Expanding our research agenda
Mission Statement

To be the centre of excellence in Australia for research (preventive and public health, service delivery, clinical and biological) into ageing and improving the life and health of older people.

NARI aims to achieve this by:

Providing and promoting education concerning ageing by the expansion, advancement and dissemination of knowledge concerning all aspects of ageing

Conducting and promoting research into the health status and needs of the aged

Conducting and promoting research and inquiry into the provision and effectiveness of clinical care, health services and technologies provided to the aged

Developing the highest academic standards of study and practice in medicine as it relates to the aged

Conducting research into the biology of ageing, including, but not limited to, the cause, prevention and cure of disease and the relief of suffering associated with ageing

Front cover: Special NARI friendships. Ninety-year-old Mary Campbell (left), a NARI volunteer for 13 years, met sisters Violet and Philomena Peters five years ago at a tai chi research project being organised by Associate Professor Keith Hill. The women’s friendship and interest in NARI have continued.
PhD student Loretta Quinn is investigating music therapy for people with dementia.
It gives me great pleasure to present the Annual Report of the National Ageing Research Institute for 2006-07. This year, we have had some major successes in investigative and collaborative research that will significantly influence our understanding of ageing and best practice in aged care, particularly for stroke prevention and dementia.

We were delighted to welcome our new Acting Director, Professor David Ames, in May. Professor Ames is Professor of Psychiatry of Old Age at the University of Melbourne, and has been closely linked with NARI for more than 15 years, having formerly been an Institute Associate. Professor Ames is recognised nationally and internationally for his contribution to the psychiatry of old age. He brings to the Institute vast knowledge and experience of the psychiatric and psychological problems suffered by older people, particularly dementia, mild cognitive impairment and depression. Professor Ames will be permanently appointed as NARI’s Director in September.

This report showcases our research for the year, though several funding successes deserve to be highlighted. We have received sponsorship for two years from the JO & JR Wicking Trust to investigate the effects of music therapy on dementia; the ICARUSS project of integrated care to reduce secondary stroke has been funded for three years by the HCF Health and Medical Research Foundation, and we have been asked by the Commonwealth Department of Health and Ageing to prepare a dementia resource kit. These projects have ensured that financially, NARI finished the year with a healthy surplus. Under our new Director and with the backing of such grant successes, we believe NARI’s long-term future is assured.

During the year, the Board continued to explore avenues for affiliation and collaboration. While we enjoy committed support from Melbourne Health, possible additional affiliations with other healthcare institutions are being considered. The Board is treating this issue seriously, keeping in mind the 30-year association with Melbourne Health and its predecessors. Similarly, we reviewed our affiliation with the University of Melbourne, and decided against augmenting or pursuing affiliations with other universities. Of course, collaborative research with healthcare organisations, universities and other institutes continues unfettered.

I wish to thank the Institute’s staff for their commitment and dedication to healthy ageing. In particular, Associate Professor Stephen Gibson, Deputy Director and the Director of the Clinical Research Division, Associate Professor Keith Hill, Director of the Preventive and Public Health Division, and Dr John Barlow, the Deputy Director (Operations and Development), ensured the Institute’s smooth running and growth during the sometimes challenging phase between directors. Associate Professor Hill was recently appointed the foundation Professor of Allied Health at La Trobe University, but he will remain an integral part of the Institute, albeit part-time.

I would like to thank the Board members for their support and guidance during the year, particularly Vice-President Judith King, Secretary John Grace, Treasurer Colin Smith and former president Alan Castleman; they also comprise the finance sub-committee. I am especially grateful to Professor Jim Angus, who facilitated the appointment of our new Director, and the other Board members involved in the selection processes. Board members Dr Peter Brennan, Mr Victor New and Mr Doug Robertson resigned during the year. We were very pleased to welcome Melbourne Health’s new CEO, Ms Linda Sorell.

I would also like to thank Professors Rob Helme, David Le Couteur, John MacCallum, Kerin O’Dea and Bob Williamson. As members of the Professoriate, they provided invaluable scientific advice and guidance throughout the year.

Finally, I wish to thank the Victorian Government Department of Human Services for its core grant and other contract grants, the Commonwealth Department of Health and Ageing, and the National Health and Medical Research Council. Our thanks also go to our corporate and private donors for their continued and generous support, and to our many volunteers, who give their time so enthusiastically.

The Hon Michael JR MacKellar
President
I have been in my present position at the invitation of the NARI Board of Management since 2 May 2007. My appointment as Acting Executive Director was made in anticipation of my applying for definitive appointment as both the Executive Director of NARI and the Professor of Ageing and Health at the University of Melbourne. Recently, it has been confirmed that I will take up both of these appointments on 3 September 2007.

The Professorship is a new position, and I view its creation as essential for furthering NARI’s work and ensuring an active voice for research and teaching in the broad area of ageing in the University’s faculty of medicine, dentistry and health sciences. This is occurring at a time when a new four-year postgraduate medical curriculum, to commence in 2011, is being designed.

I am pleased to be working for an Institute that is on a sound financial footing, and is involved in world-class research in areas of key importance to ageing; these include falls and balance, pain, stroke and music therapy in dementia. As a psychiatrist specialising in old age psychiatry and also active in ageing research since 1985, I bring to NARI my involvement in several major publicly-funded research projects on dementia and cognitive decline, expertise in psychotropic and anti-dementia drug trial research, and links to a range of clinical services and researchers into many aspects of ageing.

In addition, I have extensive editorial expertise (as editor of the journal, International Psychogeriatrics, and a series of books in the field of dementia and old age psychiatry). My teaching responsibilities encompass being chair of the University of Melbourne board of studies for its rehabilitation, aged care, psychiatry of old age and palliative care (RAPP) program in its medical course, and convenor of the old age psychiatry teaching component of the three-year Master’s course, jointly offered to Victoria’s trainee psychiatrists by the University of Melbourne and Monash University.

Since becoming the Institute’s Acting Executive Director, I have been overwhelmed with offers of collaboration and assistance from other researchers, clinicians and administrators, as well as support from NARI’s outstanding staff and Board of Management. I have been very impressed by the calibre of NARI’s present staff, and the enthusiasm and commitment of its Board of Management, especially its charming and persuasive president. I relish the prospect of working with them for an extended period.

Issues that need to be addressed by NARI in the near future include its funding sources, relations with government, collaboration with other researchers in Victoria and elsewhere, and its relationship with the health service, of which it is a part. Other aspects to explore are the extent to which the Institute should be involved in teaching and knowledge transfer, as well as its core business of research. I hope, and intend, that under my directorship, NARI will focus on aspects of ageing that have major public health implications and to which it can make important research contributions.

The Board of Management has decided that NARI will not move to a dual University affiliation model, as foreshadowed in last year’s Annual Report, but will maintain its historic affiliation with the University of Melbourne. I wholeheartedly support this decision.

Nevertheless, this should not preclude NARI from actively collaborating with other universities and research institutes in areas of mutual concern, and working with a wide range of experts. This approach is evident in the CSIRO-funded Australian Imaging Biomarkers and Lifestyle flagship study of ageing, which I direct, and which provides an instructive model of how extensive mutual collaboration can be achieved.

Professor David Ames
Acting Executive Director
APPPOINTMENTS

NARI’s new Acting Director – Professor David Ames

Professor David Ames, the Acting Director of NARI since May, has been at the forefront of working in aged psychiatry in Australia and researching Alzheimer’s disease and depression in older people.

In September 2007, he will be appointed NARI Director and the inaugural Professor of Health and Ageing at the University of Melbourne.

Since April 2005, he has been Professor of Psychiatry of Old Age for the University of Melbourne, at St George’s Hospital. Prior to this, he was an associate professor in the psychiatry of old age for the University of Melbourne for 10 years, based at numerous hospitals including Royal Park, Royal Melbourne, Mount Royal/Northwest and Broadmeadows.

Among his many career highlights is his 20-year involvement in anti-dementia drug research, ranging from Tacrine (the first drug for treating Alzheimer’s disease) to Aricept (the most widely prescribed treatment today).

He was co-founder of Victoria’s first Memory Clinic in 1988 that became the model for the existing statewide CDAMS clinics. In the 1990s, he was involved with early studies using brain imaging that showed Alzheimer’s disease was strongly associated with shrinkage of the part of the brain where memory is located.

He is chief investigator for the Australian Imaging, Biomarkers and Lifestyle (AIBL) CSIRO flagship study of ageing, a three-year project that aims to improve understanding of the causes and diagnosis of Alzheimer’s disease.

He envisages a national ageing research institute being involved in educating doctors, nurses and allied health professionals about ageing, and assisting older people to reduce their risk of disease and better manage their health problems. Its research program would focus on developing a better understanding about how to diagnose, prevent and treat common age-related problems.

“NARI’s ultimate challenge is to ensure the amount of time that people spend active and enjoying a good quality of life is maximised, and the period of time that they are disabled and dependent is minimised.”

PROFESSOR DAVID AMES
Keith Hill appointed as inaugural Professor of Allied Health

Associate Professor Keith Hill has been appointed the inaugural Professor of Allied Health at La Trobe University and Northern Health, but he will continue to have a small ongoing funded role at NARI.
During his years at NARI, he has developed an impressive list of achievements and a strong professional reputation among colleagues and in the wider health and aged care sectors.
He created the Institute’s high profile in falls prevention research in Australia, and helped to establish the first Falls and Balance Clinic that has been replicated nationally. He was also involved in developing two tools that are widely used clinically – a fear of falling scale and a simple step test to assess balance. He became the Director of Preventive and Public Health in 2002, and since then, the division’s size and budget have increased by over 50 per cent. Its research agenda has also broadened.
His first link with the Institute was in 1988 when the then director, Professor Rob Helme, asked him to set up the physiotherapy component of the first multidisciplinary Falls and Balance Clinic in Australia. At the time, he was the senior clinician physiotherapist at Mount Royal Hospital.
Balance in older people was the theme for his PhD, which he completed in 1998. The same year, he began working as a part-time researcher at NARI, and this gradually evolved to a full-time position.
Among his many research highlights are the world-first study by PhD student Terry Haines that showed falls could be prevented in hospitals, and the Well for Life program with the Dietitians Association of Australia that was promoted to all residential care facilities in Victoria. The program was later modified to assist frail older people living at home.
Two years ago, he was delighted to receive three NHMRC grants, with one being for a NARI project into preventing falls in people who have had a stroke and are returning home.

“Preventive and Public Health has an extremely good team and a great group of volunteers. One of the most pleasing things is knowing that NARI has a strong research base to continue its work.”

ASSOCIATE PROFESSOR KEITH HILL
$1.38 million boost for ICARUSS stroke prevention program

NARI’s stroke prevention program received a $1.38 million grant from the HCF Health and Medical Research Foundation to expand the project nationally and recruit 1000 volunteers. The Integrated Care to Reduce Secondary Stoke (ICARUSS) project involves stroke coordinators being the link between a patient’s GP (the primary medical carer) and specialist stroke services. Neurologist Dr Jacques Joubert, from the Royal Melbourne Hospital, devised the concept. The pilot study, conducted through Melbourne Health, has now expanded to include Austin Health and Western Health in Melbourne. Interstate centres are at the John Hunter Hospital in NSW and the Royal Perth Hospital. Also involved in the project are the Departments of Medicine and Social Work at the University of Melbourne. The original model is being adapted to ensure greater patient and carer involvement in long-term management to prevent a second stroke recurring. Survivors of a first stroke have a high recurrence rate that increases their disability level and need for nursing home care. The three-year grant will inevitably boost international collaborative interest in the program, which is already strong in France, Singapore, Vietnam and Mauritania in West Africa.

Music therapy for people with dementia

NARI research fellow Dr Bruce Barber received a $257,000 grant from the JO & JR Wicking Foundation to assess the benefits of music therapy for people with dementia. Co-investigators in this two-year project are NARI Acting Director, Professor David Ames, and geriatrician Dr Dina LoGuidice from the Royal Melbourne Hospital (Royal Park campus). Numerous reports support the use of music therapy for improving memory, cognition and other functions, but there is only limited evidence-based research. Music therapy encompasses singing, movement, instrument playing and improvisation.

This NARI randomised controlled trial involves 180 hospitalised older people with moderate to severe dementia. The study uses questionnaire and task-based investigations of memory, cognition, mood and behavioural disturbances. In addition, the trial is observing changes in brain processing, using electrophysiological methods, to determine whether music interventions produce changes at a fundamental neural level. This aspect of the research involves a new collaborative association with Professor Rodney Croft from the Brain Sciences Institute at Swinburne University of Technology.

“Initiating evidence-based research to investigate the effectiveness of music therapy for people with dementia.”

DR BRUCE BARBER

“Encouraging people to understand their stroke risk.”

DR JACQUES JOUBERT
Linking genetics and balance

NARI student Natalie El Haber was awarded her PhD for her research into the effect of genetics in influencing a person’s balance. Her study, which was published in the esteemed *American Journal of Epidemiology* in May, focused on identifying the genetic and environmental influences of balance in 176 sets of identical and non-identical female twins, aged 21 to 82 years.

The main finding was that balance had an underlying heritable component, with its influence ranging from 30 to 40 per cent, depending on the type of balance test. When a balance test also involved strength, like stepping on and off a block, an environmental influence was evident.

The study’s underlying message is that the genetic component of balance may partly explain why fractures run in families. Recognising the genetic influence may assist in the early identification of people at risk of falls and fractures.

Having twins in the study was an effective way to help quantify genetic and environmental influences. The project also involved condensing various measures of balance into three factors, before analysing them for heritability.

Her PhD supervisors were NARI’s Director of Preventive and Public Health, Associate Professor Keith Hill, and Professor John Wark from the University of Melbourne.

expanding our research agenda
Alzheimer’s patients do feel pain

A world-first study by NARI PhD student Leonie Cole has debunked the myth that patients with Alzheimer’s disease feel less pain and, therefore, require fewer pain-relieving drugs.

The research, which was published in the prestigious international Brain journal, highlights the need to establish better ways of assessing pain in people lacking the ability to communicate their discomfort to carers and doctors.

The study measured pain ratings and MRI brain responses after mechanical pressure was applied to 14 patients with Alzheimer’s disease and 15 people of a similar age without Alzheimer’s disease.

Results revealed that both groups of participants had increased levels of brain activity while they were experiencing moderate levels of pain. Also, there was no evidence of diminished pain processing in patients with Alzheimer’s disease.

In some areas of the brain, prolonged activity occurred in people with Alzheimer’s disease, which indicates that pain may come as a surprise to them.

Interestingly, the brain activity stayed at a higher level for this group even when the pressure stimulus was removed; this suggests that they are less skilled at using contextual clues about what is happening to them.

Her PhD supervisors are NARI Deputy Director, Associate Professor Stephen Gibson, and Dr Michael Farrell and Professor Gary Egan from the Howard Florey Institute. Also collaborating on this project are the University of Melbourne and St Vincent’s Hospital.
Planning and evaluating services

NARI was contracted to evaluate changes in service delivery for several health and community service agencies.

Community services

Villa Maria has implemented the Pathways and Partners project, a new model of community service delivery for clients. NARI evaluated the model in the northern and eastern regions, and consulted with clients and families/carers, partner service providers in the regions and Villa Maria staff. The evaluation showed that many aspects of the new model of service delivery were working effectively, although some areas were identified as needing further review and discussion.

NARI also assessed the service delivery of Baptcare, another agency providing community services. This project involved client and carer interviews about the range of services and support available from their time of commencing with Baptcare to a longer-term involvement; the latter included issues about how the service responded to the changing needs of clients and carers. Overall, there was a high level of satisfaction with the service, although some improvements were recommended.

A common theme to emerge in these separate evaluations was that many clients and carers valued having the same caseworker so a good relationship could be developed in regard to services and support needed.

Rehabilitation clients in rural areas

An innovative approach to providing rehabilitation services has been implemented in Victoria’s Southern Grampians and Glenelg Region. Five rural health services of varying size and scope in the district – Heywood, Portland, Coleraine, Casterton and Western District – have worked together to establish a program that has been designed to meet the unique needs of clients in this region. The Victorian Department of Human Services funded NARI to evaluate the program’s development during the past three years. The evaluation highlighted the importance of involving all key stakeholders in change management processes, breaking the process into smaller achievable goals and having strategies for attracting appropriately skilled staff to rural areas.
Assisting person-centred care in health services

For several years, NARI has been supporting improved person-centred care, particularly for older people in metropolitan and regional Victorian health services. This work, funded by the Victorian Department of Human Services, previously encompassed a literature review on person-centred care, a state-wide survey across all health services, and developing a website of resources available. The project's second phase, from December 2006 to July 2007, focused on assisting 13 health services in developing and implementing projects in person-centred care, and using the website. Areas addressed included assessment, goal setting, discharge planning, person-centred health care policy and guidelines, staff training, and care of the older person and carers in the Emergency Department. NARI also evaluated the outcomes of these activities. The website's trial highlighted its usefulness for health services, and in helping to identify gaps in the resources available. The project's final component, to take place between August and December 2007, involves repeating the initial state-wide staff survey, to identify changes that have occurred.

Refining assessment procedures

Screening for memory problems

Several brief screening tools are commonly used by doctors to determine whether a person reporting memory problems may have dementia. Unfortunately, these tools have limitations when targeting people from culturally and linguistically diverse (CALD) backgrounds, or with lower levels of education. The Rowland Universal Dementia Assessment Scale (RUDAS) was developed by staff at Liverpool Hospital to address some of these concerns.

Benefits of RUDAS

NARI and a team from the Royal Adelaide Hospital received funding from the Australian Government Department of Health and Ageing and Alzheimer’s Australia (South Australia) to further evaluate this new RUDAS screening tool in 150 older people. Results confirmed its benefits. The RUDAS had high predictive accuracy in the sample group. It was equally effective in predicting cognitive impairment as the widely-used Mini-Mental State Examination (MMSE) and the General Practitioners Assessment of Cognition (GPCOG). In contrast to the other tools, the RUDAS was not substantially influenced in its prediction accuracy by other factors, such as cultural status.

For people from culturally and linguistically diverse backgrounds

As well as the limitations of existing screening tools for people from CALD backgrounds with cognitive impairment, several other factors contribute to delays in screening and diagnosis. These include lack of understanding about dementia, and lack of knowledge about the range of supports and treatments available. Service system issues include appropriate use of bilingual trained staff or interpreters, access, and availability of culturally appropriate screening and assessment tools for accurate and timely diagnosis.

NARI collaborated with Alzheimer’s Australia – National Cross Cultural Dementia Network and Fronditha Care Inc to develop a discussion paper, and guidelines and system recommendations to improve screening and diagnosis of cognitive impairment for people from CALD backgrounds. The Australian Government Department of Health and Ageing, through Alzheimer’s Australia (South Australia), funded this project.
Health and wellbeing of older people

Achieving change

Older people often have several health problems and may be given multiple recommendations from medical and allied health professionals to improve their health status.

As part of NARI’s large Emergency Department falls prevention randomised trial, factors influencing uptake of falls prevention recommendations in this high falls risk group were explored. Results highlighted that compliance varied for the recommended actions, such as doing an exercise program, having a home safety assessment and discussing falls risk with the local doctor.

Strategies to improve compliance and outcomes are being explored.

Physical activity and exercise

NARI is involved in several physical activity projects to improve the health and wellbeing of older people.

Falls risk assessment

There is no gold standard tool for falls risk assessment. The Falls Risk Assessment for Older People (Community version) – the FROP-Com – was developed by NARI several years ago, and is gaining support from practitioners as a useful tool.

The FROP-Com

The FROP-Com has been shown to have acceptable accuracy in classifying the level of falls risk, and high reliability when reapplied by different people or over time. It has received widespread promotion, and is currently being used in numerous clinical and research settings.

A second version

Recent NARI research findings about the FROP-Com led to the development of a briefer screening version of this falls risk assessment tool. The FROP-Com screen consists of three short items that can be used to identify a risk of future falls in older people, presenting to Emergency Departments after a fall. Funded by the Australian Government Department of Health and Ageing, the FROP-Com screen is currently being trialled in Emergency Departments at Sandringham and Austin Hospitals in Melbourne, and the Goulburn Valley and Bairnsdale Regional Health Services.

This project involves scoping current falls prevention practices and referral processes in the Emergency Departments, developing best practice guidelines, and instigating training and support for implementing the guidelines and the FROP-Com screen.

..and a third version

Another version of the FROP-Com has been modified for use in the acute hospital setting – the Western Health Falls Risk Assessment (the WHeFRA). The modification consisted of dividing the tool into a two-stage screening and assessment process, which is likely to be more acceptable in the acute hospital setting. Results have shown that the WHeFRA has good consistency between raters, and acceptable accuracy in classifying risk of falls for older people in hospital. The WHeFRA has also been considered a useful tool in other hospitals, with positive results emerging from a trial in a Singapore hospital.
Getting Grounded Gracefully
A project with Moreland Community Health Service featured a randomised trial to evaluate the effectiveness and acceptability of the Getting Grounded Gracefully program, based on the gentle Feldenkrais method of movement. More than 50 older people participated in the eight-week program. Increased confidence and better balance and walking were among the improvements that participants reported.

Tai Chi for Arthritis
A large NHMRC-funded trial involving NARI, Monash University Accident Research Centre and the University of Western Australia is investigating the effectiveness of two forms of exercise on a range of health outcomes. Of particular interest is the concept of reducing the risk of functional decline in older people, who are living in retirement villages and the community, and are at risk of increasing dependence. The exercise approaches being explored are Tai Chi for Arthritis and a flexibility program, with participants taking part for a minimum of six months.
Tai Chi for Arthritis is a popular abbreviated form of tai chi that was developed by Sydney practitioner, Dr Paul Lam. The flexibility program was developed by NARI. The study is in its recruitment stage.

Living Longer, Living Stronger
In partnership with the Council on the Ageing, and with funding from the William Buckland Foundation, NARI is investigating the health and wellbeing benefits for older people starting the Living Longer, Living Stronger strength training program. This program is available through many gymnasiums and community fitness centres in Victoria. Assessments are done at four and eight months into the program, to determine short-term and longer-term benefits. This study is currently underway.

Table tennis and strength training
Preliminary results from a collaborative NARI study with the University of Melbourne suggest some positive benefits of regularly playing table tennis. Positive outcomes included improvements in aspects of balance performance and bone strength in older people.

Another current NARI study, in collaboration with the University of Tasmania, is investigating the effect of a group balance and strength training program on balance performance.

Vitamin D
NARI is collaborating with the University of Western Australia to investigate the effect of vitamin D supplements for people with early memory problems (mild cognitive impairment). This project, funded by the Australian Government Department of Health and Ageing, will identify whether this supplementation slows the progression of cognitive problems.
A sub-study will establish whether any other physical benefits are associated with the supplement, such as improved balance performance and mobility.

Improving sleep
A literature review identifying best practice recommendations to improve sleep for older people in residential care is nearly completed.

Falls, balance and mobility research

Screening for early balance problems
When older people start to feel unsteady or have minor falls, they are often unsure whether this is a normal part of growing older, or if they have a health problem affecting their balance that needs to be assessed and treated.
A study being conducted for the Department of Veterans’ Affairs is investigating this issue, using NARI’s state-of-the-art computerised force platform as part of an extensive balance testing regime. Currently, more than 140 participants have been assessed. About two-thirds of participants concerned about their balance were identified as having a balance problem.
Where balance is mildly reduced, the effectiveness of a six-month home exercise program, developed and supported by a physiotherapist, is being investigated. Several participants have already reported positive outcomes from the exercise program.
Focusing on high risk groups

In the Emergency Department

NARI has completed a large randomised trial evaluating the effectiveness of a detailed falls risk assessment for older people presenting to the Emergency Department after a fall, and being discharged home.

The study, funded by the Department of Veterans’ Affairs and the Victorian Government Department of Human Services, involved 700 people. Those randomly allocated to the treatment group received the appropriate care from the Emergency Department, and also had a falls risk assessment and management plan conducted by a health professional. For this group, the initial analysis indicated a significant reduction in falls risk.

However, this outcome was substantially influenced by a small number of people with very high falls rates. When this group was excluded, the analyses indicated no benefits in terms of falls and falls-related injuries.

Both the intervention and control group improved on measures of balance, mobility and confidence during the 12-month follow up.

Educational program

A NHMRC-funded randomised trial, conducted with the University of Queensland, is evaluating the effectiveness of an educational program in reducing falls in hospitals when older people are admitted. The educational resources for this program are currently being developed.

After a stroke

Studies have highlighted the high falls risk for older people after a stroke in the six months after leaving hospital and returning home.

This group is the focus of a current NHMRC-funded project investigating whether a falls risk assessment and management plan, including a home exercise program focusing on balance, reduces the risk of falls during the 12 months after returning home from hospital. Currently, 50 participants have been recruited.

Separate sub-studies are evaluating changes in fear of falling, balance and activity level over time after a fall occurs, and the association between three-dimensional gait analysis measures with falls risk and balance performance during the 12 months after a stroke.

Two smaller studies

Two smaller studies investigated balance problems and the effectiveness of home exercise programs in improving balance performance in people with haemophilia and other bleeding disorders (funded by the Haemophilia Foundation of Australia), and in people with rheumatoid and osteoarthritis (funded by the JO & JR Wicking Trust).

These studies highlighted mild to moderate levels of balance problems in both groups. The arthritis group responded well to the physiotherapy home exercise program of balance exercises, and showed improvements on most measures. The haemophilia group was relatively small, but the trends on several balance and mobility-related measures indicated a possible benefit of the home exercise program.

Results from these studies also highlight the decline in many physical performance measures, such as balance, from as young as 40 to 50 years. This suggests that a stronger focus should be on actively promoting exercise at an earlier age to improve or maintain balance performance, than the commonly recommended 65 years.

Anti-epileptic medications

Another NHMRC-funded study with the University of Melbourne involves evaluating the effect of anti-epileptic medications on bone strength and physical performance, including balance, leg muscle strength and walking. Preliminary analyses suggest that these medications do impair balance performance.
From home to residential care
When a frail older person managing at home with family support has a fall or another type of accident, this can cause considerable stress in the family and sometimes trigger admission to residential care.
A project funded by the Australian Government Department of Health and Ageing is evaluating falls risk, mobility, depression and quality of life in older people living at home with carer support. It is also monitoring falls and other accidents over 12 months, and investigating the effect of transitions between home and residential care for participants requiring respite care.

Looking at heredity and ageing effects
A large NARI study, in collaboration with the University of Melbourne, has identified a moderately strong heritable element to balance performance. (See NARI Highlights, page 8)
Another series of studies is investigating the effect of age on key measures of walking, particularly the evenness of stepping. A computerised gait analysis system is being used to provide a detailed analysis of walking patterns in younger and older women. A recent sub-study identified the usefulness of a continuous walking circuit in measuring walking, compared to the more traditional approach of using a short set distance.

Training and resources
The Victorian Quality Council funded NARI to provide the contents for an online educational package to improve uptake and implementation of the successful Minimising the Risk of Falls & Falls-related Injuries Guidelines Pack: For Acute, Sub-acute and Residential Care Settings. NARI was a key author. A website is currently being constructed and will complement the guidelines pack.
As part of the National Dementia Initiative, the Australian Government Department of Health and Ageing has funded NARI to develop a Dementia Resource Guide. The Guide aims to draw together in a user-friendly way, quality resources that will assist older people, carers, family and staff working with people with dementia. The Resource Guide, to be available electronically and as a publication, will be completed by December.

Other activities and achievements

Being involved
Preventive and Public Health Division staff continue to participate in many committees, working parties, professional associations and peak agencies representing the interests and wellbeing of older Australians. These have included committees and working parties for the Department of Human Services, the Australian Association of Gerontology and the Nutrition Society of Australia.
Staff have been involved in national and international research grant assessments, including the NHMRC grant review panels, the Health Research Council of New Zealand panels, and reviewing projects for the Australian Research Council and the Ophthalmic Research Institute of Australia.
They are also helping to plan the 3rd Falls Prevention Conference in Melbourne, in October 2008, and they have bid (on behalf of the Australian Association of Gerontology) to host the next Asia/Oceania Congress on Gerontology and Geriatrics, in Melbourne in 2011.

Developing a Dementia Resource Guide. From left, Courtney Hempton, Sue Hunt, Kirsten Moore and Associate Professor Keith Hill (Director of Preventive and Public Health).
Outstanding achievements

Dr Natalie El Haber was awarded her PhD for her project, Genetic and environmental influences on balance, lower limb muscle strength, gait and physical activity in studies of female twins. (See NARI Highlights, page 8)

Pauline Galvin completed her Masters of Public Health, with a research project at NARI. She identified limitations in participants’ uptake and adherence to some recommended falls prevention strategies that were made after a comprehensive assessment when they presented to Emergency Departments after a fall. In particular, some factors related to the older person (they felt unwell or did not see any value in the recommendation), and some related to the service system (there were long waiting lists for some services).

Talking about our research

Highlights have included a strong mix of 10 presentations by NARI staff and students at the 2nd Australian Falls Prevention Conference in Brisbane in November 2006, and invited presentations to the National Disease Management Conference, the National Podiatry Association state conference, and the ARCHI Innovations in Arthritis and Musculoskeletal Conditions Toolkit Seminar.

Kirsten Moore presented results from the Rural Carers Online project at the Caregivers: Essential Partners in Care Conferences in Toronto, Canada. Presentations were also made at several other national conferences, including the Australian Association of Gerontology, Alzheimer’s Australia National Conference and the Australian Rheumatology Association Conference.

Staff spoke about falls prevention to hospital staff, and metropolitan and regional Divisions of General Practice. They also shared their research findings with community groups.

Looking ahead

Several new projects will soon commence. One study is evaluating educational sessions conducted by health professionals, in improving the amount of physical activity in older people from Polish or Macedonian backgrounds. This project is with the WestBay Alliance and Brimbank/Melton Primary Care Partnerships.

A new project for the Department of Human Services involves working with metropolitan and regional health services to support and integrate their project activity to reduce the risk of declining function for older people while in hospital.

The Australian Government Department of Health and Ageing has funded two new projects in residential care settings. One is with the Centre for Eye Research Australia and aims to assess eye problems and environmental hazards in three residential care facilities. Strategies to address these problems will be developed and implemented to improve vision, safety and quality of life for older residents with vision problems. The second project involves implementing best practice falls prevention programs in nine residential care facilities in Victoria, Queensland and Tasmania.
The Division has a high international profile for its research into chronic pain in older people. Projects are investigating new ways to assess, measure and understand pain, and other research is exploring phantom limb sensation and music therapy for people with dementia.

CLINICAL RESEARCH DIVISION

Chronic Pain

A link between symptoms and adjusting to pain

Older people tend to inaccurately attribute clinical pain symptoms to the normal ageing process rather than to some underlying disease. The meaning they attribute to these symptoms is thought to play an important mediating role between the occurrence of persistent pain and the consequent levels of emotional and functional problems. However, relatively few studies have examined pain specific attributions and none have looked at possible age differences.

A study by NARI and La Trobe University involved an English language translation of a pain attribution questionnaire, recently developed in Germany. The reliability and validity of the scale was tested in a large sample of 325 patients suffering from chronic pain. The questionnaire was shown to possess excellent reliability and validity, and could be used to monitor pain being attributed to psychological or physical causes, changes in the weather, or stemming from a person’s own actions and behaviour. Older people were less likely to attribute pain to physical causes. As expected, attributing pain to a psychological cause was strongly associated with poorer psychological adjustment, including increased levels of depression, anxiety and interference with social relationships. Attributing pain to a physical cause was often linked to its interference with everyday activities, such as walking or housework.

Of perhaps greater interest, attributions of older people with chronic pain were related to a wider range of adjustment measures than in younger adults. These findings show the importance of assigning specific attributes to pain in explaining a person’s ability to adjust to chronic pain, especially in older patients. Psychologically-based treatment strategies should target these age-specific cognitive factors, to improve the management of chronic pain in the older age-group.

Assessing patients’ pain knowledge. Honours student Tessa Jones with Associate Professor Stephen Gibson, NARI Deputy Director and Director of the Clinical Research Division.
Uncertainty increases pain

One of the most important psychological factors to influence pain perception is anxiety, and when this increases so does the reporting of pain in experimental and clinical settings.

A NARI study with the University of Melbourne aimed to investigate this issue, using an experimental pain paradigm. Two groups of 15 volunteers were selected to form a ‘low anticipation of harm’ group and a ‘high anticipation of harm’ group, based on responses to the Survey of Pain Attitudes questionnaire. A computer program delivered different visual and auditory warning cues (for example, screen colour accompanied by tones) that represented different parameters of uncertainty (time of stimulus onset, number/duration and intensity of stimuli) about an impending painful electrical stimulus. People with a high anticipation of harm had greater anxiety, but there was no corresponding difference in self-rated pain intensity or unpleasantness. Lower pain ratings were found in response to the same intensity of stimulus, when tested during low uncertainty conditions compared with high uncertainty test conditions. Focusing on the concept of uncertainty when developing anxiety-reducing techniques may provide a more effective way to treat pain.

Mean VAS anxiety ratings under each uncertainty condition

Participants rated their pain intensity and anxiety after the electrical stimuli by completing Visual Analogue Scales (VAS)

- high harm
- low harm

Uncertainty conditions

RED: ‘time of onset’ and ‘number’ of stimuli uncertain (very painful)
GREEN: ‘number’ of stimuli uncertain (painful)
BLUE: ‘intensity’ of stimulus uncertain (painful)
ORANGE: ‘time of onset’ of stimulus uncertain (painful)
GREY: low uncertainty regarding the electrical stimulus (non-painful)

Pain questionnaires and clinician judgments

This NARI study aimed to explore the link between people’s readiness to change and clinician judgments about the suitability of patients for group treatment in a multidisciplinary pain management centre.

Two hundred patients with chronic pain were assessed for treatment at the Caulfield Pain Management and Research Centre. The Readiness to Change questionnaire was completed during the initial assessment. Cluster analysis revealed six sub-groups from the scores: an independently high precontemplative subscale score, high precontemplative and contemplative scores, independently high contemplative scores, low precontemplative and contemplative scores, being high on all subscales, and high action and maintenance scores. Patient scores on the questionnaire did not relate to clinician judgments about patient suitability for group or individual treatment.

Some support was shown for the Readiness to Change model, with identified patient sub-groups corresponding to each theoretical stage in the model.

Age differences in pain

The brain’s processing of pain

Compared with young adults, older people report more chronic pain complaints, and show reduced tolerance to experimental pain.

Atrophy of the brain with advancing age is well documented, with reduced grey matter across many brain regions that are involved in pain processing. However, it is unclear how these changes contribute to age-related differences in pain perception and reporting pain.

This study by NARI, the Howard Florey Institute, the University of Melbourne and St Vincent’s Hospital examined the effects of ageing on central nervous system pain processing. Anatomical and functional Magnetic Resonance images were acquired as 15 younger and 15 older adults received three levels of pressure stimulation – innocuous pressure, weak pain and moderate pain. Both groups showed significant pain-related activity in a common network of areas in the brain, including the emotional (anterior cingulate cortex and insula) and sensation (primary and secondary somatosensory cortices and posterior parietal cortex) processing areas.
There was no evidence of greater pain-evoked activation in older adults compared with the younger ones. However, the latter group showed greater activity in the areas of the brain involved with planning an action or behavioural response to pain. The age-related difference in pain-evoked activity may reflect reduced functioning of pain modulatory mechanisms in the central nervous system as people become older.

The effect of ageing in handling pain

A new NARI study examined temporal summation of pain (the growing subjective intensity of pain upon repeated stimulation) to assess the effect of age on pain plasticity in the nervous system.

Younger and older volunteers had five brief electrical stimuli, at different frequencies, applied to their skin over the sural nerve at the ankle. These ranged between one stimulus every five seconds to stimuli at a rate of twice per second. Single pulses and the fifth pulse of each stimulus set were rated for pain intensity. The younger adults demonstrated temporal summation at frequencies of stimulation that were consistent with previous reports, namely stimuli delivered once every three seconds or faster. In contrast, the older group had a higher average pain rating of the fifth pulse relative to a single pulse, even at slower frequencies of stimulation (once every five seconds).

The reaction in the older participants suggest that ageing impacts on the capacity of the nervous system to fully recover between repeated pain stimuli. This finding may have important implications for understanding the greater risk of developing chronic pain problems in elderly people.

Pain and Alzheimer’s disease

New ways of assessing pain

Pain tends to be undertreated in people in residential aged care facilities, particularly those with dementia or if they have lost verbal communication skills. While self-reporting of pain has become the ‘de facto’ gold standard for pain assessment, other non-verbal methods – behavioural measures and observational tools – also provide clinically relevant information.

The current three-year, NHMRC-funded project examined the comparative reliability and validity of several new behavioural pain assessment tools and facial expressions of pain in non-verbal older adults with dementia. This study involves NARI, the University of Melbourne and La Trobe University. Also supporting the study are the Royal Freemasons Homes of Victoria, Lionsville Aged Care, Vasey RSL Care, Donwood Aged Care Services and Doutta Galla Aged Services.

Most of the selected scales measure combinations of behaviours, such as facial grimace or wince, negative vocalisation, changes in body language, altered breathing or physiologic signs to provide an index of likely pain intensity.

Staff-rated measures can be used to quantify facial expressions, behavioural actions (rubbing the affected part), physical changes (bruises and arthritis), vocalisation (moaning) and ability to console the person. These were the best indicators of a person in pain.

The coding of facial expressions from video recordings revealed characteristic markers of acute pain in people with dementia.

The best set of items to indicate a high likelihood of pain were tested on a new sample of older people with dementia. These had an 84 per cent correct classification of pain, when judged against self-reporting.

This research is expected to lead to improved pain assessment methods for this highly vulnerable and dependent group of people.

Age-related differences in pain sensitivity

Mechanical pressure stimuli were applied to the thumbnail of the right hand in a random staircase procedure to determine thresholds for just noticeable pain (JNP), weak pain (WP) and moderate pain (MP).

There was a significant effect of age on pain sensitivity \[F(1,28) = 6.02, p<0.05\], with younger subjects requiring a greater level of mechanical pressure to elicit reports of JNP, WP, and MP compared with older subjects.
Music therapy

Effects of music on dementia and depression
NARI, in collaboration with Monash University, is leading the way by designing and implementing four randomised controlled studies to examine the effects of music therapy on dementia and depression in older people. In 2006, a pilot study was completed with Dr Samia Toukhsati from the School of Psychology, Psychiatry and Psychological Medicine at Monash University. It assessed whether a music therapy intervention would improve cognitive function and mood, and reduce behavioural problems. Improvements in these aspects were evident in music therapy and the control group (diversional therapy). Compared to diversional therapy, music therapy showed more substantial cognitive improvements (comparable to those associated with current medications) and improved orientation to time and place.

This study was reported in Montreal at the 7th International Conference of The Society of Music Perception and Cognition.

Extending on this pilot data, NARI is conducting a large randomised controlled trial of music therapy in people with dementia. [See NARI Highlights, page 7]

Two other randomised studies are taking place in residential aged care facilities. One is comparing music therapy with two other complementary therapies and no intervention. The other study is examining the effects of music therapy on depression in residents. These two studies involve The Aged Mental Health Research Unit at Monash University and The Center for Biomedical Research in Music at Colorado State University.

NARI Honours student Chathushka Fonseka: investigating the effects of music therapy in people with dementia.

Phantom limbs

A complex bodily process
Bodily experience is a complex, mostly unconscious process, requiring the integration of multiple sensory inputs. A NARI study has been examining the sensory systems involved in internal representations of the body, including the proprioceptive, motor, vestibular and visual systems, as well as the activity of ‘mirror neurons’. The latter are systems which are active during both personal perception and when viewing similar experiences in another person. [See NARI Highlights, page 9]

Looking ahead

One major focus during the next 12 months is the implementation and evaluation of best practice pain management in the residential aged care sector. Compelling evidence shows that pain is frequently and consistently undertreated in people in residential aged care facilities, particularly those with dementia.

With funding from the Commonwealth Department of Health and Ageing, an Australia-wide collaborative network, headed by Associate Professor Stephen Gibson (NARI Deputy Director), will establish a new scalable model of pain management for complex problems. The network will also provide innovative approaches to pain assessment to benchmark the performance of individual aged care facilities in Victoria, Western Australia and Queensland.

There will be a case management approach to coordinating external medical and allied health expertise, as well as access to an inpatient multidisciplinary pain consultative service. This will ensure state-of-the-art pain management practice in this highly dependent and vulnerable group of people.

This research program has the potential to make a fundamental change to the way in which expert health care resources are delivered to the residential aged care sector. More broadly, this model could be readily adapted to improve other relevant, age-related health outcomes.

expanding our research agenda
Since 2005, the Division has initiated concepts for new projects that are then sourced for funding to enable them to continue. It has been particularly successful in attracting funding for its innovative ICARUSS project.

The ICARUSS Project

In Australia, there are about 53,000 stroke cases annually at an estimated cost to the community of almost $2 billion. Stroke causes chronic disability and often leads to institutional care.

Unlike most serious diseases affecting older people, a high proportion of strokes and the accompanying disabilities can be prevented.

In a pilot study examining models of care to prevent recurrent stroke, neurologist Dr Jacques Joubert, from the Royal Melbourne Hospital, demonstrated improved management of vascular risk factors in patients involved in ‘integrated care’, compared to the control group who received traditional treatment. The resulting project is ICARUSS, a program of Integrated Care to Reduce Secondary Stroke in older Australians. (See NARI Highlights, page 7)

A new tool for data collection and storage

In a special collaboration involving Neuroscience Trials Australia (NTA), Xbio Systems and NARI, an electronic data capture system (EDC) has been designed to store and retrieve data from the ICARUSS project.

NTA specialises in assisting with clinical trials for stroke and other neurological illnesses, and XBio Systems is a commercial software development company. With the support of NTA, XBio has designed an EDC, based on NARI’s specifications, to store data gathered at the various centres in Australia involved in the ICARUSS project.

The software program is web-based so any data collected remotely, whether in Australia or overseas, can be easily entered into the database and extracted for analysis. The program will be ready to accept data from September 2007.

Expert advice about analysing ICARUSS data. Internationally-renowned social academic, Professor Irwin Epstein, from New York, with Dr Lynette Joubert from the University of Melbourne.
Administrative operations

The Institute’s administrative operations involve a small team headed by Dr John Barlow, Deputy Director (Operations and Development), and consisting of administrative assistant Beata Werner, finance officer Keith Montell and IT manager Dr Paul Andrews.

During 2006-07, the team focused on upgrading the working environment, which included revamping the Director’s office and the former Neal Stevens Medical Library into a meeting room. Computer equipment is also being updated. One building is being refurbished in association with Orygen Youth Mental Health. With the closure of the Biology Division in 2005-06, most of the equipment has been removed and this area is now ready to be renovated.

Understanding the Ageing Brain

The most important trait for healthy ageing is a healthy brain, free of age-related diseases and dysfunction.
Brain ageing and brain diseases are determined by multiple genetic factors that interact with one another and also with environmental influences. The Older Australian Twins Study (OATS), funded by the Australian Government’s Ageing Well, Ageing Productively program, has been designed to attempt to identify some of these genes and investigate their interactions with environmental factors. The study is using the NHMRC Australian Twin Registry (ATR) to identify elderly twins, and siblings of these twins will be included in the study. Identical twins share their genes, but non-identical twins, like non-twin siblings, share half their genetic information. Therefore, a comparison of twins and siblings can help in separating the genetic and shared, and non-shared environmental influences.

Study participants will receive detailed neurological, psychiatric and cognitive assessments, and will have brain MRI scans. Their blood samples will be used to measure key chemicals that may affect brain ageing, and to extract DNA for genetic tests. They will be followed up every two years and changes in their brain structure and cognitive functioning will be examined.

Statistical models will be used to examine gene-environment interactions, and specific genes will be explored for their contribution to the additive genetic effects. This study will be an important resource for national and international collaborations, and it has the potential to discover new genes.

The study involves researchers in New South Wales, Queensland and Victoria. Funding has been received and the study is awaiting approval from the Melbourne Health Human Research and Ethics Committee before recruitment commences.

Stroke and Pollution

Interesting results emerged from a detailed literature search into the possible effects of pollution on the incidence of stroke.

Some studies showed that airborne pollutants have a small, but significant, effect on the incidence of ischaemic stroke (stemming from a blockage in the brain’s blood vessels). The relative risk of dying on high pollution days was 8 per cent higher when compared to low pollution days. The risk of dying from stroke was one-third less than from chronic pulmonary disease and pneumonia.

It is most likely that pollutants produce haemodynamic changes, such as increased blood clotting, that increase the risk of stroke. Consequently, pollution did not affect the number of haemorrhagic strokes (occurring from bleeding into the brain).

Other studies suggested that acute pathogenetic processes in the cerebrovascular system are triggered by elements of atmospheric pollution, with the increased risk of death from ischaemic stroke being 3 to 6 per cent. In one study, stroke mortality was 30 per cent higher in the most polluted part of the city compared to the least polluted part.

The physiological cause of this effect is unknown. The most plausible assumption is that particulate air pollution provokes alveolar inflammation, causing the release of potentially harmful cytokines that increase blood clotting. Ultra-fine particles may cause a similar response after penetrating the lungs and entering the circulation.

More detailed research is required before these hypotheses can be confirmed. However, the study suggests that people at risk of stroke (those with high blood pressure, atrial fibrillation, diabetes, high cholesterol, or smokers) should avoid exposure to atmospheric particles, by staying indoors on high pollution days.
EDUCATION AND TRAINING

Successful NARI seminar

Who Decides? Lifestyle and Care in Older Australians was the theme of NARI’s biennial seminar in October that attracted 200 delegates. The Governor of Victoria, Professor David de Kretser, officially opened the seminar, which was sponsored by Australian Unity and the Council on the Ageing, Victoria. It explored the following topics:

- **Old Age – a burden or an asset, a pension or a job, a social value or an economic cost**
  Professor Allan Borowski (La Trobe University) challenged the idea that the large number of older Australians was creating an economic burden on society. Gavin Dufty (St Vincent de Paul Society of Victoria) highlighted the higher cost of living and its social impact.

- **Relationships and choice in residential care**
  The Hon Ian Tuxworth spoke about improving residential aged care facilities and Jeannene Stewart (Aged and Community Care Victoria) reviewed the services available. Delys Sargeant discussed older people’s physical and emotional needs.

- **Elder abuse: the system versus the individual – who decides?**
  PhD student Gerry Naughtin explored the complex nature of elder abuse, and Jane Herington (Victorian Department of Human Services) outlined the Government’s policies. Melbourne University lecturer Dr Lynnette Joubert spoke about the diverse aspects of elder abuse.

- **End of life decision-making**
  Michael Wells (Office of the Public Advocate) reviewed the legal aspects facing families and carers having to make decisions for loved ones. Dr Bill Silvester (Austin Health) reported on the innovative Respecting Patient Choices Program.

The Minister for Aged Care, the Hon Gavin Jennings, gave the closing address and stressed the importance of education and information about older people’s needs. Broadcaster Lynne Haultain chaired the morning sessions and Professor Rhonda Nay, the afternoon sessions.

Training programs

**Community care assessment training program**

NARI has updated and successfully run the community care assessment training program for many years. Dr Jean Tinney coordinated a program for Wintringham in June 2007, and she has a two-day program planned for Ararat in July. The program aims to meet the professional development requirements of primary health and community service staff, who are responsible for assessing the needs of older people. It also focuses on aspects of service coordination practice, including initial needs identification, assessment and care planning.

**Falls prevention training**

Fifty health professionals, case coordinators and other workers involved in the WestBay Primary Care Partnership attended NARI’s falls prevention training day in November 2006. It featured the interactive SPLATT Attack program that was developed to provide experiential learning of key falls prevention messages.

Other training resources being developed are the Dementia Resource Guide and an additional training module on falls prevention for the Victorian Quality Council falls prevention guidelines (See Research Report, page 15).
Masters of Research
NARI SUPERVISOR: ASSOCIATE PROFESSOR KEITH HILL
Marie-Louise Bird (University of Tasmania, School of Human Life Sciences) What changes in dynamic balance are seen in older adults who complete a crossover trial including both flexibility and strength training?

Honours
NARI SUPERVISOR: ASSOCIATE PROFESSOR STEPHEN GIBSON
Nicola Ball (Department of Medicine, The University of Melbourne) Components of anxiety and pain sensitivity.
Tessa Jones (Department of Psychology, Monash University) Patient pain knowledge and relationship with psychosocial adjustment to chronic pain.

NARI SUPERVISOR: ASSOCIATE PROFESSOR KEITH HILL
Nigel Kwok (Department of Medicine, The University of Melbourne) Cross-sectional study of regular table tennis activity and indices of bone health and fall risks in older Asian subjects.

NARI SUPERVISOR: DR BRUCE BARBER
Chathushka Fonseka (School of Psychology, Psychiatry and Psychological Medicine, Monash University) EEG P300 and fast-slow ratio correlates of music therapy-related changes in memory function in people with dementia.

Research students - theses in progress

PhDs
NARI SUPERVISOR: ASSOCIATE PROFESSOR STEPHEN GIBSON
Leonie Cole (Department of Medicine, The University of Melbourne) Pain and fMR1 activity in persons suffering from Alzheimer’s disease.
Catherine Devos (School of Psychological Science, La Trobe University) The association between pain-specific attributions and mood disturbance in chronic pain patients.
Melita Giummarra (Department of Psychology, Monash University) Predictors of post-amputation phantom limb pain.
Pamela Johnson (School of Nursing, La Trobe University) Behavioural and facial methods of pain assessment in non-verbal older persons with dementia.
Lindy Washington (Department of Medicine, The University of Melbourne) Age differences in endogenous analgesic systems.
Bradley Wood (Department of Psychology, University of Sydney) Pain self-management in older persons.

NARI SUPERVISOR: ASSOCIATE PROFESSOR KEITH HILL
Frances Batchelor (School of Physiotherapy, The University of Melbourne) Falls prevention for stroke patients following discharge home: A randomised trial intervention.
Natalie El Haber (Department of Medicine, The University of Melbourne) Genetic and environmental determinants of gait/balance in adult female twins.
Jenny Fitzgerald (School of Physiotherapy, La Trobe University) Falls prevention in the residential care setting with a focus on multiple fallers.
Kade Patterson (School of Exercise Science, Australian Catholic University) Global and local gait symmetry in able-bodied older adults.
Sandra Petty (Department of Medicine, The University of Melbourne) The effect of antiepileptic medication use on bone density, body composition and fracture risk – a twin and matched sibling study.
Melissa Russell (School of Population Health, The University of Melbourne) Falls risk, assessment and interventions for older fallers presenting to the Emergency Department and being discharged home.
Xiao Jing Yang (School of Population Health, The University of Melbourne) Effectiveness of a screening program for early balance problems and targeted exercise interventions among older community ambulant Veterans.

NARI SUPERVISOR: DR BRUCE BARBER
Loretta Quinn (Faculty of Music, The University of Melbourne) Evaluating the therapeutic effects of music interventions on hospitalised people with dementia.

Medical Doctorate
NARI SUPERVISOR: ASSOCIATE PROFESSOR STEPHEN GIBSON
Dr Shen Lim (Department of Medicine, The University of Melbourne) Pain sensitivity in patients with Parkinson’s disease.

Masters of Physiotherapy
NARI SUPERVISOR: ASSOCIATE PROFESSOR KEITH HILL
Willeke Walsh (School of Physiotherapy, The University of Melbourne) Falls risk assessment in the acute hospital setting.
Informed about ageing research

NARI’s monthly seminar program informs Institute staff and the academic community about research into ageing and aged care. The seminar’s convenor is Dr Bruce Barber.

SEMINAR PROGRAM

In 2006

JULY
Dr Julie Bernhardt, National Stroke Research Institute
Drugs or rehabilitation for stroke patients? Making the case for AVERT—a large, multi-centre trial of very early rehabilitation.
Freda Vrantsidis, Preventive and Public Health, NARI
A proposal to validate the Rowland Universal Dementia Assessment Scale in two populations outside the South Western Sydney Area Health Service.

AUGUST
Melita Giummarra, Clinical Research, NARI
Phantom limb pain.
Irene Blackberry, Preventive and Public Health, NARI
Coaching diabetes patients.

SEPTEMBER
Associate Professor Christopher Rowe, Department of Nuclear Medicine and PET, Austin Repatriation Medical Centre
Functional imaging in dementias of Alzheimer’s and Lewy Body types.
Dr Jane Sims, Monash University
Strength training in older people with depression.

OCTOBER
Melissa Russell, Preventive and Public Health, NARI
Validation of a falls risk assessment tool.
Professor Collette Browning, Monash University
Update on the longitudinal study of ageing.

NOVEMBER
Dr Peter Rendell, the Australian Catholic University
Alzheimer’s disease and prospective memory.

In 2007

FEBRUARY
Dr Toby Cumming, Development Division, NARI
Integrated care for stroke survivors: the effect on vascular risk factors and post-stroke depression.

MARCH
Dr Jean Tinney, Preventive and Public Health, NARI
Still Me: sense of self and wellbeing in residents in aged care.
Kirsten Moore, Preventive and Public Health, NARI
Challenges of establishing a rehabilitation program in a rural region: the Southern Grampians Glenelg Rehabilitation Program.

APRIL
Marlena Klaic, Preventive and Public Health, NARI
Bridging the gulf between inpatient rehabilitation and active community participation – The Enhanced Access Project.

MAY
Dr Roger Gouke, Department of Pain Management, Sir Charles Gairdner Hospital, Perth
Opioids and pain: the evidence.

JUNE
Dr Carol Holden, Andrology Australia
Men in Australia Telephone Survey (MATS) guiding education for male reproductive health.

From overseas

Ms Plaiwan Suttanon, a physiotherapy lecturer in the Faculty of Allied Health Sciences, at Thailand’s Thammasat University, is investigating balance problems for people with early dementia, for her PhD. She initially visited NARI in 2006.
Ms Jin Yih Lee, a falls clinic nurse at Tan Tock Seng Hospital in Singapore, had a seven-week clinical and research placement at NARI in October and November 2006. She was involved in clinical work at the Royal Melbourne Hospital (Royal Park campus), and observed NARI’s numerous falls prevention research projects.

CLINICAL SERVICE

Falls and Balance Clinic

Coordinator
Ms Anne McGann

Clinic secretary
Ms Marlene Tupper

Clinic team
Mr Ben Bullen
Dr Tony Chamberlain
Ms Aileen Kologeropoulos
Dr Gavin MacDonnell
Ms Melanie Pinfoeld
Ms Anne Roberts
Dr Eric Seal
Ms Rebecca Stanton
Dr Rosie Watson

Falls Clinic Coalition Organiser
Ms Kirsten Moore

The Falls and Balance Clinic at the Royal Melbourne Hospital (Royal Park campus) has an internationally-recognised assessment and management program for older people with a high risk of falling, and living at home. Together with the Vestibular Rehabilitation Service, the Clinic provides specialised services to address these two major causes of falls.

NARI and the Clinic have evaluated the services, and the results showed significant improvements in key outcomes for both clinical programs.

The NARI team continues to support Falls Clinics throughout the state, by organising the Victorian Falls Clinic Coalition meeting every six months. These meetings bring together practitioners from all Victorian public and private Falls Clinics to share knowledge, resources and practice change. NARI also hosts a website for the Victorian Falls Clinic Coalition.

The Clinic team works closely with the NARI falls prevention research team. The group meets monthly for a journal club review of a new falls prevention research paper. In addition, NARI and the Falls Clinic have shared training programs for numerous visiting national and international health professionals.
Publications

Books

Book chapters


Ames D. 2006. A study to evaluate the Rowland Universal Dementia Assessment Scale (RUDAS) in two populations outside of the Sydney South West Area Health Service. Report from South West Sydney Area Health Service and the National Ageing Research Institute to the Australian Government Department of Health and Ageing.


Journal articles


Conference presentations and abstracts


Barber B, Johnson P, Gibson SJ. Alzheimer’s disease patients and controls do not differ in their psychophysiological responses to a fixed intensity painful stimulus. Australian Pain Society 26th Annual Scientific Meeting, Melbourne, April 2006.


Farrell MJ. The physiology of pain, practical analgesia for the anaesthetist. Royal Melbourne Hospital, Department of Anaesthesia and Pain Management Annual Refresher Course, November 2006.


Gibson S, Hill K, Giummarra M, Livingston J, Blackberry L. Compliance with preventive recommendations among older people following their recent falls. 2nd Australian Falls Prevention Conference, Brisbane, November 2006.


Gibson SJ. Assessment of cognitive function in the patient with chronic pain. From Laboratory To Litigation, Australian and New Zealand College of Anaesthetists Annual Scientific Conference, Faculty of Pain Medicine, Melbourne, May 2007.


Hill K. The emergence of Tai Chi as an acceptable and effective exercise approach in improving health outcomes for older people. 2nd National Medicare Management Conference, Melbourne, September 2006.


Hill K. Don’t wait till the horse has bolted – early risk identification. 2nd Australian Falls Prevention Conference, Brisbane, November 2006.


Theses

Nicola Ball, BSc (Hons), 2006. Department of Medicine, The University of Melbourne. The role of uncertainty and harm attribution components of anxiety in pain perception.

Natalie El Haber, PhD, 2007. Department of Medicine, The University of Melbourne. Genetic and environmental influences on balance, lower limb muscle strength, gait and physical activity in studies of female twins.


Dr Shen Lim, MD, 2007. Department of Medicine, The University of Melbourne. Pain sensitivity in patients with Parkinson’s disease.
Working Together

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Mr David Jackson
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Dr Lynette Joubert,
Department of Social Work
Dr Qiao Xin Li,
Department of Pathology
Professor Siow Teng Liaw,
School of Rural Health
Dr Noel Lythgo,
School of Physiotherapy
Professor Joan McMeeken,
School of Nursing
Dr Elizabeth Manias,
School of Nursing
Professor Colin Masters,
Department of Pathology
Professor Terry Nolan,
Department of Population Health
Professor Terry O’Brien,
Department of Medicine
Dr Richard Osborne,
Department of Medicine
Professor Marcus Pandy,
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Dr Beverley Phillips,
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Dr Tracey Bucknell,
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Dr Shyamali Dharmage,
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Ms Nancy Guo,
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Dr Lynette Joubert,
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Professor John Bradshaw,
Department of Psychology
Professor Collette Browning,
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Dean of Medicine, Nursing and Health Sciences
Professor Donald Campbell,
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Department of Medicine
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Pro-Vice Chancellor (Melbourne) and Academic Director for Peninsula and Berwick Campuses
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School of Psychology, Psychiatry and Psychological Medicine
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School of Physiotherapy
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School of Physiotherapy
Professor Rhonda Nay,
Director of Gerontic Nursing, Australian Centre for Evidence Based Aged Care
Dr Nicholas Voudouris,
School of Psychological Sciences

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Professor Osvaldo Almeida,
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Dr Jocelyn Angus,
Victoria University
Ms Glenda Banks,
Glenda Banks Communications
Mr David Basic,
Liverpool Hospital, NSW
Ms Judy Basile,
Mecwa
Ms Wendy Bateman,
Aged Care Standards and Accreditation Agency
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Victoria University
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Aged Care Standards and Accreditation Agency
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Wodonga Regional Health Service
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Dr Lindy Clemson,
University of Sydney
Dr David Conforti,
Liverpool Hospital, NSW
Ms Jackie Crane,
Austi Health
Working Together

NATIONAL AGEING RESEARCH INSTITUTE

International Collaboration
Professor Darrell Abernethy, National Institute on Aging, National Institutes of Health, USA
Professor Robert Arking, Wayne State University, Michigan, USA
Mr Michel Bedard, McMaster University, Canada
Dr Richard Stanley Burns, Cleveland Clinic Foundation, USA
Professor Robert Cone, University of Connecticut Health Centre, USA
Dr Winard Dittrich, University of Hertfordshire, UK
Dr Richard Gracely, National Institutes of Health, USA
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Dr Ngaire Karse, University of Auckland, New Zealand
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Associate Professor Willie Molloy, McMaster University, Canada
Dr David Oliver, Institute of Health Sciences, The University of Reading, UK
Dr Alexandra Papaioannou, McMaster University, Canada
Dr Gisele Pickering, University of Clermont, France

Organisations
Alzheimer’s Australia
Association for the Blind
Austin Health
Australia Retirement Co
Bairnsdale Regional Health Service
Baptcare
BioMelbourne Network
Carers’ Choice (Ballarat)
Carers Victoria
Centre for Applied Gerontology
CERA
Church Nursing Home
COTA (Victoria)
DAA – Vic Branch
Mecwa
National Neuroscience Facility
Neuroscience Trials Australia
Neuroscience Victoria
Vision 2020 Australia
XBio Systems
The audited financial details for the year ended 30 June 2007 have been published in a separate Financial Report booklet that is available from the Institute upon request.

**Key Details**

Total income for the year was $2,426,745 compared to $1,949,674 for the previous year. Considerable grant success in 2006-07 contributed to this difference.

Total operating expenditure was $1,866,351 compared to $1,961,203 in 2005-06. Expenditure was reduced because redundancy payments in the previous year arising from closure of the Biology Division led to abnormal expenditure in that year.

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**Donations**

$100 or over
- Mrs Val Barrett
- Mr Ray and Mrs Dorothy Birch
- Mrs Elizabeth Brown
- Mr Leonard Buchanan
- Mrs Rita Cervai
- Dr Chris Driver
- Mr Joseph Entwistle

- Mrs Beverley Fethers
- Mrs Dorothy C Kurth
- Mrs Maurine Moore
- Mrs Jancis Rees
- Soroptimist International of Brighton and Southern Districts Inc
- Mr James Trainor

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**Financial Contributions**

**Government**
- Commonwealth Department of Health and Ageing
- Commonwealth Department of Veterans’ Affairs
- National Health and Medical Research Council
- Victorian Department of Human Services

**Bequests**
- Estate of the late Mr Bruce Wall
- Estate of the late Mr Ronald Stuart Livesey

**Sponsors**
- Australian Unity
- Neuroscience Trials Australia

**Support**
- Alzheimer’s Australia
- Baptcare
- The William Buckland Foundation
- The HCF Health and Medical Research Foundation
- Villa Maria
- Melbourne Health
- Moreland Community Health Services
- The Lord Mayor’s Charitable Fund
- Eldon and Anne Foote Trust
- The University of Melbourne
- The JO & JR Wicking Trust

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**In Appreciation**

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**Other generous financial support**

- Mr Ronald A Allan
- Mr W Babb
- Mr Arthur Bentley
- Dr DH Blake
- Mr Herbert Bratspies
- Mrs Alice and Mr P Broadley
- Ms K L Burke
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- Mr Joseph W Smith
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- Mr Vic Whelan
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- Mr Jack Wilkinson
- Miss B Woodward
You Can Support NARI

Research holds the key to unlocking the possibilities of ageing well.

The National Ageing Research Institute receives some government funding but relies predominantly on donations, research grants and competitive tendering for projects, to pursue its vision of healthy ageing for all Australians.

The Institute is committed to increasing awareness into ageing well and raising funds to support vital research into the causes and consequences of ageing and accompanying social issues.

NARI wants to ensure that more people continue to maintain their health, dignity and independence as they age.

HOW YOU CAN HELP

Individual donations
All donations over $2 are tax deductible.

You can donate by phoning 03 8387 2305 or online at www.nari.unimelb.edu.au

Make cheques payable to: National Ageing Research Institute. Mailing address: PO Box 31, Parkville Victoria 3052

Corporate sponsorship

Becoming involved in a partnership with a philanthropic organisation is a positive way for corporate businesses of all sizes to show their community commitment.

The Institute can discuss in detail a sponsorship package that maximises benefits for your company.

Bequests

Leaving a bequest to NARI’s research programs means that you will be contributing significantly to the future health of all older people.

In memoriam gifts and donations in lieu of flowers

Making a donation in memory of a loved one or friend, or encouraging donations in lieu of flowers at a funeral will ensure that the person’s memory lives on to help others.

Donations in lieu of gifts

Suggesting donations in lieu of gifts to guests invited to a special birthday celebration, or to mark an anniversary or achievement is a wonderful way to support the Institute’s research.

Fundraising events

Clubs and community groups can help to increase awareness of ageing well among their members and raise much-needed funds for medical support into ageing, by organising a fundraising event.

Become a volunteer

The Institute relies on volunteers for its research studies and to assist with research design and fundraising. Their views on healthy ageing and the relevance of our research are highly valued.

For more information - Ms Debra O’Connor  Phone: 03 8387 2305  Email: info@nari.unimelb.edu.au