatments, psychosocial aspects of chronic pain, pain and ageing and novel therapies for pain. Current projects:

- Investigating a novel therapeutic intervention for chronic pain following neurotrauma (Miller SM, Ngo TT, Gibson SJ)
- Investigating caloric vestibular stimulation as a novel therapeutic intervention for chronic pain, mania and depression (Ngo TT, Gibson SJ, Fitzgerald PF, Miller SM)
- MRI and transcranial magnetic stimulation (TMS) compatible electroencephalography system and an MRI-compatible TMS system (Georgiou-Karistianis N, Fitzgerald P, Stout J, Cornish K, Maller J, Rossell S, Miller S, Enticott P, Rinehart N, Bourne J, Hourigan K, Rajan R, Hohwy J, Dubaj V, Zhang J)
- Effect of electroacupuncture on opioid consumption by patients with chronic musculoskeletal pain: a randomised controlled study (Xue C, Zheng Z, Gibson SJ, Helme RD)
- The effect of combined therapies of electroacupuncture and cognitive behavioural therapy on chronic tension-type headache: a randomised controlled clinical trial (Greenwood K, Xue C, Zheng Z, Gibson SJ)
- Optimising pain management in frail older people (McLachlan A, Naganathan V, Le Couteur D, Hilmer S, Gibson SJ)

Nursing

The development of nursing research is a key focus in the overall evolution of a research culture at Caulfield Hospital. In 2010, a Nursing Services Research Committee was established to assist in facilitating and supporting the development of research projects.

Allied Health

Allied Health offers an intensive and diverse range of services to Caulfield Hospital's rehabilitation and aged care clients in a multidisciplinary team environment.

Research projects within the Spasticity Management Clinic:

- Botulinum toxin A injections for treatment of lower limb dystonia
- Inter-rater and intra-rater reliability of the Tardieu Scale for assessment of the leg muscles
- Comparisons of the gait patterns of people with lower leg dystonia and spasticity
- Botulinum toxin injection for management of muscle overactivity – a longitudinal study of outcomes
- Sensitivity of functional outcome measures to change following Botulinum toxin injection of the lower limb

Publications

20 Journal Articles
5 Book Chapters