

Early Mobilization after Stroke: Changes in Clinical Opinion Despite an Unchanging Evidence Base

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Background: We sought to determine whether Australasian health professionals' opinions regarding early mobilization after stroke changed between 2008 and 2014, when a large international trial of early mobilization (A Very Early Rehabilitation Trial, AVERT) was underway. *Methods:* Attendees at the two major Australasian stroke conferences in 2008 and 2014 were surveyed. Participants rated their agreement with statements about the risks and benefits of commencing mobilization within 24 hours of hemorrhagic and ischemic stroke using a 5-point Likert scale. Participants in 2014 were asked about their awareness of AVERT. Logistic regressions were performed to determine whether the time point (2008 versus 2014) or awareness of AVERT influenced opinions about early mobilization. *Results:* Surveys were completed by 443 health professionals (2008: N = 202; 2014: N = 241). Most respondents in 2014 reported that early mobilization was beneficial and not harmful to people with ischemic and hemorrhagic stroke. Opinions regarding mobilization after ischemic stroke did not change significantly between 2008 and 2014. In 2014, a significantly greater proportion of respondents believed that early mobilization after hemorrhagic stroke was helpful (2008: n = 98 of 202 [49%] versus 2014: n = 170 of 241 [71%], $P < .01$). Awareness of AVERT was significantly associated with the opinion that early mobilization was beneficial and not harmful to patients with stroke ($P < .05$). *Conclusions:* Australasian health professionals' opinions of early mobilization after hemorrhagic stroke changed between 2008 and 2014, prior to reporting of the AVERT trial. Our results suggest that awareness of an ongoing research trial can lead to changes in opinions before the efficacy of the experimental intervention is known. **Key Words:** Stroke—early mobilization—clinical opinion—questionnaire.

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Introduction

How soon and how often after stroke patients should engage in out-of-bed activity (mobilization) is of significant interest to clinicians. Patients with stroke tend to be mobilized earlier and more frequently in stroke units than patients receiving other models of care,¹ and stroke unit care is associated with significant reductions in morbidity and mortality.² In the past decade, six small randomized controlled trials (RCTs) were published reporting the safety, feasibility, or effectiveness of early mobilization for patients with stroke. These studies included between 32 and 243 participants. In three RCTs, early mobilization (within 24 hours) was compared with usual stroke unit care,³⁻⁵ in two RCTs early mobilization (within 2 days of stroke) was compared with usual bed or chair-based care,^{6,7} and in one RCT early mobilization (within 3 days of stroke) was compared with mobilization commenced at 7 days poststroke.⁸

The three RCTs that investigated the effects of commencing mobilization within 24 hours of stroke^{3,4} or hospital admission⁵ involved 159 participants in total and included patients with both ischemic and hemorrhagic stroke. Two of these RCTs also increased the frequency of mobilization in the early mobilization group.^{3,4} When individual patient data from two trials were pooled, results indicated a potential functional benefit associated with early mobilization.⁹ However, a meta-analysis of data from the three trials showed a trend that mobilizing within 24 hours of stroke may increase the risk of dying within 3 months.¹⁰ The strength of the results was limited by the small numbers of patients involved.

There was a similar lack of clarity regarding the benefits of commencing mobilization within 2 or 3 days of stroke. Two RCTs reported that early mobilization was significantly associated with fewer serious complications in patients with ischemic stroke⁸ and reduced mortality in patients with hemorrhagic stroke,⁶ but the third reported no benefits to patients with ischemic stroke in terms of complications, mortality, or level of disability.⁷

In addition to the small RCTs outlined above, a large international phase III multicenter RCT, A Very Early Rehabilitation Trial (AVERT), was conducted between July 2006 and October 2015.¹¹ AVERT was designed and powered to determine the effectiveness of frequent, higher dose early mobilization (within 24 hours of stroke) compared with the usual stroke unit care. Over 2100 participants with ischemic or hemorrhagic stroke were recruited from 52 hospitals, including 26 hospitals from Australia and New Zealand. The first results from AVERT were presented in April 2015.

Despite the limited empirical evidence regarding the associated benefits or harms arising from early mobilization after stroke prior to April 2015, recommendations regarding early mobilization have been incorporated into the majority of international stroke guidelines over the

past decade.¹² The specific timing and intensity of mobilization guidelines vary, and include that “early mobilisation of less severely affected patients . . . [is] recommended”¹³ (p. 918), or that “patients should be mobilised as early and as frequently as possible”¹⁴ (p. 80), “preferably within the first 24 to 48 hours after stroke”¹⁵ (p. 89).

The effectiveness of clinical guidelines is dependent upon health professionals adopting the recommended practices and procedures. Adherence to recommended practices can be affected by health professionals’ reluctance to engage with the recommended practices,¹⁶ and by beliefs about the benefit or perceived lack of benefit to patients from performing the recommended behavior(s).¹⁷ Therefore, the opinions of health professionals are important.

The AVERT investigators conducted a survey of clinicians’ opinions about early mobilization of patients with stroke in 2008. These results have been published previously.¹⁸ The purpose of this study was to determine how Australasian clinicians’ opinions regarding early mobilization changed between 2008 and 2014, prior to reporting of the results from the AVERT trial. We hypothesized that early intensive mobilization would be viewed by clinicians as more helpful and less harmful to patients with ischemic and hemorrhagic stroke in 2014, despite the absence of compelling evidence to this effect, but in line with changes to global guidelines about the practice based on low-level evidence.¹²

Methods

The original opinion survey, conducted in 2008, included 202 Australasian health professionals.¹⁸ The questionnaire used in 2008 was adapted and entered onto SurveyMonkey¹⁹ for use in the current study, and was also available in a paper format (see [Appendix S1](#)). Demographic data were collected (participants’ age, sex, profession, years of experience working with patients with stroke, and work setting). Seven statements were included at both time points regarding clinicians’ opinions of the risks and benefits of commencing intensive mobilization within 24 hours of both hemorrhagic and ischemic stroke. A 5-point Likert scale was used to rate participants’ levels of agreement (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). The 2014 survey had additional questions regarding the participants’ awareness of, and participation in, AVERT. Ethical approval to conduct the current study was granted (LNR/14/Austin/331). Willingness to complete the survey indicated consent.

Participants were recruited from the two main stroke conferences in Australia in 2014 (Stroke Society of Australasia Annual Scientific Meeting [July 2014] and SMART STROKES Australasian Nursing and Allied Health Stroke Conference [August 2014]). In 2008, these conferences were held together as a combined conference. Attendees were

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