AUSTRALIA’S LOST WORKFORCE: CHRONIC PAIN CAUSES 40% OF EARLY RETIREMENTS

A new Australian study reveals that 663,000 Australians aged between 45 to 64 are not working due to ill health costing the economy $12 billion a year. Of these people, 280,000 are forced into early retirement because of back problems and arthritis, both associated with chronic pain.

This lost workforce adds weight and urgency to calls for chronic pain to be recognised and managed as a chronic disease.

The study, led by Professor Deborah Schofield from the University of Sydney, suggests that effective treatment and management of chronic pain could keep more people working and paying taxes longer, and fewer receiving welfare payments. Potential savings to the Commonwealth in 2013 could be $13.7 million, rising to $36.2 million four years later.

According to Painaustralia Chief Executive Lesley Brydon:

“Chronic pain is a growing health and economic crisis in Australia that will only escalate as our population ages. Keeping people in the workforce is important on both a personal and national level. People are living longer and need to be able to support themselves through their old age. This study highlights the need for the federal government and opposition to address chronic pain in their health policies for the forthcoming election.”

Professor Schofield presented the results of the study at Painaustralia’s Annual General Meeting, held at NSW Parliament House (Macquarie Street, Sydney) on Tuesday 9 April.

NEW RESEARCH INTO CANNABIS RELATED MEDICINES FOR NEUROPATHIC PAIN

Damage to the nervous system through injury and disease often leads to the problematic condition of neuropathic pain. Neuropathic pain is an extremely disabling chronic syndrome. It has a relatively high prevalence which will only increase in the future as the population ages. Unfortunately, current medications are not always effective, and in many cases they produce side-effects which stop patients from continuing their treatment. A major challenge in pain research is, therefore, to find new drugs which relieve neuropathic pain AND produce fewer side-effects.

There are a number of areas which have potential. Over the past 10 years, preclinical research has shown that the psychoactive ingredient of the plant Cannabis sativa, THC, is effective in reducing the abnormal pain associated with neuropathic pain. THC and related compounds are, however, limited because they produce classical cannabis-like side-effects, including disruption of movement and cognition, and have been
linked to psychological problems.

Over the past few years, the Cellular Research Group at PMRI, headed by Dr Chris Vaughan, has been exploring ways to improve cannabis-related products in the treatment of neuropathic pain. Members of this group, including Benjamin Lau, Adrianne Poe, Geoff Drew, Vanessa Mitchell and Wayne Anderson, have been spearheading this research. One very interesting approach has been to target endogenous cannabis-like systems within the brain and body. We know that THC acts by mimicking the effects of endogenous substances, called neurotransmitters, which are produced by the brain. One such endogenous cannabis-like neurotransmitter is anandamide.

Instead of giving someone THC which swamps the body, a novel approach could be to give a drug which blocks the breakdown of anandamide. These drugs should selectively increase the levels of the endogenous anandamide within specific parts of the brain and body, and produce pain relief by acting within these brain regions. The aim is to produce a more subtle pain relieving effect, with lesser side-effects than administering THC. By analogy, this is how other drugs work, such Selective Serotonin Reuptake Inhibitors (SSRIs) which are used for the treatment of depression – SSRIs work by increasing endogenous levels of a different neurotransmitter, serotonin.

Recently, our group within PMRI has been carrying out preclinical studies on new drugs which stop the breakdown of anandamide. While at an early stage, this work is producing some promising results. Like THC, these drugs do produce pain relief in animal models of neuropathic pain. Of equal importance, we have also found that these drugs produce fewer side effects than THC. We hope to complete this work over the next two years. We hope that in the future these new drugs might be examined in clinical studies.

WALK AGAINST PAIN 2013

Against the backdrop of Marathon Cricket at the Sydney Cricket Ground, over 90 Walkers enjoyed a spectacular afternoon participating in PMRI’s third

“Walk Against Pain” in January.

Once again, Professor Michael Cousins led the Walkers in the celebration and was joined by PMRI Board Directors, Tim Holden and Nigel Stewart.

With almost double the number from last year, the Walkers helped raise over $5,000 to assist pain management research, as they clicked over laps of the grand arena.

Many thanks to the Walkers, their sponsors and our corporate supporters on the day - Medtronic, St Jude Medical, and Boston Scientific.

Professor Cousins thanked the Walkers for their demonstration of support and reassured the gathering that with the lead taken by Painaustralia PMRI was pursuing the state governments and departments to ensure improved delivering of pain management service nationally.

Professor Cousins and Walkers in front of the SCG Members’ Pavilion

Just walking was a bit slow for some!

Following the Walk, supporters were invited to witness the Primary Club’s Battle of the Codes Twenty/20 cricket match, pitching the Legends Rugby Union against their League counterparts. Wendell Sailor and Ryan Cross (League) battled it out and won in a close match against Phil Waugh, Brendan Foley and co.
INNOVATIVE TRAINING TECHNOLOGY:
WEBINAR SKILLS TRAINING FOR PAIN PROFESSIONALS

“Putting Cognitive Behavioural Therapy (CBT) into Practice.”

These webinar skills training programs aim to give all healthcare professionals an opportunity to learn how to help patients better manage chronic or persisting pain problems.

Each program consists of 5 webinar sessions of 90 minutes duration conducted over a 10 week timeframe. In each session, one explores and practices how to better assess and manage patients experiencing chronic pain.

- Session 1: Patient Assessment & Case Formation
- Session 2: Explaining Case Formulation
- Session 3: Identifying SMART Goals
- Session 4: Planning for Implementation
- Session 5: Review of Progress & Maintenance Strategies

Series 2 of the 2013 program runs from 15th May through to 10th July. Additional series are planned for the August to September timeframe.

Facilitators include Professor Michael Nicholas (Director of Pain Education), Dr Sarah Overton and Dr Brad Wood (both senior clinical psychologists at the Pain Management and Research Centre).

For information about these webinars, costs and how to join them, call (02) 9926 7386 or email: paineducation@sydney.edu.au.

LEADERSHIP ROLE IN PAIN MEDICINE,
NEUROMODULATION AND EDUCATION AND TRAINING

Early this year Professor Cousins was invited to the Scientific Meeting of the Faculty of Pain Medicine in Ireland. Professor Cousins delivered the RYND Lecture entitled “The Future of Pain Medicine”. The theme of the meeting was “Chronic Pain as a Chronic Disease” and Professor Cousins made a key presentation on this topic. In recognition of Professor Cousins’ contribution to the field of Pain Medicine, he was made an Honorary Fellow of the Faculty of Pain Medicine of Ireland.

The Neuromodulation Society of Australia and New Zealand (NSANZ), a chapter of the International Neuromodulation Society (INS), decided earlier this year to establish a “Lifetime Achievement Award”. Professor Cousins was invited to the Society’s 8th Annual Scientific Meeting in Canberra on 17th March to be the inaugural Recipient of this award.

President of NSANZ, Dr Paul Verillis, presented Professor Michael Cousins AM its inaugural Lifetime Achievement Award

The award recognised his seminal research in the 1970s and 1980s on the scientific basis and clinical use of the morphine-like drugs administered by the spinal route (epidurally or directly into the spinal fluid).

Initial evidence in humans that the morphine-like drugs have an action on the spinal cord was published by Professor Cousins and his research group in the journal “The Lancet” in 1979. Subsequently a major review article of his research group’s key findings, and those of others internationally, was the most cited paper in the Anesthesiology literature over the past 60 years.

The award also recognised the more recent work of Professor Cousins, in collaboration with a group from NICTA, headed by Dr. John Parker which has been pioneering a new understanding of the mechanisms of action of spinal cord stimulation leading to highly innovative developments in this field of neuromodulation.

In early May of this year, Professor Cousins was invited to be the key plenary lecturer at a combined meeting of all of the Asian Associations of Pain Medicine. Professor Cousins’ lecture was entitled “The Past, Present and Future of Pain Medicine”. The invitation to participate in this meeting was partly in recognition of the many Fellows that Professor Cousins has trained from the Asia/Pacific region including: Singapore, Thailand, Malaysia, Philippines as well as Hong Kong. (See below.)

As Professor Cousins recognised in his lecture, the training of key individuals who return to their country with new knowledge and expertise has a multiplier effect with many of these individuals becoming champions for Pain Medicine and attracting a substantial group of individuals around them as has been the case for all of the...
Pain Management Research Institute - A joint initiative of the University of Sydney and Royal North Shore Hospital
St Leonards NSW 2065

Pain Medicine Specialists from the Asia/Pacific region who attended the Singapore Meeting.

PROGRESS WITH SPINAL CORD STIMULATION RESEARCH

In a previous edition of this newsletter, it was reported that PMRI, in collaboration with NICTA, had provided the first evidence in humans of the mechanisms of action of spinal cord stimulation in treating nerve damage pain (neuropathic pain).

PMRI/NICTA reported on the precise location and type of nerve fibres that need to be stimulated to produce pain relief and this work was made possible by a revolutionary new methodology that allowed the recording of electrical activity in the spinal cord of humans undergoing spinal cord stimulation for chronic pain. (See Pain 2012; 153:593-601).

The publication of this work has made a major impact on the field of neuromodulation and resulted an invitation for Dr. John Parker to give a keynote address at the Scientific Meeting of the North American Neuromodulation Society in February this year and an editorial in the journal ‘Neuromodulation’. (See Neuromodulation 2012; 15:273-279)

The research group’s second publication in press in the journal ‘Neuromodulation’.

This publication reports a very large amount of new knowledge obtained in our work with a sheep preparation which has allowed us to take extensive measurements over quite prolonged periods of time with the sheep under a general anaesthetic. As was the case in humans, we have been able to record electrical activity (‘action potentials’) and to carry out more extensive studies on which part of the spinal cord is most favourable for neurostimulation.

Current spinal cord stimulation systems require a great deal of attention by a technician, in order to maintain effective stimulation and associated pain relief. Our work in the sheep preparation and humans, has focussed on developing methodology for automatic control of stimulation based upon a ‘closed loop’. This involved three key components:

1. A specially designed stimulation system which is linked to
2. A continuous recording system; and
3. A complex processing system which adjusts the stimulation instantaneously and continuously.

This ‘feedback’ loop system maintains completely stable stimulation so that the patient is never aware of any change in the stimulation.

We have now studied 26 patients with the ‘closed loop’ system and have been successful in maintaining stable stimulation in all patients. However when the ‘closed loop’ is turned off patients obtain acceptable stimulation, without bursts of ‘small electric shock sensations’ only about 40% of the time.

POSTGRADUATE STUDIES IN PAIN MANAGEMENT

The Sydney Medical School and PMRI conduct postgraduate coursework degrees with the option to enter or exit at the Graduate Certificate, Graduate Diploma or Masters level in Pain Management.

The aim of the program is to improve patient outcomes by providing postgraduate clinically relevant education to an international standard.

The program seeks applicants with backgrounds in medicine, dentistry, psychology, nursing, physiotherapy, palliative care, occupational therapy, pharmacology, sports medicine and other relevant disciplines.

All Units of Study (core and elective) are taught in distance mode and are completed entirely online.

For information about this and other education programs, call (02) 9926 7386 or email: paineducation@sydney.edu.au.

PAIN MANAGEMENT SYMPOSIA

PMRI’s Pain Education Unit also holds a series of Symposia, open to all healthcare professionals and friends and supporters of the Institute.

Most recently, we staged the “PAIN IN PALLIATIVE CARE” Symposium at the Kolling Auditorium on Saturday 4th May, at which leading experts in the field of palliative care contributed.
Dr Melanie Lovell, a Palliative Medicine physician and a Clinical Senior Lecturer at Sydney Medical School based at Greenwich Hospital, joined other specialists who focused on the experience, assessment and management of pain from physical, psychological, environmental and spiritual perspectives.

NSW Minister for Health and Minister for Medical Research Jillian Skinner once again indicated her whole-hearted support for this initiative with her attendance and participation on the day.

Towards the end of the event, the audience participated with the panel of assembled specialists in a review of a case study. "Louise" at age 33, a mother of three, was diagnosed with cancer in 2001. We heard of her progress and various treatments over the past decade. An intelligent and highly-regarded psychologist involved in the television industry, Louise lived life to the fullest despite the peaks and troughs she endured with her illness. Sadly, she passed away shortly before this event.

The next Symposium in this series promises to be a well-attended event, “UNDERSTANDING AND TREATING HEADACHES: Optimising the application of latest thinking and evidence based methods”. The date for this symposium is tentatively set for Saturday 19th October at the Kolling. Friends of PMRI will receive notices about the event and are encouraged to attend.

**MEMBERSHIP OF “FRIENDS OF PMRI”**

Membership is open to all people who care about finding new and improved ways of helping over 3 million Australians who suffer from chronic or persistent pain. In 2013/14 we need to find $1m from private sources to help grow the Institute with a critical mass of highly qualified researchers and clinicians.

To become, and to continue as, a Member of “Friends of PMRI”, simply make a tax-deductible donation each year of $50, or more if you can. Sign up online at www.trybooking.com/8719 using your Visa or Mastercard, or mail a cheque to ‘PMRI’.

Remember "membership" is not a one-time only action; it needs constant renewal of commitment to ensure the results are achieved.

**PAIN IN LIFE-LIMITING CONDITIONS**

Dr Frank Brennan, Palliative Care Physician, Calvary Hospital, Sydney. Dr Brennan was one of the speakers at our recent Palliative Care Symposium.

When people think of heart, lung or kidney disease they may not think of pain. Certainly cancer is associated in the public mind but does pain come into these other conditions?

Yes, it does – in two main ways. Firstly, from the disease itself. Heart disease is a good example where a patient may get repeated episodes of angina caused by narrowing of the bold vessels in the heart.

The other reason people with serious heart, lung or kidney disease may get pain is because of other illness in their body at the same time. A good example is kidney disease. The greatest numbers of Australians on dialysis is in the age group 65-84 year old. It is that group that has a higher incidence of arthritis.

One issue with pain is that the patients sometimes feel that they should “just put up with it” and worry they may seem troublesome if they ask the doctor about pain. Not these days as doctors we should be very attentive to descriptions of pain and the need to respond.

Another group of patients that suffer pain are those...
with dementia. They struggle expressing pain and remembering they have pain. Their pain may be due to being bed bound and stiff, pressure sores, fractures due to osteoporosis and other conditions. The challenge for health professionals is to realise the patient may be in pain and respond well and with compassion.

To our junior doctors and nurses, we teach them that there is a pain etiquette - to always ask whether someone is in pain, to look for the cause, to treat both the cause and the pain itself and, if one cannot help the person, to refer on to an expert who can.

Finally, if the kidneys are failing we will need to adjust the doses of pain medications.

Pain is relatively common in non-cancer conditions and, as with all pain, needs to attended to with both kindness and competence.

**FRIENDS ASSIST FUNDING OF VITAL RESEARCH EQUIPMENT**

*Linda Critchley, Scientist, Clinical Research*

Thanks to the timely donation of funds to PMRI in mid-2012 by certain individual members, “Friends of PMRI” were able to assist with the procurement of over $14k worth of vital research equipment for the Clinical Research Laboratory at Royal North Shore Hospital.

The two pieces of equipment are essential for conducting clinical research - a refrigerated centrifuge and a minus 20degC freezer.

The refrigerated centrifuge is required for separation of blood samples collected for our clinical research. We were previously using a second hand centrifuge that was 15 years old and no longer able to be serviced or calibrated. It was also past its safe rotor life which creates an occupational health and safety issue.

The Clinical Research team also acquired its own small laboratory freezer with back-to-base monitoring capabilities which fulfill our requirements for storing pharmacokinetic blood samples and study medications on site, instead of transporting samples to and from suitable freezers elsewhere on the campus.

Both items of equipment were supplied by *ThermoFisher Scientific* who became a corporate supporter of PMRI through sponsorship of the James Morrison Concert in November.

**PAIN – COMMUNICATION IS VITAL FOR OPTIMAL MANAGEMENT**

*Professor Phyllis Butow, School of Psychology, University of Sydney. Professor Butow was one of the speakers at our recent Palliative Care Symposium.*

Health professionals often feel challenged in their interactions with pain patients. The lack of clear information about the origin, diagnosis and prognosis of their condition can provide a challenging environment in which to communicate effectively with patients about their health.

In recent years, there is an increasing expectation from health care providers and patients for shared decision making to be a part of the medical consultation. And yet, studies show that there remains considerable unmet need in the management of pain. Some unmet need arises from the lack of effective interventions. However, even where the evidence indicates that interventions, such as medication, exercise or pain management are effective, patients are not always adherent with these treatment recommendations. How can we, as health professionals, improve adherence?

There are numerous models in health psychology which aim to explain why people engage (or opt not to engage) various health behaviours, such as the health belief model, the self-regulation model and the theory of planned behaviour. What all of these models highlight as being important predictors of adherence are the patient’s beliefs about their health condition and the recommended behaviour.
Reviews of interventions to increase adherence suggest that two key factors to promoting adherence are (a) good health-care provider-patient communication; and (b) that the intervention must focus on the reasons for non-adherence. Hence, having communication skills that allow open exploration of the patient’s concerns, allowing the health professional to address those issues, is crucial in achieving a good working relationship between professional and patient.

Research in oncology settings has shown that good communication between doctor and patient facilitates a number of positive outcomes including (a) adherence; (b) shared decision-making; and (c) increased satisfaction. Far less research has been conducted in the pain literature. However, randomized controlled trials of relatively brief communication skills training workshops have shown improvements in primary care settings, resulting in improved outcomes for patients with fibromyalgia and acute pain.

Further, good communication of the health professionals on pain management programs has been shown to improve outcome. Although there are inherent barriers in the treatment of chronic pain, good communication between health provider and patient can promote adherence to lifestyle changes and appropriate medical interventions that appear to result in important, clinically significant benefits for a range of pain conditions.

**MUSIC TO EASE THE PAIN**

What a fantastic experience!

Over 550 friends and supporters enjoyed the November 2012 “Windows on Pain” Concert featuring renowned jazz instrumentalist James Morrison and The Metropolitan Orchestra at the magnificent Concourse Concert Hall at Chatswood.

The Concert was strongly supported by several significant corporate friends of PMRI: Ramsay Health Care, Mundipharma, Medtronic, Sell & Parker, Reckitt Benckiser, ThermoFisher Scientific, Storage King and Turner’s Crossing Vineyard.

The concert was followed by a fine food and wine Soiree, where patrons were able to mingle with James, the conductor Sarah-Grace Williams, and the orchestra musicians.

Each of these concerts, apart from providing a thoroughly delightful program of light classical and jazz music, reaches out to a new community who is hearing about the mission of PMRI for the first time.

With help from Sarah-Grace, we are excited to announce that PMRI is intending to acquire tickets to witness singer Katie Noonan perform a gala charity concert with The Metropolitan Orchestra on Friday 6th December from 7:30pm at the Concourse Concert Hall at Chatswood.

Please put the date in your diary now. Tickets will be available for sale from PMRI, including Premium tickets for both the concert and the Post-Concert Reception with Katie and Sarah-Grace.

**NEW FUND-RAISING OPPORTUNITY**

In 2011, we reported that PMRI was selected by the ASX Thomson Reuters Foundation, representing many of Australia’s top corporate organisations, as a ‘partner charity’ for that Foundation’s 2011/12 fund-raising drive.

PMRI is sharing with another 22 registered charities such as Leukemia Foundation and Heart Research in a ‘pot’ of $1.2m, resulting from our active participation in their Art Union, Yachting Regatta, Golf Day and Dinner. The assistance and participation by several PMRI volunteers such as Tim Holden, Antony Kingsford-Smith, Geoff Verco and Phil Prakash at the Golf Day is greatly appreciated.
The winning tickets in the 2013 Art Union were sold by Autism Spectrum (Aspect), Wheelchair Sports and Odyssey House. So, it must be PMRI’s turn in 2013/14! Please help us with selling tickets next time around.

With continued and increased participation by the “Friends of PMRI” and other supporters, we have the opportunity to increase our share of next year’s results.

On that point, applications are now open for yachts and crews to compete in the next Sydney Harbour Regatta on Friday 25th October. If you have a good friend who’s a “yachtee” or you are one yourself, please contact the PMRI office for entry details.

**PAINAUSTRALIA KEEPS US “IN THE KNOW”**

National advocacy body, Painaustralia, maintains an active website www.painaustralia.org.au developed as a resource centre, providing latest news and information about pain management services and programs nationally, the latest pain research findings, and up-to-date progress on the National Pain Strategy.

The site also provides access to educational resources for consumers and healthcare professionals.

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### FORTHCOMING FUNCTIONS 2013/14

**“Soaring Above Pain” Luncheon**

hosted by Minister Jillian Skinner with guest speaker world champion aerial skier **Jacqui Cooper** and MC

**ABC commentator Peter Wilkins**

**…. NSW Parliament House**

**Friday 19th July**

at 12 noon

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**“Understanding & Treating Headache” Symposium**

Kolling Auditorium on Saturday, 19th October from 9am to 5pm

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**Katie Noonan in concert with The Metropolitan Orchestra and artistic director Sarah-Grace Williams**

**…. Chatswood**

**Friday 6th December**

at 7:30pm

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**Yachting Regatta**

Sydney Harbour

**Friday 25th October from 10am to 5pm**

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**“Walk Against Pain”**

with the cricket and football legends

**…. the Sydney Cricket Ground (SCG) on date to be advised**

**January 2014 from 3:00pm to 5:00pm**

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Help us keep the pain management message out there by supporting these events. For more information about the Friends of PMRI, or if you would like to volunteer at any one of these various functions, please contact Shaan Verco on (02) 9929 5566, or visit our website www.sydney.edu.au/medicine/pmri.