

# Leading Change

The Power of Collaboration and Thinking BIG



@AVERTtrial



@CREstroke



NHMRC CENTRE OF RESEARCH EXCELLENCE  
**Stroke Rehabilitation and Brain Recovery**

# Characteristics & Attributes of AHPs



# Characteristics & Attributes

Personality traits of OTs & PTs  
Conscientiousness > neuroticism  
*McCombie et al, 2015 IJTR (n=121)*

PT traits & the “therapist effect”  
Conscientiousness > neuroticism  
*Buining et al, 2015 BMC HS research (n=39)*

Personality AH professionals, rural vs metro  
Rural AH have higher novelty seeking traits  
*Campbell et al, 2014 Australian Health Review (n=562)*

# My Experience of AH Professionals

1. Respected
2. Hard working (don't value our time enough)
3. Good at prioritising, action focused
4. Used to working in complex decision making environments
5. Powerful patient advocates
6. Strongly collegiate – team focused



**Good collaborators**

# Allied Health Trained Leaders

Discipline  
leaders

Policy  
leaders

Hospital  
leaders

Business  
leaders

Research  
leaders

Dr Erin Lalor, CEO  
National Stroke  
Foundation  
World Stroke Organisation Board



Dr Gwynneth Llewellyn



Ms Nicki Doyle, Director  
Health Aging and Human  
Services  
KPMG



Dr Carmen Lawrence  
Former Premier of Western  
Australia- first women





**History**



**Collaboration**

**Recent BIG things**



**Growing influence**



## History



**"Julie is a sweet girl, but boy can she talk!" Mrs Smith, Prep S**

# Transition and Growth



Clinician

Researcher

Advocate

Mentor



Leader

Think Big

Stroke Foundation board, clinical guidelines, clinical trials



Influence





Cooperation  
Collective action  
Collective impact

*"Sharing changes everything"*  
Clay Shirky

## Collaboration

Needs:

A focus/idea

Someone to start

Trust

Takes time

Grows momentum

Has risk



## Recent BIG things



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Stroke Rehabilitation and Brain Recovery

**WISPP**  
WOMEN IN SCIENCE PARKVILLE PRECINCT



NHVRVRC CENTRE OF RESEARCH EXCELLENCE  
**Stroke Rehabilitation and Brain Recovery**

**WISPP**  
WOMEN IN SCIENCE PARKVILLE PRECINCT

**Idea:** Earlier more intensive rehabilitation could reduce stroke related disability & be feasible worldwide

**Activity:** Phase I, II and III clinical trial



**Efficacy and safety of very early mobilisation within 24 h of stroke onset (AVERT): a randomised controlled trial**

The AVERT Trial Collaborators group<sup>1</sup>

**Summary**

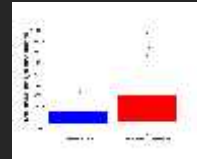
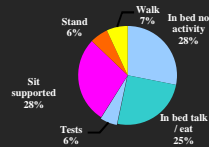
**Background** Early mobilisation after stroke is thought to contribute to the effects of stroke-unit care; however, the intervention is poorly defined and not underpinned by strong evidence. We aimed to compare the effectiveness of frequent, higher dose, very early mobilisation with usual care after stroke.

**Stroke Unit**  
April 2015  
ISSN 1473-2745  
DOI: 10.1136/bmj-2015-062002  
EULAR 2015



56 hospital teams, >2000 patients

# The 'phasing' of AVERT



Modelling  
Phase 1

Exploratory  
Trial  
Phase II

Definitive  
RCT  
Phase III

Intervention  
Outcomes

Feasibility (safety)  
Defining intervention

Fully defined/ measured  
intervention  
Does it work?

2002-  
2003

2004-  
2006

2006-  
2015

# AVERT: A pragmatic, 'real world' trial

## Design

International, multicentre, parallel group, randomised controlled trial testing efficacy and safety of a *very early (<24h) frequent, higher dose out of bed (very early mobilisation) protocol* compared to *usual care* post stroke.

## Clinical hypotheses

1. Improve functional outcome (mRS 0-2) at 3 months
2. Lead to fewer immobility complications at 3 months post stroke
3. Lead to more patients regaining the ability to walk early
4. Improve quality of life at 12 months
5. Be cost effective

*Protocol Bernhardt IJS 2006; Bernhardt IJS 2015 SAP*

# Trial pathway

Sample size  
n=2104

3+ additional sessions  
out of bed activity

Arrive hospital,  
screened, recruited <  
24 hrs

Very Early Mobilisation + Usual Care

First intervention, < 24 hrs PT /Nurse team, 6 days/wk

Stroke



Day 14  
Treatment  
ceases



3  
1<sup>o</sup>

2 month Ax

Stratified by  
stroke severity & site

Usual stroke unit care

1<sup>o</sup> Efficacy endpoint Favourable  
outcome (mRS 0-2)

Safety outcomes: death, SAEs,  
immobility, neurological

# Collaborative framework

Design Team

Interdisciplinary

Ownership

Mandatory

Treating team

Interdisciplinary

Engagement

Constant

Management

Interdisciplinary

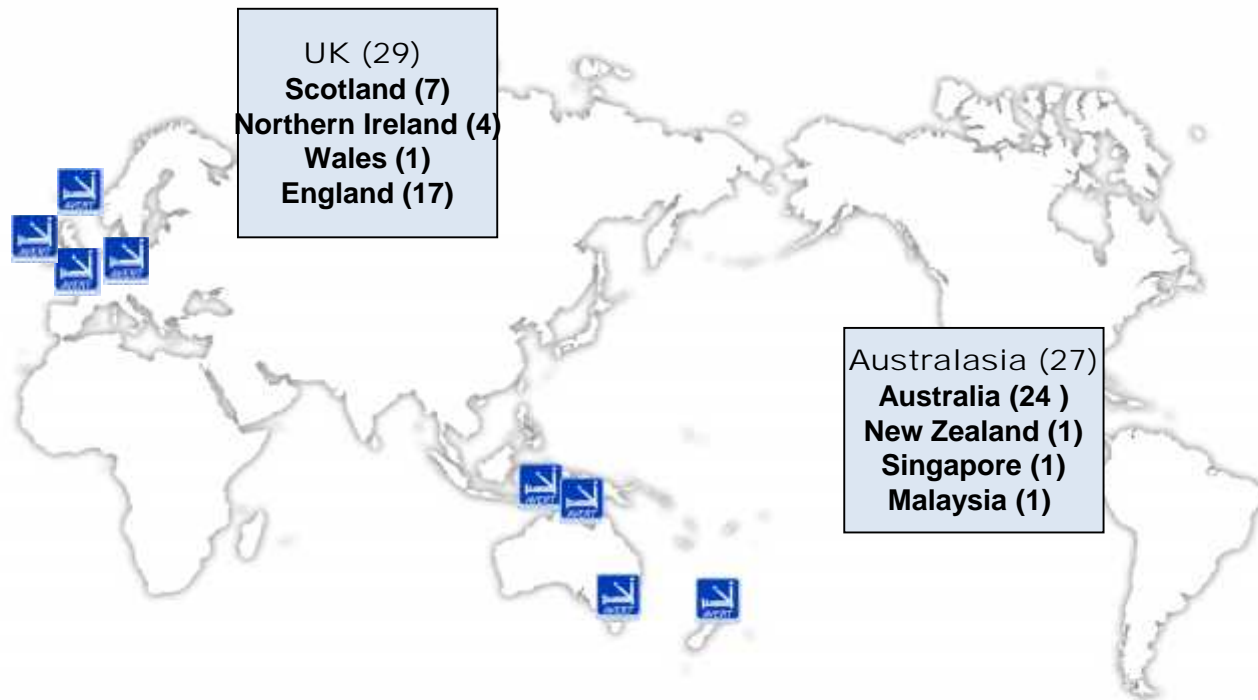
Celebrations

Routine

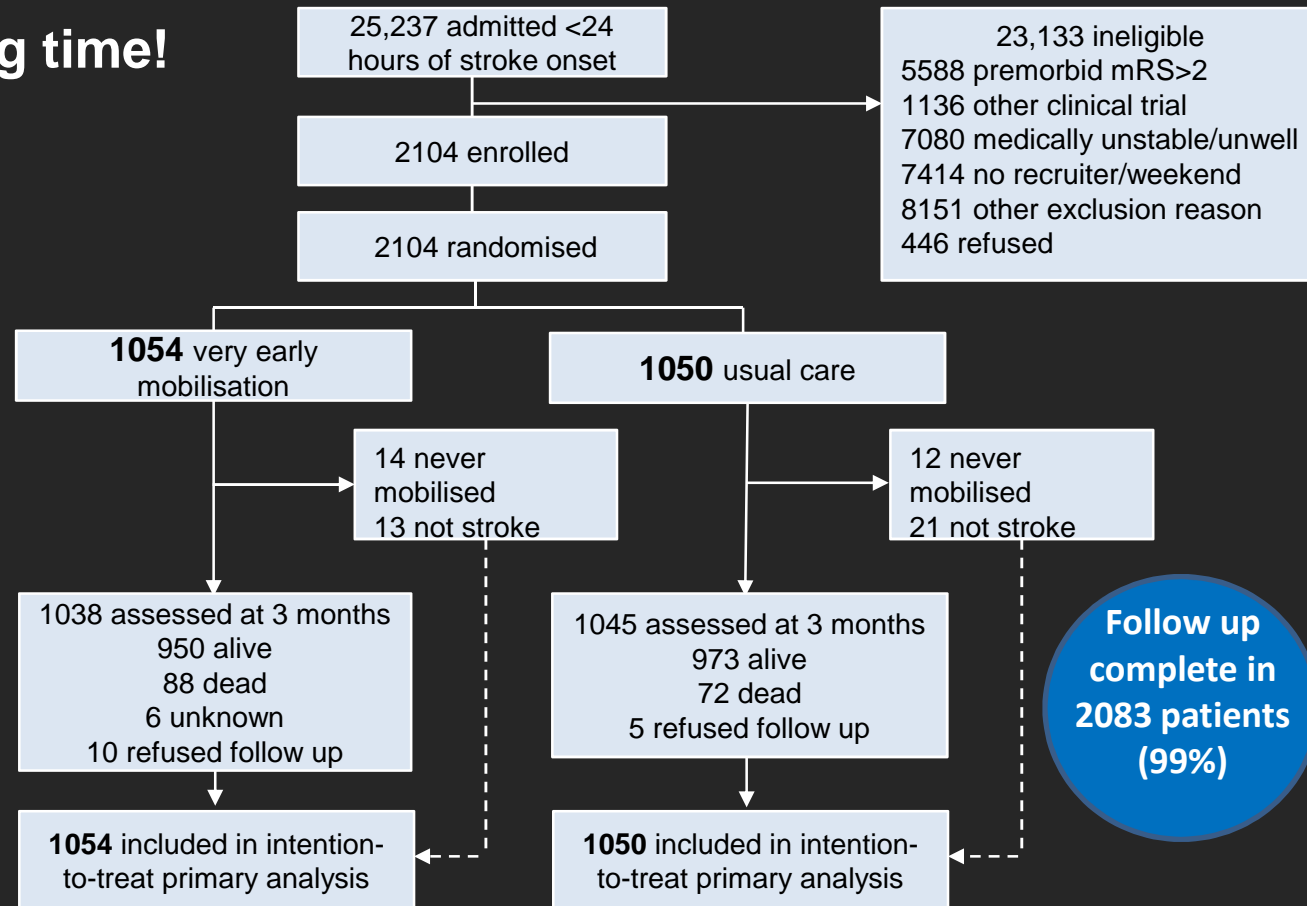




## International collaboration across 56 sites



# It took a long time!



*Bernhardt et al BMJ Open 2015*

## Top level results

1. We achieved a significant difference in the frequency, amount and timing of rehabilitation, with most patients starting intervention <24 hours of stroke

2. The very early, higher dose out of bed activity protocol **reduced the odds of favourable outcome at 3 months**, *without* accelerating walking recovery or reducing immobility-related SAEs

'more is better' may not apply in the first few days after stroke

3. We found low rates of death & SAEs, but there were signals of harm in ICH and severe stroke and those aged >80 years

Treatment dose versus benefits/harms warranted further exploration

4. Pre-planned exploratory analyses show **frequency** and **amount** are important drivers of outcome

## What does this all mean?

1. We've shown that international complex trials can be done, and done really well
2. We know a lot more than we did before – but not exactly what to do early
3. Guideline creators are struggling to interpret the findings (as are clinicians)
4. More to do! AVERT-DOSE and PhD on offer

# BMJ Christmas Edition, 2015

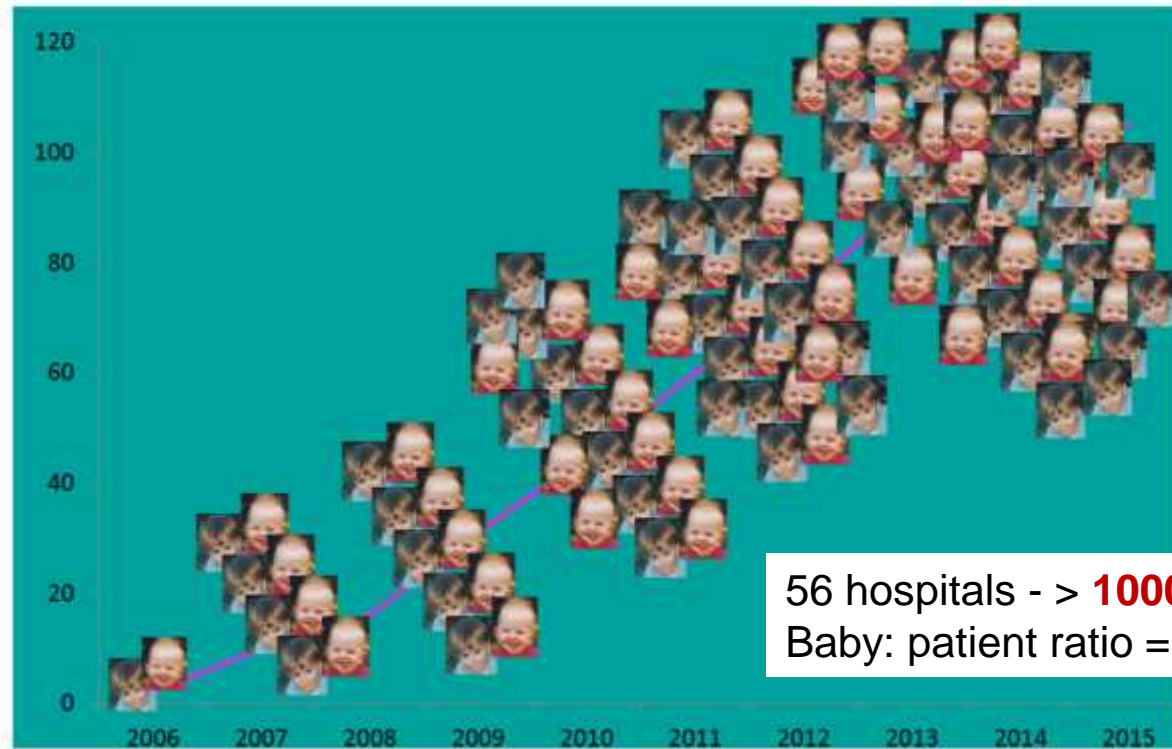


Bernhardt J, et al. AVERT<sup>2</sup> (a very early rehabilitation trial, a very effective reproductive trigger): Retrospective observational analysis of the number of babies born to trial staff.

*British Medical Journal.* 2015;351:h6432



## AVERT Baby Count



56 hospitals - > **1000** clinicians  
Baby: patient ratio = 1:19



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**WISPP**  
WOMEN IN SCIENCE PARKVILLE PRECINCT

**Idea:** Link talented stroke recovery researchers to build capacity and change the landscape

**Activity:** 5 year, 20 investigator grant to undertake a work program ranging from *biology to implementation*



<http://strokerecovery.org.au>







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Philadelphia, USA 2016



Idea: Engage best stroke research minds to establish new standards

Activity: Stroke Recovery Roundtable





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**Idea:** Use collective impact to advance women in science

**Activity:** 5 leading research institutes in Melbourne working together to make change



Influencing the  
agenda, equity &  
representation

**WFNR**

World Federation for NeuroRehabilitation

  
**World Stroke  
Organization**

  
Stroke Recovery and Rehabilitation  
First Roundtable

  
**AVERT**  
A Very early Rehabilitation Trial

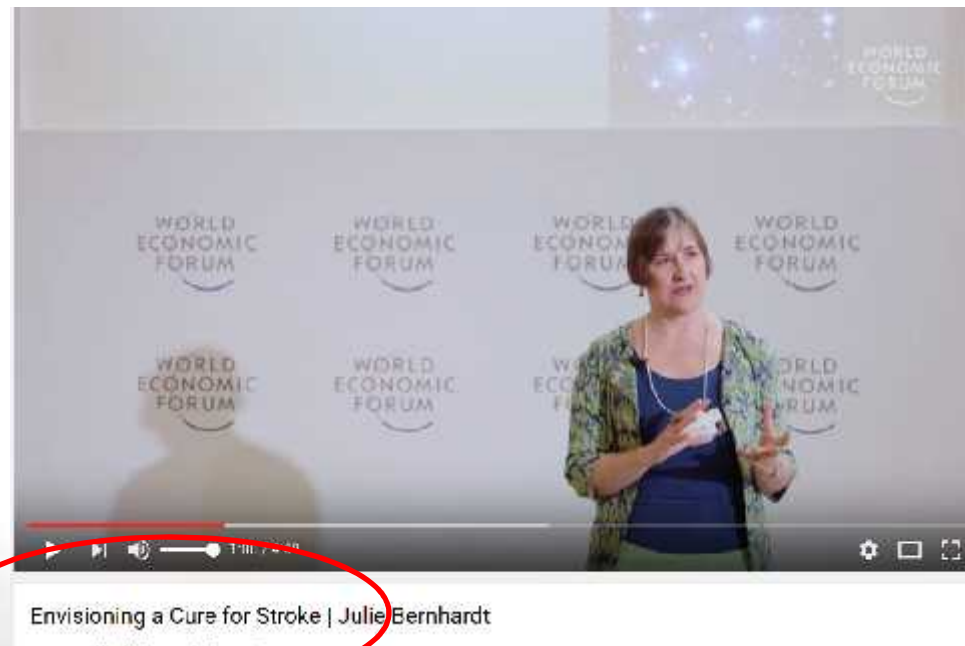


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# Challenge the status quo

NEJM  
Ideas Lab  
World  
Economic  
Forum, China



<http://bit.ly/2docfTM>





Influence

## **Get comfortable leading change**

You have the tools, just need to use them

Find a good mentor

**Forbes**  
**QUOTE OF**  
**THE DAY**

“If your actions inspire others to dream more, learn more, do more and become more, you are a leader.”

*- John Quincy Adams*



# Acknowledgements

 @AVERTtrial

## My team



## Funders



NI-MRC CENTRE OF RESEARCH EXCELLENCE  
Stroke Rehabilitation and Brain Recovery

HEART & STROKE FOUNDATION  
Canadian Partnership  
for Stroke Recovery



FONDATION DES MALADIES DU CŒUR ET LE CAVC  
Partenariat canadien pour  
le rétablissement de l'AVC



HEART & STROKE  
FOUNDATION



IPSEN  
Innovation for patient care



Department of  
health



stroke  
foundation



Chest  
Heart &  
Stroke  
Scotland



CHS  
National Heart  
and Stroke  
Foundation



Singapore  
General Hospital  
SingHealth

Stroke  
association

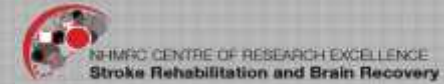
NHS  
National Institute for  
Health Research



THE UNIVERSITY OF  
MELBOURNE



# PhD Scholarship Opportunity



## The Project:

- Explore AVERT dataset to develop usable clinical guidelines

## The Candidate:

- High achieving Statistics, Engineering, Public Health, Allied Health, Psychology graduate or similar
- Developed statistical analysis skills
- Interest in decision analysis
- Experience consulting with clinicians and patients

## The Contact:

Email: [Julie.Bernhardt@florey.edu.au](mailto:Julie.Bernhardt@florey.edu.au)

Phone: 03 9035 7072