

AVERT Newsletter

No. 6. December 2007



We thank you all for your support in 2007 and wish you a Merry Christmas and a Happy and Healthy New Year for 2008!

A Very Early Rehabilitation Trial (AVERT): Looking for 2104 people with stroke from all over Australia and beyond by Dr Julie Bernhardt

As you know, our research aims to find more effective ways of reducing death and disability after stroke through changes to rehabilitation practices. We believe that early and more intensive exercise therapy can have a powerful effect on outcome. The conduct of the worlds largest stroke rehabilitation trial (AVERT) will help us find out if this is true.

2007 has been an extremely busy year for us all. The focus has been on continuing to recruit hospitals to the trial, while at the same time refining our research systems. The AVERTers at our first 9 hospitals have been very patient with us as we have worked through the gremlins in our systems. We are delighted to have increased our AVERT investigator pool to include many new enthusiastic and energetic people. We now have 11 metropolitan and regional hospital stroke units recruiting patients for AVERT. Here is the list of hospitals, and how many patients they have recruited so far:

New South Wales: Newcastle Mater Misericordiae (4), Westmead Hospital (14), Wyong Hospital (8)

Queensland: Wesley Private Hospital (3)

South Australia: Flinders Medical Centre (20)

Victoria: Austin Hospital (60), Frankston Hospital (3), Geelong Hospital, Royal Melbourne Hospital (34), West Gippsland Hospital (9)

Western Australia: Royal Perth Hospital (53)

We now have other hospitals in Australia, New Zealand and Canada who have agreed to join in and are in the process of getting ethics submitted, and organised to start. These sites include:

New South Wales: Liverpool Hospital, St. Vincent's Hospital

Queensland: Nambour Hospital

Tasmania: Hobart Hospital

Western Australia: Sir Charles Gairdner Hospital

New Zealand: Auckland

Canada: Grey Nunn's Hospital, Edmonton

Victoria: Bendigo Base Hospital

On 20 December 2007, we recruited our

210th patient

This is 10% of the total number of patients needed (2104), so we still have a long way to go! We have recognised that we need to include more hospitals in the trial if we are to achieve our target by the end of 2010.

Over the next year, we aim to increase the number of Australian hospitals from 15 to 25. We may also include more overseas hospitals in the trial. We now have people from hospitals in England, Scotland, Ireland, Netherlands, Italy, Germany, Singapore and Canada interested, and by the middle of 2008 hope to have some of these places recruiting to AVERT.



National Stroke Research Institute

Over 2008, we will continue to develop better systems that will allow easy management of hospitals overseas and, as always, we will continue to seek new funds to support these activities. It is a huge challenge, but an exciting one!

I would like to take this opportunity to sincerely thank you for your ongoing support of the AVERT Program and to wish you a safe and happy festive season.

NEWS FLASH!

Professor Peter Langhorne, Olivia Wu, Julie Bernhardt, Matthew Walters, Claire Ritchie, Lorraine Smith have just found out that they have been successful in gaining funding from Chest Health and Stroke Scotland. Peter has written to us "A nice wee present - just heard that the AVERT Scotland proposal has been funded (almost £90,000). Lots of work to do now but happy days." This means that in 2008 we will commence some AVERT sites in Scotland.

And something from you!

Jean Armstrong who is 95 years old, agreed to participate in AVERT. Jean is now home again with her 99 year old husband and has generously provide her reflections on her experience of stroke.



Jean Armstrong with Julie Luker (AVERT Main Investigator) at the Stroke Unit, Flinders Medical Centre, Adelaide.

The Stroke

"Where are you Jean?" the nurses say
"What day is it, what month, what year,"
And "Why are you here today?"
I scan my brain for answers.

Flinders Medical, Ward 5A
Monday the 27th of November, 2006.
"And why are you here" the nurses say
"I've had a stroke for you to fix."

The physios now ply their skill
Kate and Craig and Tyson
The dues to leg and arm fulfill
Until the task is done.

Thence from Flinders to Repatriation
And now for rehabilitation

The Angel

Breakfast is served, the angel appeared,
No winged creature, no Seraph this,
A vibrant beauty of the human breed
Planting on the cheek a daughter's kiss.

Porridge for breakfast, problem poses
Perilous path from bowl to mouth
Tight grip on spoon, the left hand closes
And steers the spoon toward the south.

Mother bird waiting mouth agape
Juices flowing, expectation high
The spoon poised, a looming shape,
Giggles uncontrollable seize the moment.

If brevity is the soul of wit
Laughter is the prime ingredient.

- J. Armstrong 2007

We love to hear your stories, so if you would like to contribute, please contact us.



Telling people about AVERT

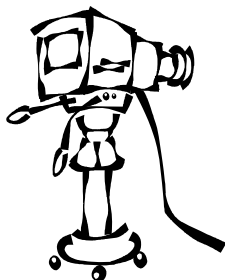
A part of what we need to do is make sure that our stroke research is published in high quality scientific journals, presented at health conferences, and communicated to people likely to have a stroke, stroke survivors and their families. We will present some of the highlights of 2007 in each of these areas. If you want to read in detail about any of these news events, publications and conferences, you can follow the links at

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

2007 Media

TV

A special thank you to Julie Luker from Flinders Medical Centre, who managed to get Channel 7 to come and give AVERT a bit of exposure.



Julie did a wonderful job in front of the camera as did 94 year old Jean Armstrong who had been involved in AVERT. The story was also sold onto Sky Health News for broadcast which was fantastic. Thanks for being a great AVERT Ambassador Julie!

Internet

After Julie Bernhardt's trip to present the results of AVERT Phase II (the pilot study) at the American Stroke Association Conference in San Francisco, these results were widely translated on the internet in English, Chinese, German and Japanese.

The results were also interpreted and made accessible to the general public. For example, Health and Age Topics (American web site) targets people over 50 with health information written in lay terminology. Robert Griffith wrote "In 1950 my father had a stroke, and his doctor insisted on a 6 weeks' bed rest as part of his treatment.....Now-a-days the bed rest would be regarded as totally wrong.....The purpose of this pilot study was fulfilled – to demonstrate that very early rehabilitation can safely begin within 24 hours of stroke."

Print

Well done to Susan Smith (Main Investigator) and Pam Dyson (Public Relations Manager) at West Gippsland Hospital for getting an AVERT profile in the local newspaper, the Warrigal Drouin Gazette.

2007 Publications

We were thrilled to have the AVERT Protocol accepted for publication on *The Lancet* web site.

<http://www.thelancet.com/journals/lancet/misc/protocol/06PRT-5424>

It is important to publish the protocol because high quality research describes how the research will happen before the study starts.

The Lancet is a highly respected medical journal, and this is a very valuable recognition for our trial. One of the protocol reviewers said "This is a very important trial, the result of which could have a major impact on routine clinical practice in stroke medicine." We also had a key publication of the Phase II safety results accepted for publication in the journal *Stroke*, which will come out in January 2008. *Stroke* publishes reports of stroke rehabilitation and is highly rated in the scientific community.

2007 Conferences

Members of the AVERT team presented at seven international conferences in Australia, America, Canada and Europe in 2007. Conferences are important for us. They allow us present out most recent research results to the medical, and allied health and nursing community.

Fiona Ellery (Trial Manager) was awarded the Best Nursing Paper at the Smart Strokes 2007 Conference (3rd Australasian Nursing and Allied Health Stroke Conference). Congratulations Fiona. The conferences we presented at this year were:

American Stroke Association, San Francisco USA
European Stroke Conference, Glasgow UK
World Physiotherapy Congress, Vancouver Canada
Australian Physiotherapy Conference, Cairns AUS
Smart Strokes, Sydney AUS
Stroke Society of Australia, Perth AUS
Clinical Research Excellence, Melbourne AUS



The results from AVERT phase II

The focus of many conference presentations was to present the results of the Phase II (pilot) study conducted at the Austin and Vincent's Hospitals from 2004-2006. The methods and results are briefly summarised below.

Patients who were admitted to hospital within 24 hours after stroke and who agreed to participate in AVERT were randomly allocated to receive one of two different types of rehabilitation. Rehabilitation was either standard care (SC) or very early mobilisation plus standard care (VEM). VEM has a focus on physiotherapists and nurses getting patients out of bed as soon as they are medically stable and providing lots of opportunities for every day activities such as walking, dressing, grooming and going to the toilet. Standard care or VEM were provided for up to the first 14 days of the hospital stay.

We measure outcomes 3 or more times over 12 months in a group of 71 stroke patients. This is considered a pilot study, with preliminary results. Outcomes included survival, level of disability, mood and complications. We also measured early blood pressure stability, fatigue and amount of therapy

Survival

Both types of rehabilitation (VEM and SC) had similar death rates. 85% of stroke patients were alive at 3 months. Most of the people who died had a severe stroke.

Disability

Disability was measured using the modified Rankin Scale. This scale evaluates ability to look after yourself, to walk and to get about in the community.

39% VEM patients and 30% SC patients were independent at 3 months. The difference was not significant. No difference was found at 6 and 12 months.

Mood after Stroke

Patient mood was measured using a questionnaire called the Irritability, Depression and Anxiety (IDA) scale. We wondered whether

very early mobilisation might increase a patient's hope and motivation, and therefore lead to a reduction in depression. It was also possible that earlier and more frequent mobilisations may add to a patient's stress and make them more irritable.

Patients who received VEM were less depressed than SC patients at 7 days following stroke.

At day 7, anxiety was the same for both groups. From 14 days to 12 months, depression and anxiety was the same for both groups.

Ability to tolerate Very Early Mobilisation

Blood pressure was measured during the first 3 days of getting out of bed. Fatigue was measured using the Borg perceived exertion scale at every therapy session. This scale asks about how physically tired you are.

All VEM patients were able to get out of bed within 24 hours without blood pressure problems. VEM patients tolerated twice as much therapy and had similar fatigue levels to SC patients.

Complications

See section by Dianna Sorbello (next page)

VEM may reduce the number of complications of bed rest, such as falls and urinary infections after stroke.

Cost

We included the cost of days in hospitals and rehabilitation received. Patients and family also provided details about the cost of equipment, home modifications and extra help provided. The results of this analysis are being finalised for publication.

All results from the Phase II pilot study need to be confirmed in the Phase III study, which plans to evaluate 2104 patients.



Complications in the first 12 months after stroke



Dianna Sorbello
Honours Student
School of Physiotherapy
La Trobe University
Australia

Over the past 2 years, I completed my Honours project as part of my physiotherapy degree and was supervised by Dr Julie Bernhardt at the National Stroke Research Institute. It has been a busy and challenging time learning new skills.

Complications after stroke are very common. They can be neurological eg. stroke recurrence, medical eg. chest infections or psychological eg. depression. The occurrence of any complications can delay rehabilitation after stroke so it is important to determine what can be done to reduce the number and severity of complications. This study examined whether very early out of bed activities could reduce the number and severity of complications experienced by patients in the first 12 months after stroke.

The main finding from this study was that there was a trend for fewer complications such as falls and urinary infections, among stroke patients who participated in early out of bed activities. What this means is that early out of bed activity may indeed help to reduce the number and severity of complications and therefore be an important part of therapy after stroke. This idea will continue to be investigated in the large AVERT trial now being conducted, as it could offer a potential way to improve the outcome for patients after a stroke.

Being a part of the AVERT trial has been a fantastic experience. It has given me the opportunity to work with a group of people who are doing excellent work to benefit the community. It has taught me the importance of research into the area of stroke and that you shouldn't accept that nothing more can be done to improve stroke management.



Congratulations Julie

Julie Bernhardt was recently awarded the Physiotherapy Achievement Award 2007 from the Australian Physiotherapy Association (Victorian Branch). The award is for her outstanding contribution to the advancement in the areas of neurology and gerontology, collaborative research, mentoring of colleagues and her passionate commitment to the interests of stroke survivors. Amazing work, Julie.

Visitors from Norway

In November, we were delighted when Professor Bent Indredavik (Neurologist) and Anne Loge (Physiotherapist) were able to come from Norway to visit us here at AVERT in Melbourne. Bent has been responsible for research on Very Early Rehabilitation for stroke patients since 1986. We were able to catch up and continue our collaboration with this fantastic team, as well as show Bent and Anne some of Australia's best bits (see below).



Anne, Julie, Tony (Julie's partner) and Bent at the Chateau Yering in the Yarra Vally just outside Melbourne.



How are we funded?

Our stroke rehabilitation research relies solely on getting grants from various granting bodies or philanthropic sources. AVERT is currently operating using the National Health and Medical Research Council grant which commenced last year. In 2007, we received a small grant (\$7,500) from the Austin Hospital Medical Research Fund for equipment and travel to support a physiotherapy student project.

Julie Bernhardt (Program Director) is supported by a Senior Post Doctoral Fellowship from the National Heart Foundation, and Neuroscience Trials Australia provides additional support for Fiona Ellery (Trial Manager).

This year we also received our first personal donation to AVERT from John van Holsteyn, This donation was used to fund a wheelchair for one of our participating sites. The wheelchair is amazing as it fits all patient sizes and can be used to rest patients (much like a Jason Recliner on wheels) between therapy exercises.



West Gippsland Hospital stroke unit had the best 2007 recruitment rate and Susan Smith (Nurse and Main Investigator) dropped into the National Stroke Research Foundation to get the wheelchair. Here she is happily sitting in the new chair, with Julie Bernhardt standing behind.

This newsletter is for *everyone* who is a part of the AVERT team. This includes people living with stroke, their families and carers who support our research program, investigators and stroke unit staff in Australian and overseas hospitals; members of the important committees overseeing the trial; and all other supporters including volunteers and donors.



The cheerful AVERT CENTRAL team @ NSRI Christmas lunch. Left front: Marcus Nicol (Data Manager), Sharon Kramer (Masters Student, Utrecht University), Thea Dix (Research Assistant), Julie Bernhardt (Director). Left Middle: Matthew Thuy (Research Assistant), Cecilia Li (Research Assistant) Fiona Ellery (Trial Manager). Left Rear: Janice Collier (Program Manager), Dorcas Quah (Research Assistant). Not present: Toby Cummings (Fellow), Jan Chamberlain (Administrative Assistant).

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, (volunteer work, financial support, contributions to this newsletter etc) we would love to hear from you. Please contact us at avert@nsri.org.au or by phoning **03 9496 2783**.

If you are keen to assist financially, all donations are tax deductible and can be made site by calling the NSRI (9496 2888).

