

# Progress in the development of recommended staffing levels for rural physiotherapy services

Robyn Adams, Bathurst Base Hospital, Mid Western Area Health Service, NSW

The lack of consistency in staffing levels in rural areas is well known and would suggest considerable variation in access to services in rural areas.<sup>1</sup> This paper describes a process utilised, and progress to date, in the development of a possible formula to assist in recommending physiotherapy-staffing levels in public health services in rural areas. In addition an overview of several other benchmarks for allied health staffing will be described. The lack of widely accepted staffing levels or benchmarks continues to be an issue when allied health professionals are required to justify or seek increases to staffing levels and service provision. Variation and inconsistency of allied health service delivery in rural and remote areas of Australia will continue to be the norm until major work is undertaken in this area.

The process below, described elsewhere in more detail<sup>2,3</sup>, is but one attempt to generate discussion and further work in the areas of staffing and service benchmarks for allied health professions, and in particular those relevant for rural and remote Australia. It is important to acknowledge that metropolitan benchmarks do not translate well do rural and remote areas.

Whilst this paper describes the physiotherapy workforce, the process would lend itself to other allied health professions.

The formula development process recognises that physiotherapy staffing levels change with the function of the hospital/health service and incorporates key physiotherapy activity drivers into the process. NSW Department of Health service level classifications<sup>4</sup> are utilised, and the rurality-remoteness of the communities are taken into consideration using the Accessibility/Remoteness Index of Australia (ARIA)<sup>5</sup> scale.

In developing a possible “formula” for recommended full time equivalents (FTEs) for physiotherapy staffing levels in rural NSW, the following parameters were considered:

- ▷ physiotherapist to population ratio, based on previous surveys<sup>1</sup> of rural NSW physiotherapists
- ▷ activity drivers for inpatients, for example, the number of Rehab beds, the number of ICU beds and the number of locally based Orthopaedic Surgeons. (The beds were designated and funded as ICU or rehab beds)
- ▷ facility service level according to the NSW Peer Group Definition for Rural Areas
- ▷ rurality as defined by the ARIA classifications.

Based on these parameters a possible formula was then developed and comparisons made between the existing and predicted staffing levels.

In its most reduced form, the formula is

**P+R+I+O = recommended Physiotherapy staffing level**

Where ratios for the following parameters are

P=Population	(1:5000)	P/5000 + (Based on surveys)
R=number of Rehab beds	(1:10)	R/10 + (RACRP guidelines <sup>6</sup> )
I= number of ICU beds	(1:6)	I/6 + (utilisation stats)
O=the number of Orthopods	(1:2)	O/2 (utilisation stats)

ie  $P/5000+R/10+I/6+O/2$ = recommended FTE

The population can be the town population or that of the local government area (LGA), or it can be weighted eg by SEIFA or other indices as appropriate.

Application of the recommended staffing levels would lead yield staffing levels more consistent across comparative service facilities within NSW and more importantly, more consistency in access to physiotherapy services. In order to assess its broader relevance, a small sampling process in other states was undertaken by the state representatives of the Australian Physiotherapy Association's (APA) National Rural Issues Committee (NRIC) across several sites with differing ARIA levels. The feedback was such that the formula was considered sufficiently robust to utilise as a starting point for recommending minimum physiotherapy staffing levels in rural areas with ARIA levels Highly Accessible (HA), Accessible (A) or Moderately Accessible (MA).

Based on this, and comparison of existing and predicted staffing levels across a number of NSW facilities<sup>1</sup>, it is reasonable to use the "formula" in communities that have an ARIA classification of HA, A or MA, but is NOT to be used in communities with ARIA classifications of Remote (R) or Very Remote (VR). Recommendations for remote and very remote areas are discussed briefly below.

The formula for rural areas has been utilised in a process in what was, until July 2004, the Mid Western Area Health Service of NSW, now a part of the Greater Western Area Health Service. As a part of establishing the actual and recommended number of full time equivalents in the area across all disciplines, the allied health advisors were asked to recommend the level of access to their service that each community in the area should have.

In the absence of information that relates demography or disease incidence/prevalence to allied health service levels, the starting point for the process was to use staffing levels as related to activity and existing service level for each community as described above. The population was weighted for age, sex, education and ATSI population. This was then standardised with the formula being applied to the standardised population. The process is still under way, but the existence of the process described in this paper provided a reasonable starting point to begin to describe an equitable distribution of resources.

The questions raised at this stage include

- ▷ Is the existing location of physiotherapists consistent with the recommended levels?
- ▷ How should the smaller communities access these services?
- ▷ What service delivery models should be developed to facilitate optimal access to services across the area in the near future?

- ▷ More importantly in the future, how will service provision continue when many of the current staff will have retired?
- ▷ How will we attract and maintain health professionals, to work in these rural areas now and in the future?
- ▷ How do we incorporate demographic and morbidity data into recommend service levels?

Many of these questions will not be easily answered without considerable investment in time and money to undertake detailed studies in this area. Locally we need to balance supporting the existing workforce at the same time as planning for equitable access to services by our local communities.

So for other disciplines, if this process seems useful, then the work to be done is as follows:

- ▷ Establish existing staffing levels in the services under consideration (in the case above, it was public hospital physiotherapy services in rural NSW for ARIA classification HA, MA, A)
- ▷ Describe staffing to population ratios using Australian Bureau of Statistics (ABS) Australian Institute of Health and Welfare (AIHW)<sup>7</sup> and local information
- ▷ Identify the key activity drivers for the specific discipline under consideration
- ▷ Collate these into a formula that gives consideration to the population, the level of the service as determined by any state planning guidelines, the accessibility classification of the town, and the activity drivers for that service, noting that the population can at times be weighted for specific communities eg by looking at town or Local Government Area (LGA) population or by weighting for variation in socioeconomic status

In remote areas, recommendations were developed by workshop participants led by Rob Curry at the 2002 APA conference.<sup>8</sup> These recommendations have been endorsed by the APA Board of Directors.

The calculation of minimum physiotherapy workforce requirements for remote regions is achieved using the following criteria:

1. There must be a capacity for a minimum of monthly visits from a physiotherapist to all remote communities with a population of over 100 residents.
2. The minimum length of stay for each visit is determined by the size of population of each community using the following formula
  - Community population of 100–300 = 1 day visit (minimum)
  - Community population of 300–800 = 2 day visit (minimum)
  - Community population of 800–2000 = 3 day visit (minimum)

One day of work on-site in a remote community generates an average of one day of non-clinical activity; that is, time spent on travel, report writing, equipment ordering, service meetings, health education planning, communications, etc. (Curry 2002)

As part of a broader question of allied health staffing or service benchmarks it can be seen from the following examples there are a number of approaches.

The Allied Health (*paediatric*) Workload Distribution Benchmarking Project<sup>9</sup> compiled by Ben Aspinall for Children's Hospitals Australasia utilised the National Allied Health Casemix Committee (NAHCC) workload distribution categories of Clinical Care, Management, Teaching/Training and Research. This project highlights the importance of recognising that a full time equivalent (FTE) staff member has more than a clinical workload (69%) and that management (24%), teaching and training (5.4%) and research (1.6%) form core components of work.

In the Canadian study "Physiotherapy Caseload Guidelines" 1999<sup>10</sup>, Heather Christie made recommendations based on the number of patients to FTE for specific caseloads. Eg general medical inpatients 8–14 per FTE; Paediatric outpatients 4–6 per FTE.

The Australasian Faculty of Rehabilitation Medicine of the Royal College of Physicians, 1995 "Rehabilitation Unit Guidelines Standards for Rehabilitation Service in Public and Private Hospitals"<sup>6</sup> recommended bed numbers per one fulltime equivalent staff member across a number of disciplines relevant to Rehabilitation.

Similarly the 2002 Recommendations of "Stroke Working party" Greater Metropolitan Transition Taskforce (GMTT) of the NSW Department of Health in their "Minimum Staffing levels for Rehab Medicine for general Neurological-stroke"<sup>11</sup> utilised this approach and made an additional recommendation for dieticians.

Langhorne and Dennis in the 1998 study "Staffing in British acute stroke units (ASUs) Stroke Units: an Evidence Based approach"<sup>12</sup> made recommendations for average Allied Health Staffing per 10 beds.

The Consensus Statement on Allied Health Staffing for a 20 bed Acute Aged Care Ward by the GMTT "Care of the acutely ill older person" Working Party in 2003<sup>13</sup> similarly made staffing recommendations per a set number of beds, and reported Allied Health Staff per 20 beds across relevant disciplines.

The Allied Health in Rehabilitation Consultative Committee (Vic), in Version 8 Mar 2004 "Guidelines for Allied Health Resources required for the provision of Quality Rehabilitation Services: A working document"<sup>14</sup> make similar but more specific recommendations for Allied Health Staffing levels and grades per 10 beds (specialist and non specialist) and outpatients for 11 rehab diagnostic groups and importantly there are recommendations for outpatients.

So from this sample of papers we can see whilst there are a number of approaches most are, as would be expected, variations on the relation of an individual staff member to a number of patients in specific clinical areas. The exception is the use of the NAHCC workload distribution categories, which quantifies clinical time as a percentage of an FTE.

Most have focused on specific clinical areas, predominantly inpatient workloads with the rehabilitation diagnoses best covered. The exceptions to this generalisation are the detailed work for both inpatient and outpatient caseloads that the Victorian Allied Health in Rehabilitation Consultative Committee have described and that of Christie who describes work in various clinical specialities for both inpatient and outpatients.

A number of these recommendations are too specific for many rural settings, which do not have the concentration of services, particularly inpatient services. This reduces their applicability beyond metropolitan and perhaps major regional areas. Whilst these may assist, broader benchmarks or guidelines are needed to reflect the range and setting of services for rural and

remote areas. Not until relevant staffing guidelines are established will rural and remote areas really be able to achieve any consistency in staffing and service access.

## References

1. Adams, R. Distribution and Utilisation of Physiotherapy Services in Rural NSW: Preliminary findings 1997 National Rural Health Conference Proceedings.
2. Adams R, (Unpublished) The development of recommended physiotherapy FTEs: feasible or fantasy? Workshop presentation at 2002 International Physiotherapy Congress Sydney.
3. Adams, R Is it possible to develop recommended staffing levels for rural allied health services? 1st NSW Rural Allied Health Conference proceedings December 2003.
4. NSW Health Services Comparison Data Book 1998/1999 Volume 1.
5. Department of Health and Aged Care, October 2001 Measuring Remoteness: Accessibility/Remoteness Index of Australia (ARIA) Revised Edition Occasional Papers: New Series Number 14 (Also available on the Department of Health and Ageing website [www.health.gov.au/publicat.htm](http://www.health.gov.au/publicat.htm)).
6. Australasian Faculty of Rehabilitation Medicine of the Royal College of Physicians Rehabilitation unit Guidelines "Standards For Rehabilitation Service in Public and Private Hospitals", 1995.
7. Australian Institute of Health and Welfare (AIHW) 2001 Physiotherapy Labour Force Report.
8. Curry, R (unpublished).Conference Workshop Summary Minimums standards for remote allied health workforce 7th International Physiotherapy congress: Sydney, May 27, 2002.
9. Aspinall B, (unpublished) Allied Health Workload Distribution Benchmarking Project. Oct 2003 Compiled by for Children's Hospitals Australasia.
10. Heather J Christie Physiotherapy Caseload Guidelines 1999 Physiotherapy Canada: Summer 1999.
11. GMTT Stroke Working party Recommendations (unpublished). Minimum Staffing levels for Rehab Medicine for general Neurological-stroke 2002.
12. Langhorne, P and Dennis, M (ed) Staffing in British acute stroke units (ASU's). "Stroke Units: and Evidence Based approach" BMJ Books, 1998.
13. GMTT Care of the acutely ill older person in Greater Metropolitan Hospitals (unpublished). Dec 2003 Consensus Statement on Allied Health Staffing for a 20 bed Acute Aged Care Ward.
14. Allied Health in Rehabilitation Consultative Committee (unpublished). Guidelines for Allied Health: Resources required for the provision of Quality Rehabilitation Version 8 Mar 2004.