Rehabilitation after stroke—is New Zealand making progress?

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There has been much written about the acute care of stroke. However, after the acute phase comes rehabilitation. Approximately 30% of all patients admitted for acute stroke receive inpatient rehabilitation and a further (unknown) number receives some type of ongoing rehabilitation in the community.

What do we know about stroke rehabilitation? We know that it has a strong effect,¹ that the more you give the better the result² and that its effect is considerable in the community as well as inpatient environment.³ Overall, stroke victims who receive rehabilitation have reduced mortality, lower levels of dependence and are less likely to end up in institutional care.¹

In this edition of the Journal, McNaughton et al report the findings of a survey of New Zealand stroke rehabilitation services conducted in late 2013.⁴ This follows the audit of acute stroke services performed in 2009.⁵ Both were based on the equivalent Australian studies performed in 2007 and 2012.

The Australian studies and the 2009 New Zealand acute stroke audit consisted of two parts: an organisational survey of structures and processes; and a retrospective clinical audit of consecutive stroke patients. The 2009 acute stroke audit identified significant service gaps across the country. At the time of that survey, only 8 district health boards (DHBs) had acute stroke units and even in those DHBs, only 62% of acute stroke patients were being managed in designated stroke beds. Today, almost all DHBs provide specialised acute stroke care.

The current paper covers only an organisational survey of stroke rehabilitation services. It includes a description of structure and processes from the service delivery perspective but in the absence of a clinical audit, does not describe treatments actually received by patients. This limits its value somewhat, however the authors have been able to provide comparisons with similar national surveys conducted in 2002 and 2007 and the 2012 Australian audit. They have also provided comment on adherence to national and international recommendations on stroke rehabilitation. The paper raises a number of important issues.

Firstly, compared to the substantial advances in acute stroke services that have occurred in the last 5 years, the improvements in stroke rehabilitation services across more than a decade are modest at best. Seven of the eight large DHBs who between them serve 62% of the country's population report that they provide stroke specific rehabilitation services. While this represents an increase from 49%, most, if not all, also manage stroke patients in general rehabilitation units. Thus, the proportion of New Zealand stroke rehabilitation patients receiving care in stroke specific units is likely to be well less than 62%.
The number of DHBs offering day hospital services has fallen dramatically since 2002. While this may well be appropriate there has been no substantial corresponding increase in outpatient rehabilitation and even a fall in the number of early supported discharge (ESD) programmes. As ESD services and community-based rehabilitation have been shown to have important benefits in terms of outcomes and hospital length of stay, this seems an alarming lack of progress.

Secondly, the survey raises concerns over levels of expertise. Only one-third of services report providing regular stroke education to staff and there are glaring gaps in the routine use of guidelines (e.g. mood assessment, shoulder pain, bowel and bladder assessment). Only 29% have any leadership from rehabilitation physicians and most of these will be in the major centres.

Thirdly, intensity of therapy input reached guideline levels in only 50% of units. The New Zealand guideline levels of a total of 1 hour per day, 5 days a week are low. International guidelines such as from the UK require 45 minutes per day of each therapy discipline. It is concerning that half of our services cannot achieve even a lower level. It does, of course, beg the question of who is responsible for the therapeutic environment for the other 23 hours. The obvious answer is the nursing team. Anecdotally, most clinicians involved in rehabilitation will realise the enormous value of skilled rehabilitation nurses and the importance they have in ensuring good patient outcomes.

Although nurses are the largest professional group working with stroke survivors, there is limited understanding of nursing practice in stroke units and very little evidence in respect of nurses’ involvement in post stroke rehabilitation. There remains the tension between the traditional nursing values of caring for (or doing to) patients versus the rehabilitation approach of facilitating independent activity. Appropriate input from skilled rehabilitation nurses is at least as important as the other therapist resources.

Finally, and although the paper only briefly touches on such issues, there are the shortcomings of service-centred care provision based on tradition. In almost 30% of the country (and possibly more), rehabilitation patients are divided up on the basis of age. A number of DHBs have separate services depending on whether patients are under or over 65 years of age. The reasons for choosing 65 years as an age cut-off are buried in history. This is no longer appropriate in an era when 1 in 6 people over 65 (1 in 4 men) continue to be in paid employment and have at least 15 years of healthy and active living ahead of them.

Also mentioned are the NZ stroke guidelines including minimum stroke service specifications which vary depending on DHB size. These differences include “acceptable” departures from what is considered best practice—e.g. not requiring thrombolysis or dedicated stroke rehabilitation in smaller DHBs. While there are obvious logistical issues in service provision, it cannot be reasonable to accept lower levels of care on behalf of these communities.

The question in the title of this editorial is “is New Zealand making progress?” The answer appears to be—some, but not a lot. So what do we need to do?

Firstly we need to turn our service centred planning approach around to make it patient and family-centred. Instead of identifying primarily what appropriate service
structure and process should look like, we should define what a person who has experienced a stroke should expect to receive from high quality rehabilitation processes. If service quality is compromised by geography (or for any other reason), then the patient should be fully informed and alternatives considered.

Secondly, we need to look at how to support and develop expertise in stroke rehabilitation. The McNaughton paper mentions centralisation that is occurring in other countries such as the UK as opposed to decentralisation and non-specialisation in New Zealand. However, the quoted centralised services are more about acute and hyper acute stroke care rather than rehabilitation and the evidence that stroke-specific rehabilitation is superior to general rehabilitation is relatively weak. Despite this, the variation in care across the country is glaring. New Zealand is a small country and it is important that patients have the opportunity to receive high quality and consistent care.

Rehabilitation services are led primarily by specialists in geriatric medicine in most DHBs. While geriatricians are skilled at managing complex older people, we also need better access to the expertise of specialist rehabilitation physicians. In New Zealand, these clinicians are employed only in a small number of main centres.

There needs to be national and regional coordination of staff education programmes provided in innovative ways. The use of telemedicine in stroke (telestroke) has shown evidence of benefit in the acute phase of care. In countries such as Scotland and Canada, the use of this technology is expanding to include rehabilitation.

Thirdly, we need to move to a more appropriate range of rehabilitation services. A recent review of rehabilitation services in the Northern Health Region (unpublished) stated principles that included the need for services to be based on need rather than age, and that services should be as close to the patients' communities as possible. This includes the delivery of community-based programmes.

Furthermore, we need to move to outcomes based monitoring of patient care. This will be assisted by the fact that New Zealand rehabilitation services are now routinely using the Functional Independence Measure (FIM) and the Australian Rehabilitation Outcomes Centre for benchmarking.

Pleasingly, the National Stroke Network (previously the National Stroke Leadership Group) has recognised many of these issues and has developed a work programme accordingly. It is in the process of seeking increased consumer input with one of the tasks being a review of stroke service specifications with a patient perspective. Working groups have been established to consider nursing issues and rehabilitation processes. The Ministry of Health has also given a clear indication that community based rehabilitation development will be an expectation in the coming years.

The McNaughton paper provides valuable information for a current baseline. The direction from the Ministry of Health and the establishment of processes to improve national and regional networking should support substantial change across the country. When stroke rehabilitation services are next reviewed, the answer to the question about progress should be “a great deal.”

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