

# AVERT Newsletter

No 9. August 2009



## Welcome to our Biannual Newsletter

We aim to keep you, our supporters, up to date with information about A Very Early Rehabilitation Trial (AVERT). This trial will test whether starting rehabilitation within 24 hours of stroke onset leads to better outcome (and is cost effective) compared to standard stroke care. The study is very important and, if our results are positive, may lead to marked improvements in patient care around the world. The trial sits at the core of a very early rehabilitation research program.

The program is focussed on finding out not only the effectiveness and cost of earlier rehabilitation but also aims to better understand what happens when people start to exercise soon after stroke. A few key areas of interest include how exercise affects muscle, bone and the brain, and how it may alter mood (depression) and cognitive function (thinking abilities).

In this newsletter we tell you about:

- Our progress with the AVERT trial
- Janette Stirling Rose and Patrick Rowe experiences of stroke
- Results from research by staff, students and international fellows
- Things we have done to let people know about our research both here and overseas

## AVERT Progress

### Recruiting patients to AVERT

AVERT has been running for 3 years and we can be really proud of what we have been able to achieve together. We certainly didn't plan to expand to hospitals outside Australia when we began, but as you can see from the list of hospitals now involved in the trial (page 2) we've grown beyond all expectations. In part, this has been necessary to help us recruit the

patients we need to make the trial a success (> 2000 patients). We have also taken this step because of international interest, and because there are advantages in clinical research which tests whether the very early rehabilitation program works outside our Australian health system.

On July 30, we hit a major milestone, with patient 500 recruited at the Austin Hospital. This is an outstanding achievement, achieved with support from 18 stroke unit teams in Australia, New Zealand and Scotland. AVERT is now the largest stroke rehabilitation trial in the world.

**500** patients

Two hospitals, the Austin Hospital and Royal Perth Hospital have large stroke units and were the first 2 hospitals to recruit patients in 2006. The teams at these sites have each recruited over 100 stroke patients and we thank them for their ongoing hard work and dedication.



Pictured (left to right) at the Royal Perth Hospital: Jean Hardy (Physiotherapy Assistant), Christopher Woodley (100<sup>th</sup> AVERT patient) and Tanya West (AVERT Physiotherapist). Jacqui Ancliffe (Main Investigator) is not pictured.

## New hospitals start AVERT and more to follow

During the first 6 months of 2009, 8 new hospitals have joined the trial from Australia, Singapore, Wales and Canada. Twenty seven hospitals are now able to recruit to AVERT (see table). New hospitals in Northern Ireland and Malaysia will commence soon.

**Dr Tauqeer Ahmad**, Main Investigator, and his team at Singapore General Hospital were successful in obtaining 128,000 Singapore dollars for a **Project-Based Research Grant** from a **Singhealth Foundation** grant to recruit 120 AVERT patients.

**Dr Sheila Lennon**, Trial Leader AVERT-Northern Ireland, and her team were successful in obtaining a **Program Grant** for £87,000 from **Northern Ireland Chest Heart and Stroke** to recruit 130 AVERT patients. Belfast City Hospital, Ulster Hospital and Antrim Area Hospital have ethics applications underway, with training planned for October. Dr Guio Jalon has been appointed as a Research Associate.

The Malaysian team in Kuala Lumpur have also secured administrative funding from the **National University of Malaysia** (UKM) to support the start up of AVERT at UKM Kuala Lumpur.

**We congratulate all of these teams on their grant success to support AVERT in their country.**

Adding new hospitals to the trial means a lot of hard work by our small AVERT Central team in Australia, AVERT Scotland and the staff at each of the new hospitals. We have done exceptionally well to build the trial to this extent. We will be having an **Australian Investigator Meeting in Melbourne, August 27-28**. This meeting will focus on our achievements to date and continue to update and refine processes at AVERT hospitals and the central team here at the National Stroke Research Institute.

Current AVERT hospitals
<b>AUSTRALIA</b>
Austin Hospital VIC
<sup>new</sup> Belmont Hospital NSW
Flinders Medical Centre SA
Frankston Hospital VIC
Geelong Hospital VIC
<sup>new</sup> Gosford Hospital NSW
Newcastle Mater Hospital NSW
Royal Hobart Hospital TAS
Royal Melbourne Hospital VIC
Royal Perth Hospital WA
Sir Charles Gairdner Hospital WA
<sup>new</sup> St. Vincent's Hospital NSW
Warrnambool Hospital VIC
Wesley Hospital QLD
Westmead Hospital NSW
West Gippsland Hospital VIC
<sup>new</sup> Wollongong Hospital NSW
Wyong Hospital NSW
<b>NEW ZEALAND</b>
Auckland City Hospital
<b>SCOTLAND</b>
Monklands Hospital
Stirling Royal Infirmary
Western Infirmary
Wishaw General Hospital
<b>SINGAPORE</b>
<sup>new</sup> Singapore General Hospital
<b>WALES</b>
<sup>new</sup> Nevill Hall Hospital
<sup>new</sup> Royal Gwent Hospital
<b>CANADA</b>
<sup>new</sup> Medicine Hat

## A Stroke Survivor's Story from Janette Stirling Rowe and Patrick Rowe

Janette and her husband Patrick were out having lunch with friends. Janette says "I was sitting having the sweet and I felt as if I was there but not there, feeling a bit funny. A friend said I was trying to eat my lunch, but the food was not going in my mouth." Patrick was worried and said they would stop at the doctors on the way home. They left very soon and got on the bus to go home. When they were off the bus and nearly home "Patrick left me with a friend and said he would run off ahead to call an ambulance. I thought I was going to fall over. I don't remember anything after that until I was in hospital" says Janette.

When they got off the bus, Patrick recognised that something was really wrong. He saw that the right side of Janette's face looked frozen and she wasn't responding to conversation. Patrick did not know about the FAST test, but he thought these symptoms were the signs of a stroke.

The FAST test for the signs of stroke involves asking three simple questions

**Face. Check their face. Has their mouth drooped?**

**Arms. Can they lift both arms?**

**Speech. Is their speech slurred? Do they understand you?**

**Time. Time is critical. If you see any of these signs, call 000 now.**

**Think FAST. Act FAST**

Patrick decided to call an ambulance and said "I think my wife's having a stroke". Patrick remembers the ambulance got there quickly and his wife got to the Royal Perth Hospital (RPH) very rapidly.

**Fact.** Very few stroke patients can call an ambulance for themselves. Families, friends or carers are the people who need to recognise the signs of stroke and call for an ambulance.

Because Patrick thought Janette might be having a stroke and he called an ambulance quickly, Janette got to hospital within 3 hours of her stroke and she was able to be offered early treatment. Patrick said "I would rather be embarrassed and call the ambulance than not call".

**Fact.** At the Royal Perth Hospital, 48% of people don't get to hospital within 24 hours of stroke symptoms.

At the RPH, Janette remembers being told she had had a stroke. She says she 'freaked out' because both her mother and sister had died from a stroke. Professor Hankey, her neurologist, talked to her about a new drug called tPA that can dissipate the clot in the brain. He explained that the drug can have both good and bad effects.

**Fact.** tPA is a drug used to 'bust the clot' that is causing the stroke and can only be given within 3 hours from the start of the stroke.

Janette and Patrick both felt that the drug was the best option for a good outcome. It was great news for Janette as she was one of the people who have a dramatic recovery after having tPA. Janette is now home and doing well. Patrick says he couldn't speak more highly of RPH. They were happy to tell their story if it could help someone else.

We thank Janette and Patrick for telling us their stroke story. National Stroke Week in Australia is September 14-20. Would you like to share your story or hold an event and help the people in your community? We would encourage you to participate in promoting the FAST message to improve outcomes for people with stroke. For more information, go to the National Stroke Foundation web site.

<http://www.strokefoundation.com.au/content/view/365/1/>

## Visiting Research Fellow:

### Dr Thomas Linden



#### Picture: Thomas Linden, with family

How time flies! It seems like almost yesterday that I arrived from the midst of the winter of Gothenburg, Sweden to Melbourne in the heat of January 2008 for a full year of research with the AVERT team at the National Stroke Research Institute. I have met numerous very skilled people passionately devoted to improve the life of those suffering from stroke. They also happen to work in a very friendly and inclusive atmosphere so it is not only the warmth of the climate my family and I are going to miss.

So what have I done at AVERT Central? I am a neurologist and a psychiatrist, and my area of interest is problems with memory and thinking. This is a common and serious complication after stroke. I have spent my time at AVERT looking at ways to investigate the effect of very early mobilisation on memory, mood and thinking. One of the tests I have recommended for use for AVERT patients is called the MoCA which tests memory, mood and thinking.

When the study is finished in a few years, we will be able to answer the important question on whether very early mobilisation affects not only movement-related function, but mental ones as well. The research will make a difference to how stroke services are being run all over the world. Thank you AVERT and Australia for hosting me and my family during the year of 2008. It was a memorable one!

## Visiting Research Fellow:

### Dr Sheila Lennon

In March and April, Sheila Lennon from Belfast, Northern Ireland visited the AVERT team at the National Stroke Research Institute in Melbourne. Sheila is the Trial Leader for AVERT-Northern Ireland. Sheila spent a month here learning about all things AVERT. Her plan is to enlist up to 5 hospitals to recruit 130 patients to AVERT by 2010.



## Calf Stiffness and Walking Early After Stroke

### By John Nguyen, Honours Student School of Physiotherapy La Trobe University, Melbourne Australia

I have recently completed an Honours research thesis at the National Stroke Research Institute supervised by Dr Janice Collier and Dr Julie Bernhardt. I investigated a complication after stroke, ankle stiffness. I wanted to know if the ankle of the stroke affected leg becomes stiff in the first 14 days after stroke.

Ankle stiffness stops the foot from moving easily and can stop people from being able to easily stand up from a chair or walk. Walking moves the ankle and may help to stop ankle stiffness. The foot was measured for ankle stiffness and the Stopwatch Activity Monitor (see picture) counted how many steps patients were walking in a day.



I found that at 2 weeks after stroke, most people with stroke were walking less than people of a similar age without stroke. The results also indicated that several patients who were doing very little walking developed ankle stiffness, those who walked more did not. As this study tested just 10 people, further research is required with more patients to decide if walking can be used to prevent stiff ankles and calf muscles in stroke patients.

I want to say a big thank you to all the patients at the Austin Hospital who participated in the study for their time, patience and kindness. During a difficult time, they were able to use their personal experience to provide new information about ankle stiffness and walking in the first 14 days after stroke.

Thanks also to Dr Sue Lord (University of Otago, Wellington, NZ) Dr Michael Fahey, (Royal Children's Hospital, Melbourne, Australia) and Dr Jannette Blennerhassett (Royal Talbot Rehabilitation Centre, Melbourne, Australia) who generously loaned equipment for me to use in this study. The patients themselves, my supervisors and the rest of the wonderful AVERT team have taught me a lot and the whole experience for me was very special. I am very grateful to have worked with such a great bunch of people.

### **What do Doctors and Nurses Think About Getting Patients out of Bed Who Have Been Given rt-PA?**

**By Jason Ha, Medical Student,  
School of Medicine, Dentistry and  
Health Sciences, The University of  
Melbourne  
Australia**

As part of my degree, I have completed a year of research under the supervision of Dr Julie Bernhardt and Dr Thomas Linden at the National Stroke Research Institute. We got 54 physicians and nurses from Australian hospitals to complete a questionnaire about very early mobilisation of stroke patients who were given a medication via a drip called rt-PA.

rt-PA is used in some patients in the first 3 hours after stroke to break down the blood clot that causes strokes. Very early mobilisation is getting people out of bed to sit, stand and walk within 24 hours of stroke.

We found that clinicians were likely to restrict very early mobilisation of patients after rt-PA if there was:

- A decline in patient function
- Presence of infection
- Drowsiness or confusion
- An unstable medical condition
- Risk of falls
- A severe stroke
- Blood pressure problems

Half the clinicians had no protocols to guide whether to allow very early mobilisation of patients. This highlights the importance of studies such as AVERT to guide clinicians about benefits and harms of very early mobilisation.

It has been an absolute pleasure working with the AVERT team over the past year. Their dedication to the field of stroke research has been inspiring, and the cheerful and friendly team has taught me many invaluable skills which I will carry through my future studies as a medical student.



## Telling People About AVERT

Here is a summary of our communications with the research community and general public over the past 6 months.

### Scientific Publications

We recently published the results of a systematic review of very early versus delayed mobilisation after stroke in the Cochrane Database of Systematic Reviews (2009, Issue 1), with a summary in Stroke (2009, June).

This publication describes a careful search for the highest quality research publications on very early mobilisation (getting people out of bed within 48 hours of stroke and providing more therapy), compared with usual hospital care.

We found 3 research trials, but 2 were not yet completed (VERITAS, AVERT III). One trial (AVERT II) examined a small number of people with stroke (71). The very early mobilisation group was given earlier therapy and more therapy than usual hospital care (Very early mobilisation group 18.1 hours post stroke; Usual hospital care group 30.8 hours post stroke). No significant effect for death and dependency was found for very early mobilisation (OR 0.67,  $p = 0.42$ ).

#### Conclusions:

There is insufficient research yet to make any recommendation on very early mobilisation after stroke.

We found no research to suggest that the practice should be discontinued where very early mobilisation is already a well established part of stroke unit care.

There is insufficient evidence to suggest that the very early mobilisation should be adopted more broadly.

NOTE: What this highlights is the importance of trials like AVERT. In the future, results will help to give clinicians clear direction about how best to help people with stroke recover.

## Conferences

Eight members of the very early rehabilitation research collaboration presented at the European Stroke Conference in Stockholm in May 2009. This conference provided a great opportunity to meet with our European researchers and continue to progress stroke rehabilitation research in Europe.



Picture: AVERT poster presentation at the European Stroke Conference by Swedish collaborators, Monica Skarin (middle) and Anna Sjöholm (right) with Julie Bernhardt AVERT Program director, National Stroke Research Institute (left).

## Community Media

When new hospitals start the AVERT research, local news media will often profile the story. When AVERT started in Scotland, the BBC picked up the story, as below:

### Stroke study to test early rehab

“Four Scottish hospitals are to take part in an international study to see whether early rehabilitation can aid stroke patients. Stirling Royal Infirmary, Monklands, Wishaw General and Glasgow's Western Infirmary will join the study over the next four years.” Source. BBC News UK. 21 October 2008

[http://news.bbc.co.uk/2/hi/uk\\_news/scotland/tayside\\_and\\_central/7680514.stm](http://news.bbc.co.uk/2/hi/uk_news/scotland/tayside_and_central/7680514.stm)

Details of all our AVERT news stories are available at our web site.

<http://www.nsri.org.au/avert.htm>

## Grant Successes

Congratulations to **Julie Bernhardt** who was awarded Top Ranked Fellow in Victoria for a **Career Development Award** from the **National Heart Foundation**. This award provides salary support for Julie for the next four years.



Telmo Languiller (Parliamentary Secretary) (left) and Professor David de Kretser (right) Governor of Victoria presented the award to Julie Bernhardt (centre) at the Heart Foundation's Victorian office.

**Toby Cumming** was successful in getting a **Travel Grant** from the **Stroke Society of Australasia**. Toby used this grant to travel to the European Stroke Conference in Stockholm and also meet with European research collaborators.

## Donations

We are thrilled with our grant successes, but we also have grant submissions which don't get funded, and the research can't be done. Our stroke rehabilitation research relies solely on obtaining grants from various granting bodies or philanthropic sources. If you are keen to assist us financially, it would be greatly appreciated. All donations are tax deductible and can be made by calling the NSRI (Phone: +613 9496 4137).

## Want to Contribute?

This newsletter showcases some of the ways people have become involved in the AVERT Research Program. We thank you all for your contribution. If you would like to assist in any way (your stroke story, research collaborations, volunteer work, financial support, contributions to this newsletter etc) we would love to hear from you.

## Want To Know More?

If you have any queries about our program you can contact us via:

Email: [avert@nsri.org.au](mailto:avert@nsri.org.au)

Phone: +613 9496 2363

**If you are a participant in the AVERT trial, you may wish to give your contact details and email address to your assessor at your 12 month follow up visit, and we will make sure that you continue to receive further updates about the trial.**

**From the AVERT Central team**