

Ongoing trial: Determining Optimal early rehabilitation after Stroke (AVERT DOSE)

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on behalf of the AVERT DOSE Trialists' Collaboration

Speaker Disclosure

I have no conflicts to disclose.

Trial Funding Acknowledgement

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AVERT

Large, 2 groups, international RCT (n=2104)

Conclusions

- Too much too soon can be harmful
- Severe stroke patients & ICH showed harm
- Dose analyses showed benefit in those less severely affected patients (mild & moderate stroke)
- Clinicians still don't know what is best. Guidelines to be developed.

Articles

The Lancet, 2015

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



*The AVERT Trial Collaboration group**



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.

Published Online
April 17, 2015
[http://dx.doi.org/10.1016/S0140-6736\(15\)00690-0](http://dx.doi.org/10.1016/S0140-6736(15)00690-0)

Australian Clinical Guidelines

Strong recommendation against

For stroke patients, starting intensive out-of-bed activities with a walking aid is not recommended. (Bernhardt et al. 2015 [36])

International
Journal of Stroke WSO

Leading Opinion

Where to now? AVERT answered an important question, but raised many more

Mark T Bayley^{1,2}, Audrey Bowen³, Coralie English⁴,
Robert Teasell⁵ and Janice J Eng⁶

Practical info References

Patients with baseline NIHSS scores above 4 and below 7 have higher odds of a favourable outcome when they are mobilised more than once per day and spend less than 13.5 minutes per day mobilising with physiotherapy staff (Bernhardt et al. 2016 [39]).

Research evidence Key info Rationale References

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Funding for AVERT DOSE obtained



Aim and Hypotheses

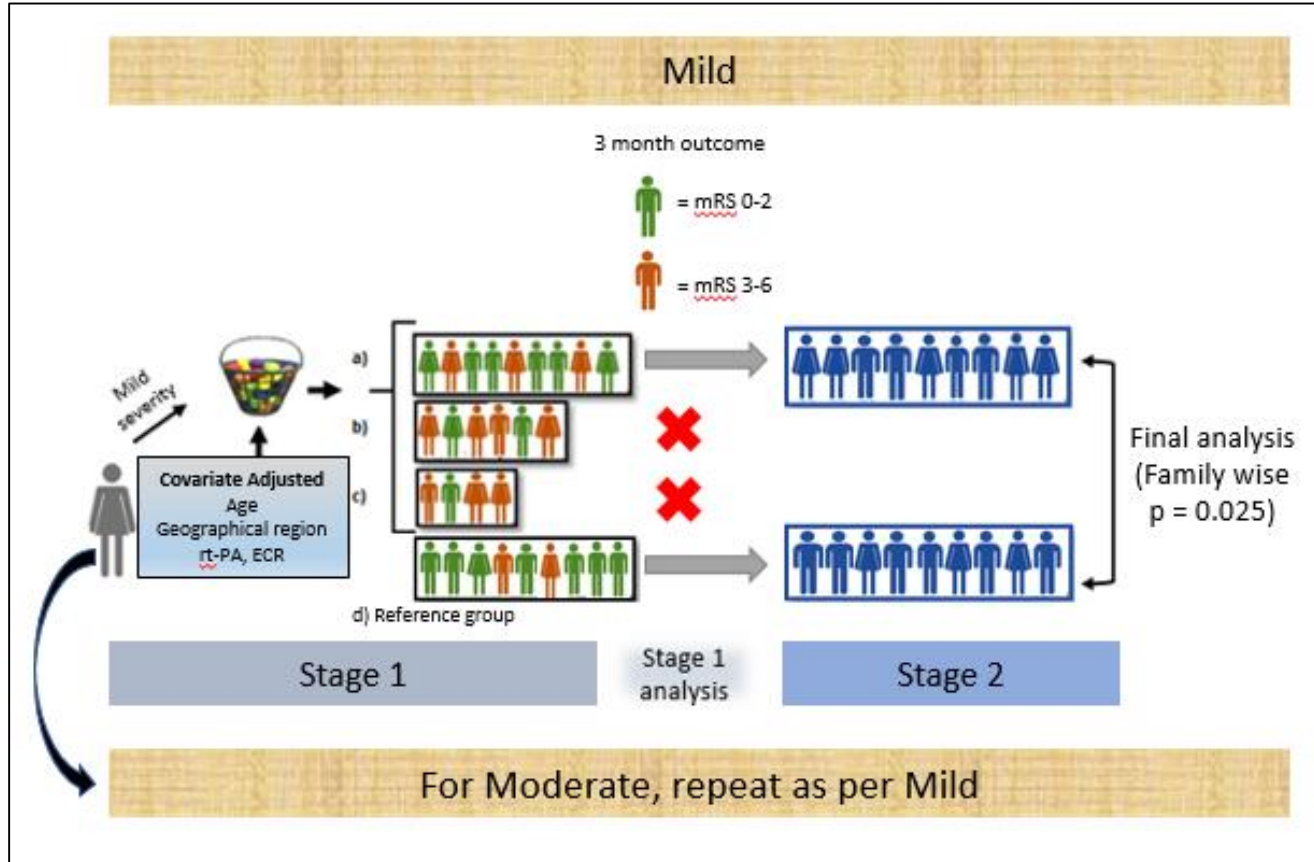
Aim To define optimal early mobility intervention regimens for people with mild and moderate stroke.

Hypotheses Optimal dose intervention regimen(s) will result in:

- More patients with **no or little disability** at 3 months post stroke, (1° outcome)
- Patients with **fewer and less severe complications**
- Better **quality of life** at 6 months

Cost-effectiveness and a range of sub-studies are included to examine recovery processes.

Multi-Arm, Multi-Stage, Covariate-Adjusted Response-Adaptive (CARA) Randomisation Design



DOSE
 Varying amount
 Varying frequency
 Tailored to patient

Number of participants:
 $n > 2,500$

Adaptive design differences

Randomised Clinical Trial	AVERT DOSE Adaptive Randomisation
Randomisation to group is remote, computer generated	Randomisation to group is remote, computer generated
Group allocation is concealed	Group allocation is not concealed
Randomisation is fixed. For four groups, equal allocation would be 1:1:1:1	<ul style="list-style-type: none"> • Statistician Leonid Churilov • For adaptive randomisation, adapts based on 2... • Coder Hannah Johns • Blinded outcomes at 3 and 6 months <p>reference group after stage 1 analysis</p>
Blinded outcomes at 3 and 6 months	Blinded outcomes at 3 and 6 months


Inclusion/Exclusion Criteria




Inclusion	Exclusion
<p>Patients \geq 18 years admitted to a stroke unit within 48 hour of onset of stroke with:</p> <p>Ischaemic stroke</p> <ul style="list-style-type: none">• Mild (NIHSS 0-7) or moderate stroke severity (NIHSS $8 \leq 16$)• Pre stroke mRS of 0 – 2• Medically stable	<ul style="list-style-type: none">• Pre-stroke mRS of 3, 4 or 5• Haemorrhagic stroke or TIA• Severe stroke (NIHSS > 16)• Co-morbid progressive neurological or coronary conditions or other rapidly deteriorating disease• Palliation or immediate surgery• A lower limb fracture/disability• Patients with no evident mobility problems or expected to be discharged within 3 days post enrolment.• Currently in a drug or other intervention trial

Involved Sites



 Committed and selected

 Interest and under negotiation

Australian and New Zealand sites

Victoria

Austin
Alfred
St Vincent's Hospital Melbourne
Albury Wodonga

Queensland

Princess Alexandra Hospital
Sunshine Coast University Hospital

Western Australia

Fiona Stanley Hospital
St John of God, Midlands
Joondalup

New Zealand

Tauranga

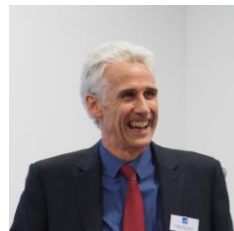
The AVERT DOSE team so far....



Julie Bernhardt



Leonid Churilov



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Jejaraj Pandian



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Vincent Thijs



Brooke Parsons



Velandri Shrikanth



Helen Dewey



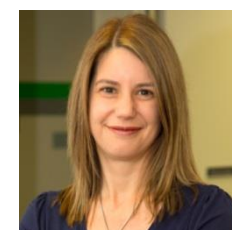
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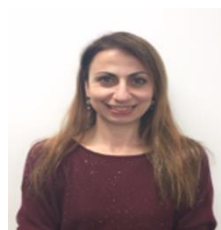
Katijahbe Md Ali



Fiona Ellery



Hannah Johns



Oriana Borschmann



Janice Collier



Carol Williams

as well as Prof Richard Lindley, Prof Bent Indredavik, Dawn Tan, Dr Kate Heyward (not pictured) .

Trial Status



AVERT-DOSE will:

1. Commence recruitment in 2019
2. Run for approximately 4 years
3. Include >2,500 patients
4. Be an international collaborative effort
5. Deliver clearer early rehabilitation protocols for clinical practice



Interested in participating?

Email: fellery@florey.edu.au