

Australian Medical Workforce Advisory Committee

# **THE REHABILITATION MEDICINE WORKFORCE IN AUSTRALIA**

**SUPPLY AND REQUIREMENTS**

**1997**

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## ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AFRM	Australasian Faculty of Rehabilitation Medicine
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare
ALOS	Average length of stay
AMWAC	Australian Medical Workforce Advisory Committee
AN-DRG	Australian National Diagnostic Related Group
Aust	Australia
CPR	Consultants in Rehabilitation : Population
DHFS	Department of Health and Family Services (Commonwealth)
FAFRM	Fellow of the Australasian Faculty of Rehabilitation Medicine
FTE	Full Time Equivalent
GP	General Practitioner
NSW	New South Wales
NT	Northern Territory
Pop	Population
Qld	Queensland
RACP	Royal Australasian College of Physicians
RARA	Rural and Remote Areas
Rehab	Rehabilitation
SA	South Australia
SNAP	National Sub-Acute and Non-Acute Casemix Classification Study
Tas	Tasmania
Terr	Territory
Vic	Victoria
WA	Western Australia

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## **TERMS OF REFERENCE OF AMWAC AND THE AMWAC REHABILITATION MEDICINE WORKFORCE WORKING PARTY**

The Australian Health Ministers' Advisory Council (AHMAC) established the Australian Medical Workforce Advisory Committee (AMWAC) to advise on national medical workforce matters, including workforce supply, distribution and future requirements. AMWAC held its first meeting in April 1995.

### AMWAC Terms of Reference

1. To provide advice to AHMAC on a range of medical workforce matters, including:
  - the structure, balance and geographic distribution of the medical workforce in Australia;
  - the present and required education and training needs as suggested by population health status and practice developments;
  - medical workforce supply and demand;
  - medical workforce financing; and
  - models for describing and predicting future medical workforce requirements.
2. To develop tools for describing and managing medical workforce supply and demand which can be used by employing and workforce controlling bodies including Governments, Learned Colleges and Tertiary Institutions.
3. To oversee the establishment and development of data collections concerned with the medical workforce and analyse and report on those data to assist workforce planning.

### AMWAC Rehabilitation Medicine Workforce Working Party Terms of Reference

The AMWAC Rehabilitation Medicine Workforce Working Party was established as a sub-committee of AMWAC and was asked to provide a report to AMWAC on the optimal supply and appropriate distribution of consultant in rehabilitation medicines across Australia, including projections for future requirements.

The Working Party held its first meeting on 4 July 1996 and presented its report to the 19 May 1997 AMWAC meeting.

## **MEMBERSHIP OF AMWAC**

### Independent Chairman

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## **MEMBERSHIP OF THE AMWAC REHABILITATION MEDICINE WORKFORCE WORKING PARTY**

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The Working Party would also like to acknowledge the helpful comments provided by Professor John Horvath and Mr Paul Gavel (AMWAC); and Mr John Harding, Mr Warwick Conn and Mr Graham Angus (AIHW), and Ms Sybil Apted (AFRM) for assistance with data collection.

## **INTRODUCTION, GUIDING PRINCIPLES AND METHODOLOGY**

### **Introduction**

The main objective of the Working Party has been to promote an optimal supply and appropriate distribution of consultants in rehabilitation medicine, including projections for future requirements to the year 2007.

Rehabilitation medicine is that part of the science of medicine involved with the prevention and reduction of disability and handicap arising from impairments; and the management of disability from a physical, psycho-social and vocational viewpoint. This specialty has been recognised as a principal specialty by the National Specialist Qualification Advisory Committee in Australia since 1976.

Medical rehabilitation in its broadest sense is part of all patient care and thus is the function of every practising doctor who is involved in the prevention, assessment, management and medical supervision of disability until that person has attained an adequate and appropriate level of performance (AFRM 1995).

Rehabilitation services involve a continuum of care from the acute sector through the rehabilitation inpatient phase to outpatient therapy programs, and long term maintenance through domiciliary programs and community programs.

Rehabilitation is provided through multi-disciplinary teams that include consultants in rehabilitation medicine, other medical practitioners, physiotherapists, occupational therapists, psychologists, speech pathologists, prosthetists, orthotists, neuro-psychologists, social workers, nurses and other allied health staff. This report focuses on consultants in rehabilitation medicine.

A consultant in rehabilitation medicine is a registered medical practitioner whose practice is exclusively by referral and who, by training and experience (a) in rehabilitation medicine is able to give a learned opinion (b) regarding patients with disabilities.

- (a) Training and experience to the standard that the Australasian Faculty of Rehabilitation Medicine (AFRM) and the Royal Australasian College of Physicians (RACP) requires for admission to Fellowship of the Faculty.
- (b) A learned opinion takes into account the issues of duration and complexity of the consultation which is occupied by the history and examination as well as the assessment of function and relevant investigations of the patient. This includes continuing management. It also includes communication with the referring source, other relevant health professionals and other agreed persons who can assist with the patient's restoration of function and quality of life (AFRM 1993).

This definition does not include other medical practitioners who, for one reason or another, undertake rehabilitation work as part of their practice; nor does it include the training registrars who hold positions in hospitals or the service registrars who work in rehabilitation medicine but are not recognised as being in training positions.

### **Guiding Principles**

In compiling this report, the Working Party adopted the following guiding principles:

- the Australian community should have available an adequate number of trained consultants in rehabilitation medicine, appropriately distributed to provide the rehabilitation services it requires;
- the community is best served when consultants in rehabilitation medicine have high standards of qualification and work with a high level of ongoing experience;
- the best assurance of standards is a high quality requirement for entry to practice;
- all Australian citizens must have access to a good standard of rehabilitation services irrespective of geography and economic status. In achieving this, proximity to the patient must be balanced against the quality of the service that can be provided and national and international guidelines for best practice in rehabilitation; and
- both public and private sectors should provide an adequate amount and quality of service.

### **Methodology**

The approach of the Working Party has been to analyse existing data sources and to undertake consultation with relevant persons and organisations, in order to make informed comments on the factors affecting the current and future market for rehabilitation services.

In estimating workforce numbers, establishing a profile of the workforce and assessing its adequacy, the main sources of data were:

1. Australasian Faculty of Rehabilitation Medicine (previously the Australasian College of Rehabilitation Medicine)

The AFRM keeps a variety of data, principally on the number, age, gender and location of Fellows, and details of training positions and trainees. The Working Party had access to data collected in a 1993 survey of AFRM Fellows. In addition, the AFRM conducted a survey of Fellows in late 1996 to update and supplement the existing data it held. This survey had an 86% response rate.

## 2. Australian Institute of Health and Welfare (AIHW)

The principal AIHW data source is the annual Medical Labour Force Survey. The Medical Labour Force Survey presents national labour force statistics for registered medical practitioners, primarily through a survey collected as part of the annual renewal of registration. The survey data used in this report is for 1994 (AIHW 1996). This survey had an overall response rate of 89.8%. The report also uses preliminary data on numbers of consultants from the soon to be published 1995 survey.

## 3. AMWAC Public Hospital Specialist Vacancy Survey

AMWAC surveyed Australian public hospitals in October 1996 seeking information on public hospital rehabilitation specialist vacancies. A vacancy was defined as an approved position for which funding was available and for which active recruitment was being undertaken. This survey had a 95% response rate.

A major difficulty with interpretation of the responses to the survey relate to the definition of active rehabilitation recruitment. The Working Party was aware that, in the face of a chronic shortage of applicants for positions, the practice had arisen of only advertising a vacant position when it was felt that likely applicants were available. This was likely to underestimate the rehabilitation vacancy rate in the questionnaire.

## 4. Department of Health and Family Services (DHFS) Medicare provider database

Medicare provider statistics define medical practitioners according to the predominant services billed to Medicare. The Medicare statistics include all practitioners who have billed Medicare for at least one service during a financial year.

Under Medicare there are four types of specialist in rehabilitation medicine- a consultant physician in rehabilitation medicine, consultant physician (internal medicine) in rehabilitation; a specialist physician (internal medicine) in rehabilitation; and other medical specialist (rehabilitation medicine) in rehabilitation.

The major deficiency with the use of Medicare data for workforce planning purposes is that data are not available on practitioners who are salaried consultants in rehabilitation medicine in the hospital system and who do not render services on a fee for service basis. So Medicare data excludes services rendered free of charge to public hospital patients and to Veterans' Affairs patients and compensation cases. For rehabilitation medicine this will have the effect of underestimating the size of the workforce and as a result the Working Party considered the Medicare data to be of little value.

Up to now it has not been possible to isolate from Medicare data those procedures or items related specifically to rehabilitation. Furthermore, specialists in rehabilitation medicine did not have consultancy Medicare status until February 1996.

#### 5. AHMAC and DHFS casemix reports on hospital activity

Since August 1994, a national overview of hospital activity as measured by Australian National Diagnostic Related Groups (AN-DRGs) has been published. To date reports covering the years 1991-92 to 1994-95 have been issued. The first three reports only included information on public hospital activity. The 1994-95 report also provides details of private hospital activity.

However, at present, the national casemix classifications that have been developed only cover acute care. This is a major deficiency for a speciality like rehabilitation medicine which has a substantial sub-acute or non-acute component to its activity. The reports to date have included data on two rehabilitation DRGs. However, meaningful analysis of this data is not possible due to reliability and validity issues. Significant changes in data definition has occurred and doubts exist regarding the reliability of the rehabilitation collection.

Further, it has been recognised that a sub-acute and non-acute casemix classification system would be required to allow valid inferences to be drawn on trends in rehabilitation service. These developments are currently being pursued by AHMAC and DHFS and may provide useful data to guide future deliberations regarding the rehabilitation workforce.

#### 6. State/Territory Health Departments

Each State/Territory was requested to supply information on rehabilitation service provision, infrastructure, workforce and comment on resource allocation in the next five years. This information was used in an attempt to fill in the gaps caused by the omission of sub acute and outpatient rehabilitation services from the national casemix data.

#### 7. Australian Bureau of Statistics

The Australian Bureau of Statistics (ABS) population data and projections are used as the sole source on population data. In making its population projections ABS uses four different series. The population projections in this report are based on Series A/B, where constant fertility and low overseas migration are assumed (ABS 1994 and ABS 1997).

#### 8. Rural and Remote Area classification

Wherever possible, distributional data have been interpreted using the rural and remote area (RARA) classification developed by the Commonwealth Department of Health and Family Services (DHFS 1994).

## **SUMMARY OF FINDINGS AND RECOMMENDATIONS**

This report describes the current rehabilitation medicine workforce and assesses the adequacy of that workforce.

All indicators suggest there is a shortage of consultants in rehabilitation medicine; no State/Territory is near the recommended consultant to population benchmark; waiting times are comparatively long and the public hospital vacancy rate is significant. In the short term the shortage is unlikely to improve, particularly given there is also a shortage of trainees in rehabilitation medicine.

The workforce is also significantly maldistributed across Australia and within most States/Territories. The workforce is concentrated in New South Wales and Victoria and in urban areas.

All available information on rehabilitation services have shortcomings and this has made it extremely difficult to gain an accurate assessment of the number of rehabilitation services being provided; and in turn to produce reliable requirements projections.

The report concludes that several issues need to be pursued by State/Territory health departments, with support from AFRM, as a priority:

- collection of sub-acute and non-acute casemix data and development of a reliable time series of this data (which it is recognised is in progress);
- ensuring all current training positions are filled, as a first step to reducing the shortage of consultants in rehabilitation; and
- establishing a National Rehabilitation Network to oversee the development of appropriate rehabilitation infrastructures and rehabilitation services in each State/Territory.

The Network is suggested as a short term practical arrangement that could function as a forum of exchange between State/Territory health departments and would focus on best practice initiatives, benchmarking, resource utilisation, service co-ordination and workforce requirements.

### **Description of the Current Rehabilitation Medicine Workforce**

#### *Number of Practising Consultants In Rehabilitation Medicine*

- The current number of practising consultants in rehabilitation medicine is estimated to be 169. Those in full time activity were 153 and part time 16.

#### *Geographic Distribution*

- 57.9% of the workforce (98 consultants) is located in New South Wales and 26% (44 consultants) is located in Victoria.
- The majority of consultants in rehabilitation medicine had their primary practice in capital cities for all States/Territories with only a small and unevenly distributed workforce in rural areas.

#### *Gender Profile*

- From the AFRM data, there were 35 (21%) female consultants in rehabilitation medicine and 134 (79%) males. The 1997 trainees consist of 16 (34%) females and 31(66%) males.

#### *Age Profile*

- The age profile of the workforce is predominantly under 50 years of age in most States/Territories with the exception of Queensland and Western Australia where consultants in rehabilitation medicine are older.

#### *Work Profile*

- The principal employer of consultants in rehabilitation medicine was public hospitals (48.9%). 36.6% of consultants work in the private sector.
- The 1996 AMWAC/AFRM survey of consultants in rehabilitation indicated that on average males spent 45 hours per week in direct care of patients whilst females spent 33 hours. On call hours indicated that males spent 43 hours whilst females spent 41 hours per week.

#### *Training Arrangements*

- Trainees in rehabilitation medicine must complete three years of basic training. Upon satisfactory completion of basic training and a pass in a Part 1 examination trainees may enter advanced training. Advanced training comprises three years of clinical experience in an advanced rehabilitation medicine training program.
- As at April 1997, there were 72 accredited training positions of which 25 (35%) were unoccupied.

#### *Services Provided*

- Rehabilitation services are targeted at persons with disabilities. The most common disabling conditions affect the musco-skeletal system and the special senses, but the greatest dependency results from neurological disorders. The relationships between age and the severity of disability and type of disability are strong.
- Rehabilitation may take place in inpatient and outpatient settings in a hospital, day

hospitals and in the home.

- All available information on rehabilitation services has some shortcomings and this has made it extremely difficult for the Working Party to gain an accurate assessment of the number of rehabilitation services being provided.
- Some information is available through national casemix activity reports but until the work to develop casemix classifications for sub-acute and non-acute care is complete and a time series of data is available, casemix data is of little value.
- In an attempt to fill in the gaps caused by the current absence of sub-acute and outpatient rehabilitation services from national casemix data, the report includes a summary of rehabilitation services provided in each State/Territory.
- In turn, this highlights the substantial differences that currently exist in the way rehabilitation services are provided in each State/Territory.

### **Adequacy of the Current Rehabilitation Medicine Workforce**

All indicators suggest there is a shortage of consultants in rehabilitation medicine; however the actual shortage was difficult to quantify. The Working Party believes this shortage is unlikely to improve in the short term, particularly given the shortage of trainees interested in training in rehabilitation medicine.

One fact that limits the ability of the Working Party to quantify the shortfall in consultants in rehabilitation medicine is that there has been a lack of clarity in who was providing specialist rehabilitation services. Service provision has been characterised by substitution in all States/Territories, no doubt, in an attempt to solve the workforce shortage problems.

Clearly, there is a difference between the optimum of rehabilitation services being provided by trained consultants in rehabilitation medicine and the State/Territory health departments' need to provide a rehabilitation service to their population.

This situation provides limited scope for dramatically increasing the number of consultants in the rehabilitation medicine workforce, despite the obvious shortages that currently exist and appear likely to continue. Future supply is limited by the number of doctors considering training in rehabilitation medicine; which, in turn, is influenced, in part, by the current lack of rehabilitation infrastructure in some States/Territories. Until this cycle is broken the situation is likely to be perpetuated.

The Working Party believes consideration should be given, by State/Territory health departments, to improving the opportunities for junior medical staff, and support staff, to

participate within rehabilitation services; as well as providing greater access to research opportunities for consultants and the development of academic positions.

In setting up rehabilitation services in the future, special attention needs to be given to ensuring that there is a critical mass of personnel able to resource not only the major urban hospitals but also provide services to rural areas.

For those States/Territories with less well developed rehabilitation medicine workforces, consideration should be given to interim methods of encouraging greater trainee participation. This may include a system of scholarships with attachment to training in one of the more populous States/Territories.

The AFRM needs to review as a priority the desirability of training positions and increase the awareness of the specialty and its career opportunities. The AFRM also needs to consider its role in supporting the development of services in areas of underdevelopment by cooperation with State/Territory health departments in development of innovative models to address both service and training needs.

#### *Consultants in Rehabilitation Medicine : Population Ratio*

- The current Australian consultant to population ratio is estimated at 1:108,220 population. There is considerable variation in the specialist to population ratios between the States and Territories, ranging from 1:65,160 in New South Wales to 1:419,338 in Queensland.
- The AFRM considers that to maintain a high level of ongoing experience and to ensure that consultants in rehabilitation medicine perform a reasonable volume of work the consultant to population ratio for Australia should be 1:50,000.

#### *Public Hospital Vacancies*

- The AMWAC survey of public hospital specialist vacancies conducted in October 1996 found there were seven rehabilitation medicine vacancies.
- This level would generally not be considered a serious level of vacancy. However, the Working Party considers that this is an underestimate of the vacancy rate that currently exists in public hospitals. Anecdotal evidence is that there are numerous positions available for consultants in public hospitals; however, because there are not the number of consultants available to fill these positions, vacancies are not advertised, and therefore are not recorded in the vacancy survey.

#### *Consultation Waiting Times*

- Based on responses to the AMWAC/AFRM survey of consultants in rehabilitation medicine, waiting times for a first standard consultation were estimated to average

15 days in private rooms and 22 days in public hospitals. For an urgent consultation waiting times averaged three and five days respectively.

- Average waiting times for a standard first consultation are longest in South Australia, Western Australia and the Northern Territory.

### **Future Supply and Requirements Indicators**

The Working Party examined various sets of data to gain an overview of the rehabilitation services being provided as there is no universal model or set of data for rehabilitation. All available information on services have shortcomings and this has made it extremely difficult to gain an accurate assessment of the number of rehabilitation services being provided; and in turn to produce supply and requirements projections.

The work currently in progress to develop sub-acute and non-acute casemix classifications should be of value in assessing requirements trends in the future.

For these reasons the Working Party feels it is not appropriate to conduct any projection analysis at the moment, and that it would be more prudent to wait for a time series of casemix trends to be available.

### **Conclusions**

In the meantime, given the apparent shortages in the workforce, priority should be given to ensuring all training positions are filled and that State/Territory governments employ trained consultants in rehabilitation in their rehabilitation services. Until these trainee numbers are increased, shortages of consultants in rehabilitation medicine are likely to continue. The success of increasing trainee numbers will clearly depend upon close co-operation between State/Territory health departments and the AFRM.

However, the Working Party is of the view that the situation is unlikely to improve without improvements in infrastructure and service delivery arrangements and that there needs to be an urgent examination by State/Territory health departments of these issues.

In view of the number of reviews already completed in some States/Territories into rehabilitation services and workforce requirements, this process may be best assisted by the formation, by State/Territory health departments, of a National Rehabilitation Network.

A National Rehabilitation Network would focus on best practice initiatives, benchmarking, resource utilisation and workforce requirements through a forum of exchange between State/Territory health departments. This should have the outcome

of developing appropriate rehabilitation infrastructures and improved delivery of services. An added benefit to such a strategy should be an increase in the profile of rehabilitation medicine and in turn a greater interest in training in the specialty and ultimately an increase in the number of consultants in rehabilitation medicine.

## **RECOMMENDATIONS**

The Working Party recommends:

1. The vacancies in the rehabilitation medicine training program should be filled as a priority given the current shortages in the workforce.
2. State/Territory health departments should work towards reducing the substitution that occurs in rehabilitation services by filling vacancies in existing services and staffing new services with trained consultants in rehabilitation medicine. This should provide a clear signal that State/Territory health departments are committed to investing in rehabilitation and setting up appropriate infrastructures. In turn, this should then assist in attracting trainees to rehabilitation medicine.
3. There are clear indicators of a lack of rehabilitation services due to a shortage of trained consultants in rehabilitation and real and perceived infrastructure inadequacies. There should be an urgent examination by State/Territory health departments of these infrastructure issues.

In view of the number of reviews already completed in some States/Territories into rehabilitation services and workforce requirements, this process may be best assisted by the formation, by State/Territory health departments, of a National Rehabilitation Network. Such a network would focus on best practice initiatives, benchmarking, resource utilisation and workforce requirements (building further on the work in this report); through a forum of exchange between State/Territory health departments.

4. AMWAC conduct a further review of the rehabilitation medicine workforce in 2000, when a time series of rehabilitation casemix data should be available.

## DESCRIPTION OF THE CURRENT REHABILITATION MEDICINE WORKFORCE

As discussed in the introduction, there are a variety of data sources on the numbers, attributes and distribution of consultants in rehabilitation medicine in Australia. While each of these data collections has some deficiency, it is possible to piece together a reasonably accurate and up-to-date profile of the workforce.

In establishing the profile of the current rehabilitation medicine workforce, the Working Party defined:

- the number of practising consultants in rehabilitation medicine;
- the distribution of consultants in rehabilitation medicine;
- the age and gender profiles of the workforce; and
- the hours worked and services provided and performed by consultants in rehabilitation medicine.

### The Number of Practising Consultants in Rehabilitation Medicine in Australia

In 1996, the AFRM had 289 members; of this number 169 were known to be practising in rehabilitation medicine in Australia, 153 of whom were practising full time.

**Table 1: AFRM Fellows, by State and Territory, 30 July 1996**

State/Territory	Rehabilitation (full time active)	Rehabilitation (part time)	Other specialty (full time active)	Total
New South Wales	85	10	13	108
Victoria	39	5	15	59
Queensland	7	1	9	17
South Australia	11	-	8	19
Western Australia	5	-	4	9
Tasmania	2	-	-	2
ACT	3	-	-	3
Northern Territory	1	-	-	1
<b>Total</b>	<b>153</b>	<b>16</b>	<b>49</b>	<b>218*</b>

\* respondents who indicated activity

Source: AFRM

In the recently published 1995, AIHW Medical Labour Force Survey, consultants with their main specialty in rehabilitation medicine was estimated at 173. There were also a further 45 who had rehabilitation as their second speciality of practice and nine with rehabilitation as their third speciality of practice.

### Growth in the Rehabilitation Medicine Workforce

The Australasian College of Rehabilitation Medicine was formed in 1980 and consultants working in, or having a significant interest in, rehabilitation were invited to join. There were 135 Fellows at the College's inauguration. By the middle of 1987 membership numbered 210. In a survey conducted in 1988, 128 of 160 respondent members indicated that they worked principally in rehabilitation medicine. In 1993, the College became the Australasian Faculty of Rehabilitation Medicine (AFRM).

Table 2 shows the rehabilitation medicine workforce has grown by 32% since 1988. The largest growth in the workforce has been in New South Wales and Victoria, whilst there has been a small decrease in total numbers in the other States.

**Table 2: Consultants in rehabilitation medicine; by State /Territory, selected years 1988 to 1996**

Year	NSW/ACT	Vic	Qld	SA/NT	WA	Tas	Aust
1988	57	32	10	19	10	0	128
1996	98	44	8	12	5	2	169
% increase	71.9	37.5	-20.0	-58.3	-50.0	-	32.0
% pop. increase	21.7	5.5	19.3	15.3	11.8	6.3	10.1

Source: AFRM and ABS

### Distribution of the Rehabilitation Medicine Workforce

In 1996, 57.9% of practising consultants in rehabilitation medicine were in New South Wales, followed by 26% in Victoria; 58.7% of the Australian population reside in these two States.

**Table 3: Consultants in rehabilitation medicine and population; by State/Territory, 1996**

State/Terr.	NSW/ACT	Vic	Qld	SA/NT	WA	Tas	Aust.
Specialists	98	44	8	12	5	2	169
% specialists	57.9	26.0	4.7	7.1	3.0	1.2	100.0
% population	34.8	24.9	18.2	10.0	9.6	2.6	100.0

Source: AFRM and ABS

Table 4 (using AFRM data) shows the 1996 distribution of consultants in rehabilitation medicine between States and Territories and by geographic location. Overall, 85.8% of consultants in rehabilitation medicine had their primary practice in a capital city (63.% of the population), 7.1% in other major urban areas (8% of population) and the remaining 7.1% in rural and remote areas (28% of population).

**Table 4: Distribution of consultants in rehabilitation medicine; by State/Territory and geographic location, 1996**

State/Territory	AFRM	% of Australia	% capital city	% other major urban	% rural
NSW/ACT	98	57.9	82.6	10.2	7.1
Victoria	44	26.0	90.9	2.2	2.2
Queensland	8	4.7	75	12.5	12.5
SA/NT	12	7.1	100	0	0
Western Australia	5	3.0	100	0	0
Tasmania	2	1.2	100	0	0
<b>Australia</b>	<b>169</b>	<b>100.0</b>	<b>85.8</b>	<b>7.1</b>	<b>7.1</b>

Source: AFRM

By way of comparison, the AIHW medical labour force survey estimated that 83.2% of consultants in rehabilitation medicine had their primary practice in a capital city (63.5% of population); 9.6% in other major urban areas (8.2% of population) and the remaining 7.2% in rural areas (28.3% of population) (AIHW 1996).

Clearly many rural areas have insufficient consultants in rehabilitation, if any. Many of these rural areas provide rehabilitation services through other health professionals such as registered nurses, allied health professionals and general medical practitioners.

### **Age Profile**

Table 5 and 6 detail the age profile of the rehabilitation workforce. This is a young workforce. Table 5 shows that 67.4% of the workforce is aged under 50 years and only 12% of the workforce is aged over 60 years. Table 6 shows that 40-44 years and the 35-39 years age cohorts have the most consultants.

The age profile varies from State/Territory. South Australia has a comparatively younger workforce with 83.4% of AFRM Fellows aged under 50 years. For Queensland and Western Australia the workforce was older with 87.5% and 60% respectively aged over 50 years.

**Table 5: Age profile of consultants in rehabilitation; by State/Territory and major age group, 1995-96**

Age	NSW/ACT	Vic	Qld	SA/NT	WA	Tas	Aust
% under 50 years	69.7	69.7	22.2	83.4	40.0	100.0	45.7
% 50-59 years	20.2	16.3	55.6	8.3	40.0	0.0	33.7
% over 60 years	10.1	14.0	22.2	8.3	20.0	0.0	20.6

Source: AFRM

**Table 6: Age profile of AFRM members; by State/Territory and gender, 1996**

State/ Terr.	Sex	30-34 yrs	35-59 yrs	40-44 yrs	45-49 yrs	50-54 yrs	55-59 yrs	60-64 yrs	65-69 yrs	Total
NSW/ACT	M	6	19	20	11	7	9	4	6	82
	F	*	*	7	3	*	3	0	0	17
Vic.	M	0	7	6	3	3	4	4	0	27
	F	3	4	4	3	0	0	*	*	16
Qld	M	0	0	0	*	*	3	*	0	8
	F	0	0	0	*	0	0	0	0	1
SA/NT	M	0	*	3	4	0	*	0	*	11
	F	-	-	-	-	-	-	-	-	1
WA	M	0	*	0	*	0	*	*	0	5
	F	0	0	0	0	0	0	0	0	0
Tas	M	-	-	-	-	-	-	-	-	1
	F	0	0	0	0	0	0	0	0	0
<b>Aust</b>	M	6	30	29	20	12	19	11	7	134
	F	5	5	11	8	1	3	1	1	35
	<b>Total</b>	<b>11</b>	<b>35</b>	<b>40</b>	<b>28</b>	<b>13</b>	<b>22</b>	<b>12</b>	<b>8</b>	<b>169</b>
%	Total	6.5	20.7	23.7	16.6	7.7	13.0	7.1	4.7	100.0
%	F	45.4	14.3	27.5	28.6	7.7	13.6	8.3	12.5	20.7

a - an age was not available for all members; \* number less than 3

Source: AFRM

## **Gender Profile**

In 1996, 21% (35) of the Fellows of the AFRM were female. The majority of the female consultants in rehabilitation are located in New South Wales and Victoria.

Female consultants in rehabilitation medicine have a much younger age profile than their male counterparts. In 1996, 86% of females were aged under 55 years compared to 72% of males.

From the AIHW data, there were 32 female consultants in rehabilitation medicine, representing 16.8% of the workforce; 84% (27) of those were aged under 55 years of age.

## **Practice Profiles**

Rehabilitation medicine services may be provided in a designated rehabilitation unit on an inpatient or outpatient basis, or in the domiciliary setting by community rehabilitation teams.

In the AMWAC/AFRM survey (n=110) 63% of respondents indicated that their principal field of medicine was rehabilitation. Other respondents gave various fields of medicine with the highest percentage in geriatric medicine (10%) followed by paediatric rehabilitation (5%) and medical legal (4%). Approximately 40 respondents were primarily involved in specialties other than rehabilitation medicine, spending 30 hours or more per week on that specialty. These specialties included general medicine, orthopaedic surgery, psychiatry, rheumatology, spinal surgery, surgical neurology, urology and neurology.

The percentage of time spent in rehabilitation included musculoskeletal/orthopaedic (56%), chronic pain management (43%), back pain management (42%), acquired brain injury/head injury (38%), stroke (38%), medical legal (35%), amputation/prosthetics (33%), neurological (33%), spinal cord injury (27%), industrial/occupational injury (27%), geriatrics (25%), knee/foot injury/sports medicine (23%) and multiple sclerosis (23%).

The majority of respondents (66%) to the AMWAC/AFRM survey 1996 indicated their clinical activity was undertaken in public hospitals. In the AIHW medical labour force survey 48.9% of consultants in rehabilitation medicine reported that their main job was in a public acute care hospital; 36.6% indicated private rooms; 8.4% indicated other public; and, 6.1% indicated other private.

## **Hours Worked**

From the 1996 AFRM/AMWAC survey, consultants in rehabilitation medicine worked, on average, 48.8 hours per week, plus 4.9 hours on call worked, and 27.9 hours on call not worked. On average, 27.4 of these hours were spent on clinical rehabilitation activity

and 9.1 hours were spent on clinical activity other than rehabilitation. The remaining 12.2 hours were spent on non-clinical activities including administration, teaching and research.

Males on average spent 45 hours per week in direct care of patients whilst females spent 33 hours. On call hours indicated that males spent 43 hours whilst females spent 41 hours per week.

Based on survey data from the AIHW, in 1994, 76.5% of male and 63.2% of female consultants in rehabilitation medicine worked full time. That is, on average a total of more than 40 hours per week. This was less than the male proportion for all specialists of 80.8% and more than the female proportion of all specialists of 52.5%.

Consultants in rehabilitation medicine appeared to work slightly lower average total hours per week than all specialists. This was the case for males and females working full time and part time. On average, male consultants in rehabilitation worked a total of 46.2 hours per week, while their female counterparts worked 37.9 hours per week. For full time specialists only, the figures were 52.6 hours for males and 46.4 hours for females.

Consultants in rehabilitation medicine spent less time on average on call (not worked) in rural areas than in urban areas. In the AIHW survey 1994, male consultants with a main job in capital cities or urban areas reported spending an average of 46.7 hours per week on call, compared to 37.0 for those with a main job in rural/remote areas. Female consultants in rehabilitation with a main job in capital cities or urban areas reported spending an average of 44.4 hours per week on call, compared to 4 hours in rural/remote areas.

### **Training Arrangements**

Entry to training into rehabilitation medicine training requires an Australian medical degree or registrable equivalent. Trainees must then complete three years of basic training before they are eligible to take the Part I assessment. During basic training, trainees acquire broad general medical and surgical experience including two years in an approved hospital, and develop a satisfactory level of clinical competence in medicine.

The Part I assessment involves both written and clinical examinations. Candidates must pass the written examination in order to proceed to the clinical examination. Candidates are permitted two consecutive attempts at the clinical examination in a 24 month period, plus any supplementary examinations offered. If successful in the Part I examination trainees may then proceed to the three years of advanced training.

Admission to advanced training is satisfactory completion of all requirements of Part I

training. Advanced training comprises three years of clinical experience in an advanced rehabilitation medicine training program. Assessment is based on satisfactory written reports from supervisors in each six month training term, completion of special courses in behavioural sciences, research methodology, administration and management of rehabilitation services, and clinical neuropsychology, as well as successful completion of the final Part II examination.

The Part II examination may be taken during the third year of advanced training. Candidates must pass the written examination in order to proceed to the clinical examination. Candidates are permitted two consecutive attempts at the clinical examination in a 24 month period.

Trainees who successfully complete all the requirements are awarded Fellowship of the Australasian Faculty of Rehabilitation Medicine of the Royal Australasian College of Physicians (FAFRM), a principal specialty, and are recognised as consultant physicians in rehabilitation medicine by the Health Insurance Commission.

As at April 1997, there were 72 accredited training positions of which 25 (35%) of the accredited positions were unoccupied. Of the 72 advanced trainees, 16 are female (34%), Table 7. On average there are about 15 new trainees that join the training program each year. It is expected that approximately 15 trainees will graduate into specialist practice each year in 1998, 1999 and 2000.

**Table 7: Rehabilitation medicine advanced training positions and trainees; by State/Territory, 1997**

<b>State/Territory</b>	<b>Training positions</b>	<b>Trainees</b>	<b>% of trainees</b>	<b>Female trainees</b>	<b>Female (%)</b>
NSW/ACT	47	26	55.3	8	31
Victoria	16	14	29.8	5	36
Queensland	2	2	4.3	1	50
SA/NT	4	3	6.4	1	33
Western Australia	1	1	2.1	1	100
Tasmania	1	1	2.1	0	0
<b>Australia</b>	<b>72</b>	<b>47</b>	<b>100.0</b>	<b>16</b>	<b>34</b>

Source: AFRM

A priority area for examination by the AFRM is the current 35% vacancy in training positions. The AFRM needs to review the desirability of training positions and increase the awareness of the specialty and its career opportunities. An AFRM survey could be conducted to find out the reasons why these vacancies exist. Methods of encouraging

trainee participation may include part time training; the availability of scholarships with attachment to training in one of the more populous States/Territories; and the manpower required to provide training. The success of increasing trainee numbers will clearly depend upon close co-operation between State/Territory health departments and the AFRM.

The AFRM also needs to consider its role in supporting the development of services in areas of underdevelopment by the cooperation with State/Territory health departments in producing innovative models to address both service and training needs. To overcome the difficulties of access to outpatient services and coordination with specialised services, the Working Party recommended the establishment of funded outreach rehabilitation teams, consisting of a consultant in rehabilitation medicine and trainee consultant. The composition would need to vary between States/Territories. Such a funded team would help in attracting consultants in rehabilitation medicine and trainees to the rural setting.

Trainees would be provided support and training and the issue of professional isolation that currently exists in rural areas would be reduced. For consultants, it would allow an opportunity to enhance their skills in health related disadvantages suffered by rural and remote communities and provide a knowledge base of skills to younger colleagues.

The Working Party also concluded that rehabilitation medicine is a highly system specific specialty and largely dependent on the system of health care delivery. This means that it is not easily substituted by foreign graduates and there are few countries where rehabilitation medicine as a specialty is as highly developed as in Australia. There is also very little interest in practice in Australia by United States consultants in rehabilitation medicine because of lower remuneration payments to consultants.

Another issue to be considered is that 33% of specialists are aged over 51 years and it would seem, that this specialty lends itself to a mature age group who enter rehabilitation medicine (Table 5). This is further indicated by the clinician specialists in training by age, which shows that the of the 47 AFRM advanced trainees 35% are aged over 40 years of age and in the AIHW Survey 1994, out of a total 19 trainees in rehabilitation medicine 21% were in the age group 45-54 years and 11% in the age group 35-44 years.

### **Services Provided**

Rehabilitation and assessment services are targeted at persons with disabilities irrespective of age. This range of inpatient rehabilitation services offered to disabled people are wide and varied and include the following: cardiac; pain; head injury; stroke/neurological; behavioural/cognitive; orthopaedic/amputee; spinal; musculoskeletal.

The most common disabling conditions affect the musculo-skeletal system and the special senses, but the greatest dependency results from neurological disorders, especially those that cause impaired cognitive function and disturbances in behaviour in addition to physical disability. The relationships between age and severity of disability and type of disability are strong.

In general, rehabilitation services serve two groups firstly, the healthy population who suffer a catastrophic event and require rehabilitation to minimise their disability and enable them to return to aspects of their previous lifestyle. Secondly, people with multi-system disease and disability who are being maintained in the community and for whom any insult either internal, that is disease or injury, or external, that is change in environment, or level of family support, will increase the degree of disability.

Well coordinated rehabilitation intervention at crucial times for the second population can minimise handicap, improve quality of life, prevent or delay reliance on institutional care and more effectively use community resources; this group is again not age specific, but the elderly population predominates.

It is estimated that approximately 70% of all rehabilitation services are used by people aged 60 years or more (AIHW, 1996). They may be referred by general practitioners (GPs), community health centres, day hospitals, domiciliary services, acute hospitals and members of the public, their family or themselves. This group may make slower progress in multi-disciplinary rehabilitation programs, have longer lengths of stay and achieve lower functional status and may require a sequence of admissions to maintain their independence. The availability of high standard well integrated inpatient, community based and home based rehabilitation services could play a significant role in reducing the length of stay for older people.

Referrals for rehabilitation patients can come from the community via general practitioners, from within the acute hospital itself or from other hospitals. The majority of the other groups of adult patients who require rehabilitation (people with stroke, head injury, rheumatological and orthopaedic conditions, amputation and cardiac conditions) also come from within the acute inpatient hospital setting. There are some referrals from the country areas for people with rheumatological conditions, amputation, head injury and stroke.

Paediatric inpatient referrals come mainly from neurosurgeons, nephrologists and intensive care specialists from within the hospital, for example following trauma, while outpatient referrals emanate from neurologists, orthopaedic surgeons, paediatricians and community child development centres generally for congenital conditions.

Rehabilitation may take place in inpatient and outpatient settings in the hospital, day

hospitals and in the home. It is only possible from the current data systems to provide global indicators of trends of care provided in the different settings because comparisons are difficult as services provided vary in each State/Territory.

All available information on services have shortcomings and this has made it extremely difficult to gain an accurate assessment of the number of rehabilitation services being provided.

The development of models of rehabilitation service delivery for different circumstances should be pursued jointly by State/Territory health departments and AFRM.

#### Australian Hospital Casemix Data

On a national basis, some comparisons can be made by using the AHMAC and DHFS Australian casemix reports on hospital activity. The interpretation of data regarding rehabilitation is not possible, due to concerns regarding the reliability and validity of the rehabilitation data collection and data definition changes.

Casemix classifications have only been developed for acute care, which is but one aspect of rehabilitation care. These classifications exclude prevention, primary care and community long term care. In addition data are only available for 1993-94 and 1994-95, removing any scope for assessing service trends, the data is summarised in Appendix A.

#### National Sub-Acute and Non-Acute Casemix Classification Study (SNAP)

The separation of sub-acute episodes of care from acute episodes is now recognised as an essential step in understanding the outputs of the healthcare system and a way of measuring the services provided and performed.

Sub-acute care and non-acute care have been defined in the context of hospital inpatient services. Sub-acute care is an episode of care provided in designated rehabilitation, geriatric rehabilitation, palliative care, psychogeriatric unit or in a psychiatric unit other than an acute psychiatric unit or under the clinical management of a specialist in these medical fields. Non-acute care is defined as an episode of care which occurs after the patient has been classified as a nursing home type patient, or in which the patient is receiving convalescent care, or in which the patient is receiving non-complex respite care.

For the purpose of management it is important to be able to group all patients into clinically meaningful classes that have similar resource usage. Up to now however, sub-acute and non-acute care are not adequately classified by DRGs. As a consequence work has commenced in Australia to develop a suitable classification system for sub-acute and non-acute care.

In practice, the identification and classification of sub-acute care and non-acute episodes in Australia has proved to be a difficult task. One important reason is the limited availability of source data for classification development, whereas the DRG classification uses variables which are routinely collected about each patient care episode. The variables that have been collected in the routine discharge data set include age, diagnoses, source of referral and destination after discharge, all of which have been demonstrated to be ineffective in the classification of sub-acute and non-acute episodes.

The aim of the National Sub-Acute and Non-Acute Casemix Classification Study is to build on previous work in sub-acute and non-acute casemix classification by undertaking nationally coordinated research which will test and build on casemix classification variables and systems identified in earlier Australian studies. This project is currently being undertaken at the Centre for Health Service Development, University of Wollongong, by Kathy Eagar, David Cromwell and Carmel Kennedy.

The objective of the study is to assist materially in the development of a national casemix classification system that can be used to fund and clinically manage Australian sub-acute and non-acute services. The five case types about which data will be collected are: palliative care, rehabilitation, psychogeriatric, geriatric evaluation and management, and maintenance care.

There have been five variables identified as being able to explain a proportion of resource use for sub-acute and non-acute care, they are: episode type, functional dependency level; impairment type ( for rehabilitation only); phase (for palliation only) and severity (for palliation only).

The SNAP project should be released around August 1997 with version 1 classification being available at the same time.

#### Rehabilitation Services Provided by State/Territory Health Departments

In an attempt to fill in the gaps caused by the omission of sub acute and outpatient rehabilitation services from the national casemix data, the Working Party received the following advice from each State/Territory in response to a letter sent by AMWAC (see Appendix B).

This approach served to highlight the substantial differences in the way rehabilitation services are provided by each State/Territory. One of the main reasons for this difference is that the scope of rehabilitation services is wide and in the absence of developed jurisdictions to support rehabilitation medicine a range of other practitioners provide these services.

#### *New South Wales*

Rehabilitation services in New South Wales are generally structured in one of two ways; integrated with geriatric medicine services (the degree of interaction varies between hospitals and Area Health Services), or delivered separately from geriatric medicine services. Where rehabilitation services are delivered separately from geriatric medicine services there is often significant rehabilitation activity provided for elderly people within geriatric medicine services.

New South Wales hospital comparison data on rehabilitation services are available for two years - 1993-94 and 1994-95 (NSW Health 1995b and NSW Health 1996). Table 8 summarises the data by hospital type and shows that rehabilitation separations increased by 43.5% between 1993-94 and 1994-95.

**Table 8: New South Wales rehabilitation separations; by hospital type, 1993-94 and 1994-95**

Hospital type	1993-94	1994-95	% change
<b>Acute groups</b>			
Principal referral	3,043	6,434	111.4
Major metropolitan referral	565	1,159	105.1
Major non metropolitan referral	472	977	106.7
District metropolitan	2,718	5,017	84.6
Large district non metropolitan	565	823	45.7
Small district non metropolitan	157	319	103.2
Community	155	523	237.4
Ungrouped	1,040	360	- 65.4
<i>Total acute hospitals</i>	<i>8,715</i>	<i>15,612</i>	<i>79.1</i>
Community	31	31	0.0
Nursing homes	636	979	53.9
Psychiatric	126	3	- 97.6
Ungrouped	4,706	3,775	- 19.8
<i>Total non acute hospitals</i>	<i>5,499</i>	<i>4,788</i>	<i>- 12.9</i>
<b>Total</b>	<b>14,214</b>	<b>20,400</b>	<b>43.5</b>

Source: NSW Health Department

Table 9 summarises the number and distribution of rehabilitation beds within the metropolitan Area Health Services and shows that New South Wales has 19.2 rehabilitation beds per 100,000 population.

**Table 9: New South Wales metropolitan rehabilitation beds, 1995**

Area Health Service	Rehab. beds	Population	Beds per 100,000 population <sup>a</sup>
<b>Capital city areas</b>			
Central Sydney	70	450,978	15.5
Northern Sydney	242	733,717	33.0
South Eastern Sydney	140	711,299	19.7
South Western Sydney	104	708,855	14.7
Wentworth	26	300,410	8.7
Western Sydney	118	625,715	18.9
<b>Other major urban areas</b>			
Central Coast	45	259,027	17.4
Hunter	86	524,361	16.4
Illawarra	61	332,944	18.3
<b>Total</b>	<b>892</b>	<b>4,647,306</b>	<b>19.2</b>

Estimated population as at 30 June 1995.

a - figures exclude specialised statewide rehabilitation beds for spinal and brain injury

Source: NSW Health Department

There are several models for delivery of separate rehabilitation services. For example, in the Illawarra Area Health Service, the rehabilitation and geriatric service is responsible for providing rehabilitation services for both the working age and the geriatric population, and acute geriatric medicine is provided by generalist internists. In the Hunter Area Health Service, Central Coast Area Health Service and the Western Sydney Area Health Service, rehabilitation medicine and geriatric medicine are delivered separately although both provide rehabilitation services. The Rehabilitation Medicine Service in the Western Sydney Area Health Service provides rehabilitation for the working age group, while the Geriatric Medicine Service provides the majority of rehabilitation for older people. Rehabilitation medicine services in the Hunter Area Health Service are delineated on the basis of age, while the Hunter Rehabilitation Service directed at the working age group and rehabilitation for the aged provided by the Aged Care Service.

In rural areas, rehabilitation services are usually integrated with geriatric services, centralised and linked with base hospitals. Patients requiring specialised rehabilitation services may need to be transferred to metropolitan tertiary centres. The availability of

specialist medical staff, allied health staff and nursing staff influences the range and availability of services in rural areas. Recruitment of specialist staff to rural areas is a recognised problem.

One strategy that has been suggested to assist in overcoming difficulties of access to outpatient services and coordination with specialised services is to investigate the feasibility of establishing an outreach rehabilitation team in each rural Area Health Service. The team could compliment the services available in the local community by providing particular expertise in specific disciplines and a case management role. The team could also provide assessments, additional training and support to local practitioners when required (NSW Health 1995).

*Victoria*

The overall concept of rehabilitation and assessment currently operating in Victoria comprises: primary and community care catering for the disabled at home; hospital inpatient care; Community Rehabilitation Centres; and, long stay care in some public sector nursing homes where maintenance of levels of dependency might be feasible and lead to a lower burden of care for staff.

The Victorian Department of Human Services 1996 Medical Workforce Survey identified 54 specialist rehabilitation practitioners, providing clinical services in Victoria, who indicated rehabilitation Medicine as their primary, secondary or tertiary specialty qualification. The following data describes the number and distribution of consultants in rehabilitation medicine in Victoria in 1996 (Table 10 to 12).

**Table 10: Rehabilitation medicine as the primary specialty qualification, Victoria; by location, 1997**

<b>Location categories</b>	<b>Number</b>
Metropolitan	33
Other Metropolitan	2
Large Rural	1
No postcode	2

Source: Victorian Department of Human Services

**Table 11: Rehabilitation medicine as the secondary specialty qualification, Victoria; by location, 1997**

Primary Specialty	Number	Location Categories
General Medicine	1	Other Rural
Geriatrics	3	Metropolitan, Large Rural, Other Rural
Rheumatology	2	Metropolitan
Neurology	2	Metropolitan
Orthopaedic Surgery	1	Metropolitan
Paediatric Surgery	1	Metropolitan
Psychiatry	1	Metropolitan

Source: Victorian Department of Human Services

**Table 12: Rehabilitation medicine as the tertiary specialty qualification, Victoria; by location, 1997**

Primary Specialty	Secondary Specialty	Number	Location Categories
Geriatrics	General Medicine	2	Metropolitan
General Medicine	Geriatrics	1	Metropolitan
Rheumatology	Occupational Medicine	1	Metropolitan

Source: Victorian Department of Human Services

There are 13 registrar training positions in rehabilitation medicine in Victoria. These include 11 positions in acute hospitals and two in aged care facilities, one of which is unfilled. The Aged Care Division of the Victorian Department of Human Services perceives there to be a significant undersupply of consultants in rehabilitation medicine in the public sector.

The report of the Metropolitan Hospital Planning Board in late 1995 noted the need for general rehabilitation services in each geographic network. The report noted, however, that specialist rehabilitation services, including amputee services, traumatic and non-traumatic spinal cord injury, head injury and burns, require considerable expertise and volume to ensure high quality, cost effective services. Projected demand for the rehabilitation services was predicted by the report to rise by approximately 8 % between 1993-94 and 2001.

Amputee rehabilitation is currently provided at five hospitals in the Melbourne metropolitan area, while specialist services for traumatic spinal cord injury are currently provided through the Austin and Repatriation Medical centre with some paraplegia and quadriplegia cases are also being seen at the Caulfield Campus of the Alfred Healthcare

Group.

The Victorian Department of Human Services has developed a document to determine which hospitals should be funded for rehabilitation services. This represents an attempt to separate out specialist rehabilitation services from palliative care, assessment/post acute/emergency respite care or interim care, and psychiatric services programs. Data was provided by the Victorian Department of Human Services which shows that in 1995-96 there were 19,796 separations identified as rehabilitation. This is equivalent to 1 separation per 441 people in Victoria or 0.4% of the population had a rehabilitation separation as is shown in Table 13. Admissions to hospital are only one aspect of rehabilitation care and excludes prevention, primary care and community long term care.

**Table 13: Victoria, rehabilitation beds, separations, patient days and average length of stay, 1995-96**

Service	Rehab. beds	Separations	Patient days	ALOS
Total designated rehabilitation	945	12,075	293,835	24.3
Total other rehabilitation		7,721	26,251	3.4
Total rehabilitation	945	19,796	320,086	16.2

Source: Department of Human Services, Victoria

Victoria is currently working to an unpublished draft model for a regional geriatric service, based on a catchment area of approximately 15,000 people aged 70 years and over. The model is based on a set of quantitative and qualitative resource distribution benchmarks and a number of different service components:

- general hospital acute geriatric units: to provide specific general medical unit beds for elderly people, within the area to geriatric service system. Between 10 to 30 beds should be available in each general hospital. Medical staff of the acute geriatric unit will consult in other wards of the hospital, the emergency department and maintain an outpatient clinic;
- assessment and rehabilitation units: beds in the unit would be used for fast and slow stream rehabilitation. In the interim, an acceptable bed to population ratio for the regional geriatric service is seen to be 6.4 beds per thousand people 70 years of age and over, including the acute general unit beds within the general hospital. The assessment and rehabilitation unit should be allowed around 4 beds per thousand people 70 years of age and over; and
- community rehabilitation centres: provide community based access to diagnostic and treatment programs with an emphasis on rehabilitation. The interim ratio of 3.5 places per 1000 for the 70 years and over correlates with the resource benchmark

for inpatient services and is to be reviewed in 1997-98.

In Victoria distribution benchmarks are as yet unresolved except in metropolitan regions. A detailed document is in preparation and will describe the optimal use of rehabilitation resources and distribution in Victoria and will be completed by July 1997.

### *Queensland*

In Queensland public hospitals there are 13 units that are designated rehabilitation inpatient units, although the extent to which each is providing active rehabilitation varies. Table 14 below presents a profile of the designated rehabilitation units and the expected standard number of full time employment medical staff as per the AFRM. It should be noted that, although it appears that the Queensland rehabilitation units have medical staffing consistent with the AFRM standard, in fact the medical officers attached to the units mostly have wider responsibilities, and in particular responsibilities for geriatric services.

**Table 14: Profile of Queensland rehabilitation units, 1996**

<b>Region/District Designated unit</b>	<b>Number of beds</b>	<b>Medical FTE (actual)</b>	<b>Medical FTE (expected under standard)<sup>a</sup></b>
Royal Brisbane	30	2.4	1.2
Prince Charles	22	2	0.9
Princess Alexandra <sup>b</sup>	144	14.7 (incl. 5 registrars, 3 residents)	4.0
Queen Elizabeth II	26	4 (incl. 1 resident, 1 registrar)	1.0
Royal Children's	8	0.5	0.3
Ipswich	23	1	0.9
Gold Coast	25	na	1
Gympie	12	0.3	0.5
Redcliffe	17	0.5	0.7
Nambour	24	2	1.2
Toowoomba	20	2 (includes 1 resident)	0.8
Rockhampton	18	0	0.7
Townsville	12	0	0.5

a - AFRM, Standards for Rehabilitation Medicine Services in Public and Private Hospitals (1995) General rehabilitation standard used-1 rehabilitation specialist per 25 patients; total of 10.8 allied health staff per 25 patients; b - includes specialist units

Source: A Rehabilitation Strategy for Queensland Health

The most striking deficiency in rehabilitation services in Queensland is the complete absence of inpatient rehabilitation beds or outpatient rehabilitation services, under the direction of a Fellow of Rehabilitation Medicine. Medical input in most Queensland rehabilitation services is provided almost exclusively by geriatricians and medical officers with an interest in rehabilitation. The specialists units at Princess Alexandra Hospital and the spinal unit at Royal Children's Hospital are the two exceptions.

A 1996 report produced by Ernst and Young, Queensland Health Rehabilitation, compared Queensland with New South Wales by using, on clinical advice, a series of 42 AN-DRGs which would be expected to respond to a rehabilitation treatment. The report compared the length of stays for these AN-DRGs, between Queensland and New South Wales. It found that almost without exception, Queensland public hospitals have a longer length of stay for those AN-DRGs selected, with most more than 50% longer lengths of stay than New South Wales.

The report highlighted that the impact of not having adequate rehabilitation services is a '>>false saving' for Queensland Health. The report concluded that the existing rehabilitation services are unevenly distributed and staffed at below accepted national standards, reflecting the absence of consistent planning standards and a historical lack of priority given to the development of rehabilitation services in Queensland.

#### *South Australia*

The number and distribution of rehabilitation beds in South Australia is shown below.

**Table 15: Number and distribution of rehabilitation beds (funded as rehabilitation specific), South Australia, 1996**

<b>Hospital</b>	<b>Number of beds</b>	<b>Principal medical specialist</b>
Repatriation General Hospital	35	Geriatrics+Rehabilitation
Julia Farr Services	40	Rehabilitation
Flinders Medical Centre	6 <sup>a</sup>	Rehabilitation
Hampstead Centre	93 <sup>b</sup>	Rehabilitation+Orthopaedic

a - in the process of being established

b - 25 stroke/geriatric/medical, 25 spinal injury, 12 amputee, 31 orthopaedic.

Source: South Australian Health Commission

Other hospitals where rehabilitation services are provided but where there are no designated beds include Noarlunga Health Service, Women’s and Children’s Hospital, North West Area Health Service, Royal Adelaide Hospital. Services include non intensive rehabilitation, multidisciplinary therapy and outpatient programs for amputee and musculoskeletal problems. The proportion of rehabilitation services that are provided in a community or outpatient setting vary, for example, the Hampstead Centre provides 99.9% of its services in an inpatient setting, but in paediatric rehabilitation at least 95% of rehabilitation services are in community or outpatient settings.

Rehabilitation separations for South Australia are examined below in Table 16 as an indicator of service requirements, and show that between 1995-1996 there has been an 92% increase in separations in public hospitals.

**Table 16: South Australian public hospitals designated rehabilitation separations, 1995 and 1996**

<b>Year</b>	<b>Separations</b>	<b>Occupied bed days</b>	<b>Average length of stay</b>
Jul 95 - Sep 95	344	9118	26.5
Oct 95 - Dec 95	437	12382	28.3
Jan 96 - Mar 96	564	14008	24.8
Apr 96 - Jun 96	662	15870	24.0

Source: South Australian Health Commission

Using these indicators the South Australian Commission has determined the following supply requirements for consultants in rehabilitation medicine to the year 2007:

- an additional two paediatric rehabilitation consultants and one advanced rehabilitation trainee to cover state needs for the Women’s and Children’s Hospital;
- two rehabilitation consultants in medicine for Repatriation General Hospital;
- one additional rehabilitation consultant in medicine in North Western Area Health Service; and
- three rehabilitation consultants in medicine and a further one orthopaedic and amputee rehabilitation specialist for the Hampstead Centre.

### *Western Australia*

In Western Australia there are five consultants in rehabilitation medicine (that is with the FAFRM) employed in the public sector, one of whom has a part-time private practice. Many of the rehabilitation services are delivered by other specialists. Estimates indicate that approximately 70% of the work within geriatric rehabilitation (or restorative) units is concerned with rehabilitation. The overlap with geriatric medicine in Western Australia is best demonstrated in Table 17, which shows the distribution of beds used for the purpose of rehabilitation/geriatric services.

In the Royal Perth Hospital Shenton Park Campus, the rehabilitation beds are distributed as shown in Table 18 below. The Hospital's Director of Rehabilitation Services is also a geriatrician.

**Table 17: Distribution of rehabilitation/geriatric beds in Western Australia and principal medical specialist, 1996 \***

Hospital	Number of rehab. beds	Principal medical specialist
<i>Adult General</i>		
Mt Henry Hospital	23	Geriatrician
Bentley Hospital	38	Geriatrician
Armadale Hospital	24	Geriatrician
Swan Hospital	24	Geriatrician
Osborne Park Hospital	40	Geriatrician
Fremantle Hospital <sup>a</sup>	36	Geriatrician
Sir Charles Gairdner Hospital	56	Geriatrician
Royal Perth Hospital, Shenton Park Campus	122	<i>*various (see Table 18)</i>
<i>Paediatric</i>		
Princess Margaret Hospital <sup>b</sup>	4	Rehabilitation specialist

a - number of beds subject to review; b - beds may vary depending on need

Source: Health Department of Western Australia

**Table 18: Distribution of rehabilitation beds Royal Perth Hospital, Shenton Park Campus, 1996**

Type of patient	Number of beds	Principal medical specialty
Stroke	26	neurologist
Head Injured	29	rehabilitation
Fractured Hip	14	geriatrician
Spinal injury	30-40	rehabilitation+orthopaedics
Amputee	5	orthopaedics
Rheumatology	13	rheumatologist
Other	5	-
<b>Total</b>	<b>122</b>	<b>-</b>

Source: Health Department of Western Australia

The Royal Perth Hospital, Shenton Park, is currently Western Australia's only tertiary adult rehabilitation site. At Sir Charles Garidiner Hospital and Fremantle Hospital, it is essentially geriatric rehabilitation that is practised because most of the patients requiring rehabilitation are elderly. Geriatric rehabilitation also takes place in the non teaching metropolitan hospitals. There are no formal units in the private sector nor in the rural areas, although the special interest of some specialists in rehabilitation means that some rehabilitation services would be provided as part of their care regime.

A home based rehabilitation service operates out of Shenton Park Campus providing an early discharge service for patients. The medical component of this service is provided in the hospital outpatient or general practice setting.

**Table 19: Trends in adult rehabilitation services at Royal Perth Hospital, 1991-92 to 1995-96**

Rehabilitation Division	1991-92	1992-93	1993-94	1994-95	1995-96
Number of cases discharged <sup>a</sup>	1709	1863	1960	1990	1821
Number of bed days	43,677	47,789	45,638	39,647	37,933
Average length of stay	25.6	25.7	23.3	19.9	20.8
Outpatient occasions of service-specialist medical	na	na	na	7805	7590

a - excludes amputee services because figures not available for all years

na - not applicable

Source: Health Department of Western Australia

Specialist paediatric rehabilitation is performed at Princess Margaret Hospital and concentrates on: neuro-rehabilitation following brain trauma, cerebral palsy, spinal cord injury and congenital spinal cord dysfunction. This unit has also had a historical central diagnostic responsibility for autism.

The current practice in Perth would indicate that geriatricians are the primary coordinators of care for the geriatric patient population in need of rehabilitation. Also, a number of other specialist disciplines, in addition to rehabilitation medicine, are well established in meeting the rehabilitation needs of defined classes of patients. Accordingly, in planning terms, the Health Department of Western Australia has recommended that it would appear desirable not to restrict the workforce for rehabilitation medicine to those with the FAFRM.

### *Tasmania*

Rehabilitation services in Tasmania are provided by the State government and private hospital and outpatient facilities across the three Tasmanian health regions.

The Southern Region provides:

- 27 inpatient aged care rehabilitation beds through the major teaching hospital in Hobart. This involves geriatrician management and a multi-disciplinary team.
- an Outpatient Aged Care Rehabilitation Unit managed by the State health department provides multi-disciplinary rehabilitation programs for orthopaedic, neurology, and amputee services for community clients over 60 years of age.
- a Private Rehabilitation Hospital in Hobart offers a mixture of inpatient and outpatient rehabilitation services. These include:
  - (i) inpatient services: a 27 bed level three rehabilitation hospital catering for public funded, private and compensation cases. The 1996-97 data shows that for public cases the number of bed days is 858 (16% of total); for private cases the number of bed days is 2859 (54% of total); and, for compensable cases the number of bed days is 1548 (30% of total). This service covers traumatic brain injury; stroke; spinal; amputee and neurology. Medical services includes employment of a rehabilitation registrar and two visiting medical officers and multi-disciplinary allied health staff.
  - (ii) outpatient services : are State government funded and private services for adults and children available. Outpatient services involve a rehabilitation registrar, visiting medical officers and a paediatrician along with multi-disciplinary allied health.
- State government funding is provided for a range of community based outpatient rehabilitation services provided from community health centres and district hospitals in the Region. There are usually GPs and allied health professionals involved.

A private hospital in Hobart has recently opened a 15 bed inpatient rehabilitation ward covering neurology, musculo-skeletal, and orthopaedic. Medical services are provided by a gerontologist with plans to involve a rehabilitation specialist in the near future. Other services include multi-disciplinary allied health professionals. A small amount of outpatient service is provided and may expand in the near future.

The North West Region provides hospital based rehabilitation services through the following sites:

- the Burnie site where there are 20 beds for rehabilitation services, which are now integrated into the 160 bed service. The service is provided through a case management model.
- the Mersey Community Hospital, which is contracted to provide rehabilitation services at level three according to the Tasmanian Hospital Role Delineation document.
- non specialist general practitioners type rehabilitation services are provided through the district hospitals.
- rehabilitation services through the Aged and Disability Support Program in the North West, with a trend to move more services to this community based service.

The Northern Region provides:

- inpatient rehabilitation services through a 16 bed rehabilitation ward in the State Government managed hospital in Launceston. The ward provides services for orthopaedic, neurology, spinal and amputee patients. Medical services are provided by a geriatrician and a medical director with rehabilitation service experience along with multi-disciplinary allied health professional services.
- outpatient rehabilitation services in multi-disciplinary allied health professional teams, with medical co-ordination of case meetings and outpatient medical clinics connected with the major hospital and from a variety of community health centres and district hospital locations. These often involve general practitioners for medical coverage.

### *Northern Territory*

An eight bed rehabilitation unit opened in the Northern Territory in June 1995. In the 1995-96 financial year, the Northern Rehabilitation Network was responsible for the care of 116 inpatients and 218 outpatients. This throughput represented an overall increase by 278% on the previous year. This increase may be attributed to the presence of an inpatient ward, the employment of a consultant in rehabilitation medicine who was able to visit communities, and the higher profile of rehabilitation services since its establishment.

At present, there is only one permanent consultant in rehabilitation medicine employed by Territory Health Services. Although based at Royal Darwin Hospital, the specialist visits remote communities such as Katherine, Gove, Port Keats and Peppiminati. There is no rehabilitation medicine registrar in the Northern Territory, which is a significant issue for the Northern Rehabilitation Network when the rehabilitation specialist is away on community visits, conference leave or recreation leave.

Projected needs are such that two full time consultants in rehabilitation medicine and two full time rehabilitation medicine registrars will be required to be based in Darwin in the near future in order to provide adequate rehabilitation medicine services. Clients from remote areas of the Northern Territory may be brought in to Darwin to attend the Northern Rehabilitation Network for a 'block' of therapy. Issues which arise from this procedure include:

- reticence of Aboriginal people to remain inpatients for a rehabilitation program;
- limited availability of appropriate interpreters;
- limited appropriate accommodation for carers; and
- lack of appropriate accommodation, that is wheelchair accessibility. At present, there is only one wheelchair accessible room in an Aboriginal hostel in Darwin.

These issues also affect the ability to provide outpatient rehabilitation programmes to Aboriginal people who have been inpatients of the rehabilitation service. The tendency is for them to return to their communities on discharge from the rehabilitation ward.

Case managers for remote area clients liaise with the appropriate communities and Rural Health team regarding rehabilitation programmes and plan for re-entry into the community. This is, however, a difficult process due to the geography of the Northern Territory, limited resources in communities and cultural differences.

The availability of slow stream rehabilitation services in the Northern Territory is extremely limited. Clients discharged from the Northern Rehabilitation Network in the Darwin Urban region are unable to receive much in the way of follow-up therapy. Referrals are made to the Community Health Adult Team, which employs a physiotherapist and occupational therapist. There is no dedicated Adult Team speech pathologist. There are also huge gaps in slow stream service provision for children and adults in a younger age bracket.

A rehabilitation service was established at Alice Springs in August 1995, and services the area from Elliot in the north, to communities over the Western Australian, South Australian and Queensland borders. It is currently set up as an outpatient facility; however, plans to incorporate inpatient rehabilitation beds in the existing ward structures does exist. A full time Rehabilitation Specialist position is funded and allocated to this Service. Unfortunately, recruitment has not been successful to date.

#### *Australian Capital Territory*

The Canberra Hospital is the major trauma and tertiary care facility in the Australian Capital Territory and surrounding region. The hospital has 30 rehabilitation beds in one ward. The Australian Capital Territory rehabilitation service based at The Canberra Hospital provides both inpatient and outpatient rehabilitation services based on multidisciplinary clinical streams. These are the acquired brain injury, neuro rehabilitation, musculoskeletal and prosthetic orthotic streams. It is envisaged that over the next year, rehabilitation services will experience significant change and development opportunities with:

- the redevelopment of the rehabilitation ward at The Canberra Hospital from a 30 bed traditional hospital ward to a 15 bed purpose designed ward for rehabilitation clients with acute care needs;
- the building and establishment of a 15 bed independent living unit for those in the transition between hospital and home;
- the establishment of a 20 bed ward for provision of convalescence and slow stream rehabilitation for hospital patients;
- the implementation of an outreach service for people with acquired brain injury and the establishment of two cottages providing community based accommodation and support for eight people with acquired brain injury.

## ADEQUACY OF THE CURRENT REHABILITATION MEDICINE WORKFORCE

There are a number of indicators of the adequacy of a medical workforce. No single measure can provide a definitive assessment, however by examining each it is possible to gain an indication of whether a workforce is adequately meeting current demand or if there is a significant shortfall or oversupply. The indicators chosen by the Working Party were:

- consultant to population ratio (CPR);
- public hospital vacancies;
- waiting times for consultations; and
- perceptions of the adequacy of the current workforce.

### Consultants in Rehabilitation Medicine : Population Ratio

To maintain a high level of ongoing experience and to ensure that consultants in rehabilitation medicine perform a reasonable volume of work, the AFRM suggests that the CPR for Australia should be 1:50,000 (Doherty 1988).

Table 20 indicates that the current consultants in rehabilitation medicine to population ratio is 1:108,220, well below the recommended benchmark.

**Table 20: Consultants in rehabilitation medicine: population; by selected years, 1988, 1993 and 1996**

Year	Consultants in rehabilitation medicine	Population ('000)	Population per consultant, 1:	Consultants per 100,000 population
1988	128	16,814.4	131,363	0.76
1993	152	17,843.3	117,390	0.85
1996	169	18,289.1	108,220	0.92

Source: AFRM and ABS

Table 21 highlights the considerable variation in the specialist to population ratios between the States and Territories, ranging from 1:65,160 in New South Wales to 1:419,338 in Queensland.

**Table 21: Consultants in rehabilitation medicine:population; by State/Territory, 1993 and 1996**

Year	NSW	Vic	Qld	SA	WA	Tas	ACT	NT
<b>1993-94</b>								
Rehab. medicine	81	43	14	10	4	0	0	0
Pop. (>000)	6008.6	4462.1	3112.6	1461.7	1677.6	471.7	298.9	168.3
CPR, 1:	74,810	103,769	222,329	146,170	419,400	-	-	-
<b>1995-96</b>								
Rehab. medicine	95	44	8	11	5	2	3	1
Pop. (>000)	6,190.2	4541.0	3354.7	1479.2	1762.7	473.7	307.5	177.1
CPR, 1:	65,160	103,205	419,338	134,473	352,540	236,850	102,500	177,100

1995-96 population is an estimate.

Source: AFRM and ABS

On the basis of CPRs, Australia and every State/Territory is currently under resourced in consultants in rehabilitation medicine. Even New South Wales, which has by far the best endowment of consultants in rehabilitation medicine, is under resourced when compared to the benchmark.

### **Public Hospital Vacancies**

The AMWAC survey of public hospital specialist vacancies conducted in October 1996 found there were only seven rehabilitation medicine vacancies; comprising five staff specialist vacancies and two visiting medical officers vacancies. Victoria had the most vacancies with three. Three of the vacancies were in rural areas. There were no temporary resident doctors filling specialist rehabilitation vacancies.

These indicators represent a 4% level of vacancy of the current practising consultants in rehabilitation workforce of 169. This level would generally not be considered a serious level of vacancy. However, the Working Party considers that this is an underestimate of the vacancy rate that currently exists in public hospitals. Anecdotal evidence is that there are numerous positions available for consultants in public hospitals, however, because there are not the number of consultants available to fill these positions, vacancies are not advertised, and therefore are not recorded in the vacancy survey.

### Consultation Waiting Times

Another measure of some value in assessing the adequacy of a workforce is waiting times. Waiting time is a complex issue affected by a number of factors including the overall staff to population ratio, facility size and efficiency, diagnostic infrastructure, referral patterns and the effectiveness of organisation and supervision. Particularly in rehabilitation, where practitioners also require the services available from experienced support teams waiting times, cannot be looked at in isolation.

Tables 22 and 23 below show the average waiting times by State/Territory for a standard first consultation and a urgent consultation with a rehabilitation specialist.

**Table 22: Average waiting times for a standard first consultation (days); by State/Territory and by public outpatient and private rooms, 1996**

State/Territory	Public outpatient	Private room
New South Wales	19	11
Victoria	14	16
Queensland	17	10
South Australia	52	25
Western Australia	49	22
Tasmania	7	7
Northern Territory	56	56
<b>Australia</b>	<b>22</b>	<b>14</b>

Source: AMWAC/AFRM survey of consultants in rehabilitation

Average waiting times for a standard first consultation are longest in South Australia, Western Australia and the Northern Territory, and this is probably due to the low number of consultants in these States/Territory.

Interestingly however, Queensland's which has a higher SPR (1:414,575) than both South Australia (1:134,845) and Western Australia (1:349,380) has an average waiting time that is less than half those experienced in either of these two States.

**Table 23: Average waiting time for a urgent consultation (days); by State/Territory and public outpatient and private rooms, 1996**

State/Territory	Public outpatient	Private rooms
New South Wales	6	2
Victoria	2	3
Queensland	1	1
South Australia	5	9
Western Australia	17	6
Tasmania	1	1
Northern Territory	1	1
<b>Australia</b>	<b>5</b>	<b>3</b>

Source: AMWAC/AFRM survey of consultants in rehabilitation

The waiting times for an urgent consultation in private rooms are less than that for a public outpatient consultation (Table 20), except for South Australia. One explanation for this may be that in South Australia, consultants in rehabilitation medicine with private consulting rooms may have a higher demand with patients willing to wait for a private consultation.

The Working Party suggested that in a low volume specialty such as rehabilitation medicine, waiting time as a measure of demand may not be valid. This is because the role of rehabilitation medicine for particular patients may not be understood by the wider community and the rehabilitation medicine inpatient service is not being fully utilised or marketed. Until rehabilitation is fully utilised in the wider community and awareness of the different types of services is known, current waiting times may not be representing the true demand. As awareness grows for rehabilitation services, demand will increase putting pressure on an already under resourced specialty.

### **Consultants' in Rehabilitation Medicine Perceptions on Service and Workforce Levels**

Respondents to the AMWAC/AFRM survey highlighted certain restrictions on the work they could do in the hospitals in which they worked. The most common restrictions were related to budget restrictions, which ultimately led to inadequate support and infrastructure (50%) and inadequate provision of nurses/other allied health staff (48%) for both inpatient and outpatient services. These issues were common in all States/Territories with similar levels being expressed.

Other concerns raised by respondents related to limits in access to beds; the desire to do more sessions in the public hospital system if resources were made available; the possibility of more individuals leaving the public hospital system in the future due to the under resourced rehabilitation services; consultants being overworked; long waiting times for rehabilitation services due to the inadequate rehabilitation and hospital infrastructure available to support these services or a lack of consultants especially in rural/remote areas; inadequate remuneration for consultants in rehabilitation medicine compared to other specialties; and no present career structure or recognition/respect of the specialty by other specialists. Responses to the AMWAC/AFRM survey are detailed in Appendix C.

### **Conclusions on Adequacy of the Current Rehabilitation Medical Workforce**

All indicators suggest there is a shortage of consultants in rehabilitation medicine; no State/Territory is near the recommended consultant to population benchmark; waiting times are comparatively long and the public hospital vacancy rate is significant. The workforce also suffers from a maldistribution problem.

The Working Party believes the shortage of consultants in rehabilitation medicine is unlikely to improve in the short term, particularly given the shortage of trainees interested in training in rehabilitation medicine. Accordingly, this issue needs to be addressed by government and the Faculty as a priority.

One fact that limits the ability of the Working Party to quantify the shortfall in consultants in rehabilitation medicine is that there has been a lack of clarity in who was providing specialist rehabilitation services. Rehabilitation services are provided by a range of other specialists in Australia in response to the current medical workforce shortfalls. There is clearly a difference between the optimum of rehabilitation services being provided by trained consultants in rehabilitation and the State/Territory health departments' need to provide a rehabilitation service to their population. This situation provides limited scope for dramatically increasing the number of consultants in the rehabilitation medicine workforce, despite the obvious shortages. In any case, the limiting factor at this point would seem to be the number of doctors considering training in rehabilitation medicine. Until these numbers are increased, shortages appear likely to continue. The lack of rehabilitation infrastructure in some States/Territories appears certain to perpetuate this situation.

## REQUIREMENT INDICATORS

The Working Party expects that the demand for rehabilitation services will increase due to variety of factors, including:

- population increases;
- age structure of the community;
- prevalence of disability and handicap in the community;
- incidence of injury;
- reduced length of stay in acute care settings;
- health care trends;
- changes in technology and options for service provision; and
- improved linkages between hospital care, community based services and vocational rehabilitation services through substitution of services.

In addition, as rehabilitation services establish greater credibility, an increasing number of hospitals can be expected to elect to appoint consultants in rehabilitation medicine and establish rehabilitation inpatient and outpatient services.

### Population

Australia has a growing and ageing population. In 1995-96, Australia's population was estimated at 18.29 million (ABS 1997). The ABS estimates that population will reach 19.17 million by 2001 and 20.09 million by 2006 (ABS 1994). Between now and 2006 there is a projected 1.2% growth per annum.

ABS estimates that the median age of the total population will rise from 33.1 years in 1993 to between 39.4 and 41.8 years in 2041. As a proportion of the total population, those aged 65 and over represented 11.7% (2.1 million) in 1993, and will increase to around 12.7% (2.56 million) in 2006. (ABS 1994).

Increasing longevity may be associated with prolongation of the period of morbidity or disability to death. Better management and prevention of acute illnesses is associated with a higher prevalence of chronic illness and disability, as individuals are able to survive longer in this state. With the projected population increases, especially in the aged, the demand for rehabilitation services should be greater.

### Ageing of the Population

Between 1996 and 2006, it is estimated that the population aged 65 and over will increase by 19%. The population aged 75 years and over will increase by 36.7%. The population aged 85 years and over will increase by 57.6%. Projections are shown in Table 24.

**Table 24: Australian population projections persons aged 65 years and over, 1996 to 2006**

Age group (years)	1996	2001	2006	% increase 1996-2006
65 - 69	691,350	665,300	769,900	11.4
70 - 74	602,450	627,900	608,600	1.0
75 - 79	426,477	510,900	537,700	26.1
80 - 84	283,739	322,500	391,400	37.9
85 +	201,447	258,600	315,900	56.8
<b>Total 65 and over</b>	<b>2,205,373</b>	<b>2,385,200</b>	<b>2,623,500</b>	<b>18.9</b>
% of total pop.	12.1	12.5	13.1	-

Source: ABS

The growth in the older population, combined with the heavy utilisation of medical services by this group, will lead to a large increase in the demand for medical services by older people as a whole.

Moreover, wider dissemination of current understanding of the value of early rehabilitation, concurrently with acute treatment (eg for stroke and hip fracture patients), is likely to see an increase in the practice of rehabilitation medicine in acute care settings. As well, early discharge practices will need to be complemented by a greater use of community and home-based rehabilitation services.

The ability to discharge early from hospital may be greater for younger individuals with single illnesses. Older patients are more likely to have more complex illnesses, have pre-existing disability, to live alone and to have fewer social supports. These factors render them more resistant to early discharge strategies. As a result, the older population are occupying a greater proportion of hospital beds than would be predicted by demographic changes alone. Projections prepared for the National Health Strategy suggest that the absolute number of hospital beds required in the future will decline for all age groups except the 75 years and above age group, which will increase in absolute terms (Macklin 1991).

The 1986 the Nursing Homes and Hostels Review advocated that residential care programs be enhanced, and further, that aged and disabled people should as far as possible be supported in their own home/communities, and only be supported by residential services where other support services are not appropriate to meet their needs and as far as possible, services should promote rehabilitation and restoration of function.

The recent Commonwealth Aged Care Structural Reform Package announced in 1996

confirmed the trend towards ageing in place and acknowledged the need for residential care facilities to respond to the complex care needs of residents.

This approach is in keeping with the philosophy of rehabilitation medicine and increasingly requires management of disability in the community. This will lead to a greater role for general practitioners, who in turn are likely to depend on rehabilitation specialist output. As the population ages, this will become more significant and will require greater resources to be made available both in workforce requirements and the funding of services.

A number of indicators of rehabilitation medicine service requirements for older people have been examined: AIHW projections of hospital separations and bed days for the population aged 65 years or more, and Aged Care Assessment Team (ACAT) assessments for the population aged 65 years or more.

#### AIHW Projections of Hospital Separations

The hospital separations for the population aged 65 years and over are projected to increase by 21.9% from 1995-96 to 2005-06. The separations are estimated to increase by 24.6% for males and increase by 19.1% for females. Hospital bed days for those aged 65 and over are expected to increase by 27.2% from 1995-96 to 2005-06 (Table 25). The projections were determined using the 1992-93 incidence of the particular characteristic in the population was determined for each five yearly age group by sex, and applying this incidence rate to the estimated population of that group in each of the projection years.

**Table 25: Persons aged 65 years or more; projections of hospital separations, Australia, 1995-96 to 2005-06**

Age group (years)	1995-96	2000-01	2005-06	% increase 1996-2006
65 – 69	313,352	301,690	349,646	11.6
70 – 74	329,439	344,704	334,716	1.6
75 – 79	267,086	321,784	340,506	27.4
80 – 84	191,730	218,626	266,675	39.1
85 +	138,945	179,937	220,473	58.6
<b>Total</b>	<b>1,240,552</b>	<b>1,366,741</b>	<b>1,512,015</b>	<b>21.9</b>

Note: projections are based on 1992-93 data

Source: AIHW, hospital and morbidity data, 1992-93; ABS, Australian Demographic Statistics, 3101.0; ABS, Projections of the Populations of Australia, States and Territories, 1995 - 2051, 3222.0

#### ACAT Projections

DHFS ACAT assessment data compiled from the six monthly reports provided by each State/Territory, are shown in Table 26. It is estimated that ACAT assessments will increase by 34.9% between 1995-96 to 2005-06.

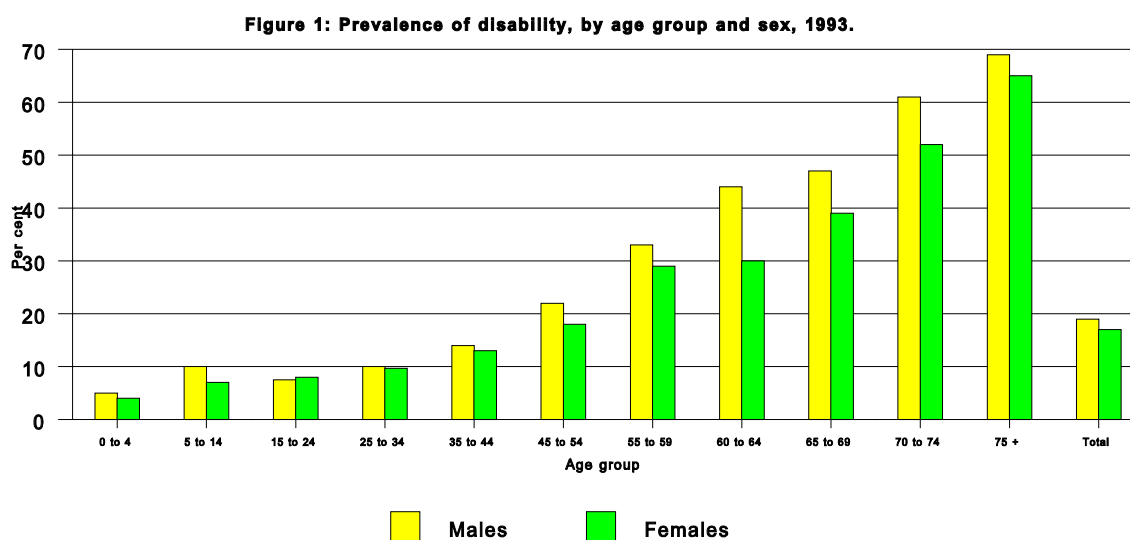
**Table 26: Persons aged 65 years or more; projections of ACAT assessments, 1995-96 to 2005-06**

Age group (years)	1995-96	2000-01	2005-06	% increase 1996-2006
65 - 69	9,678	9,309	10,772	11.3
70 - 74	19,075	19,855	19,237	0.8
75 - 79	29,638	35,421	37,185	25.5
80 - 84	39,066	44,345	53,693	37.4
85 +	46,733	60,308	73,673	57.6
<b>Total</b>	<b>144,191</b>	<b>169,239</b>	<b>194,561</b>	<b>34.9</b>

Source: DHFS, ACAT Assessments 1992-93, unpublished data; ABS, Australian Demographic Statistics, 3101.0; ABS, Projections of the Populations of Australia, States and Territories, 1995 - 2051, 3222.0

### Prevalence of Disability and Handicap

Disability and handicap is strongly related to age. The rates for both increase rapidly for those aged 45 years and over, for males and females. The prevalence of disability by age group and sex is shown in Figure 1.



The rates for disability without handicap reach a maximum for persons aged 70-74 years and then show a decrease, as older persons are more likely to have a handicap resulting from their disability.

Arthritis and other musculoskeletal disorders are the most commonly reported main disabling conditions, affecting 4.9% of the total population and 3.3% of the population aged under 65 years. Diseases of the ear are reported as the second most frequently reported main disabling condition, affecting 2.6% of the total population. Respiratory disease are reported as a main disabling condition by 1.7% of people, more commonly among people age 5 to 14 years or aged 65 years and over. An estimated 1.6% of the population reported an intellectual disability or other mental condition and 0.4% had psychiatric conditions (AIHW 1996a).

The most common disabling conditions among people aged 0-64 years were diseases of the ear (1.8%), other musculoskeletal disorders (1.8%), and intellectual and 'other mental' condition (1.6%). Some 14.2% of the total population reported they had a disability which caused a handicap. Females aged 65 years and over have much higher rates of profound and severe handicap than do males. The proportion of people reporting a profound or severe handicap was slightly over 4% of the total population aged 5 years and above, or 2.6% of those aged 5 to 64 years (AIHW 1995). It should be noted that these disability and handicap prevalence are self-reported and not based on clinical assessment.

The rates of severe handicap were obtained from the ABS, Survey of Disability, Ageing and Carers conducted from February to April 1993 (unpublished data). The rate of severe and profound handicap is estimated to increase by 30.3% from 1995-96 to 2005-06, as is indicated in Table 27.

**Table 27: Persons aged 65 years or more; projections of rate of severe and profound handicap, 1995-96 to 2005-06**

Age group (years)	1995-96	2000-01	2005-06	% increase 1996-2006
65 - 69	50,531	48,567	56,117	11.1
70 - 74	71,030	73,608	71,186	0.2
75 - 79	67,653	80,561	84,269	24.6
80 - 84	92,782	105,099	126,812	36.7
85 +	107,821	138,977	169,608	57.3
<b>Total</b>	<b>389,816</b>	<b>446,812</b>	<b>507,991</b>	<b>30.3</b>

Source: ABS, Survey of Disability, Ageing and Carers, 1993, unpublished data ; ABS, Australian Demographic Statistics, 3101.0; ABS, Projections of the Populations of Australia, States and Territories, 1995 - 2051, 3222.0

## Incidence of Injury

Generally, there has been a steady decline in the rate of work related and road traffic related incidents in over the past 20 years. These movements have occurred because of a number of measures such as the Occupational Health and Safety Act, the Workers Compensation Act, seat belt campaigns, random breath testing, road speeding rules and programs to eliminate road black spots.

Although there has been a significant decline in the rate of fatalities on the roads, there has been a concomitant improvement in handling of trauma, particularly since the early 1980s, resulting in a higher survival rate for seriously injured people.

Injury has been recognised as a major public health issue as it offers considerable potential for prevention, and as such has been nominated by the National Better Health Program as one of its five priority areas. Prevention is also the key issue in helping to minimise the costs in workers compensation.

Many respondents of the AMWAC/AFRM survey, however, believed that in the area of injury, there is a need for development of rehabilitation for those of working age. The current approach for providing rehabilitation services for the working group is fragmented. Respondents indicated that specialised services such as the Brian Injury Rehabilitation Services and Spinal Injury services are generally well developed; however, there are unmet needs for working aged rehabilitation services, particularly relating to services for young trauma patients and young stroke patients. Respondents concluded that those of working age can experience difficulties accessing community based rehabilitation services, which are usually focused more on geriatric age groups, and as a consequence, the working age group can be restricted to accessing outpatient based rehabilitation services.

### **Health Care Trends**

The increase in day surgery, day procedures, ambulatory care and particularly the recognition of the cost of acute care are all impacting on the general trend for shorter length of stay. With the reduction of time available for post acute care, this will impact on rehabilitation services, as patients will be referred earlier, increasing the workload in consultation and management of disability within the community.

As prevalence and incidence of chronic illnesses and resultant disabilities increases as a part of the aging process, it is crucial to take these figures into account when planning services and workforce requirements. For example, the spinal cord annual incidence since 1988 suggests between 300 and 400 new cases are added to an extant population of about 6000 (Walsh 1988). Surveillance data for the years 1986 to 1991 conducted by QuadCare in 1992 confirm this estimate.

The incidence of stroke in Australia appears little different from that for several other

Western countries. Approximately 37,000 people suffer a stroke each year in Australia, about 50% are over the age of 75 years. The crude annual incidence for first ever stroke age standardised is 132 per 100,000 for males and 77 per 100,000 for females (Anderson 1993).

Managing the course of chronic illness and restoring the already compromised patient to improve function is the emerging challenge for the health system. With the increasing prevalence of disabling conditions, the demand for rehabilitation services will develop, with the provision of broader and more sophisticated services, and this could involve a wider involvement of general medical practitioners and allied health professionals specialising in rehabilitation.

### **Consultants' in Rehabilitation Medicine Views on Future Requirements**

Respondents to the AMWAC/AFRM survey were asked to indicate whether various issues would increase or decrease workforce requirements or have no change; the results are shown in Table 28. The majority of the respondents (90%) indicated that the most significant factor that will increase the rehabilitation workforce requirements is the ageing of the population. The respondents (75%) indicated that patients expectations and/or knowledge will increase rehabilitation medicine workforce requirements. Similarly, 59% of respondents believe that the expectations of other health professionals will increase workforce requirements.

Respondents (65%) also indicated that health outcomes/quality assurance would increase the workforce requirements. This is especially the case with the move towards the comprehensive set of national health goals and targets strategy, which highlights the need for a balance between the preventive, diagnostic, treatment and palliative services to achieve best health outcomes. The focus areas on the agenda include, cardiovascular disease, cancer, injury and primary psychiatry, all of which include in their episode of care a rehabilitation component.

Respondents also indicated that the demand for consultants in rehabilitation medicine will further increase as the trend towards shorter stays in acute hospitals (43%) and the management of patients with disabilities in the community rather than in institutions (55%) will potentially increase.

**Table 28: Consultants' in rehabilitation medicine assessment of issues that will have an effect on rehabilitation medicine workforce requirements over the next ten years**

<b>Issues that will have an effect on rehab. medicine workforce requirements over the next ten years</b>	<b>% increase</b>	<b>% decrease</b>	<b>% stay the same</b>	<b>% no</b>
Ageing of the population	90	5	5	0
Patient expectations/knowledge	75	1	16	8
Health outcomes/quality assurance	63	4	24	10
Expectations of other allied health professionals	59	5	25	10
Geographic maldistribution of rehab services	57	11	20	12
Increased productivity in hospitals	55	9	26	10
The move to more community care	55	12	25	9
Disease patterns	53	4	31	13
Multi-disciplinary team provision	52	5	35	7
Geographic distribution of the population	52	4	33	12
More defensive medicine	45	10	37	7
Technology	44	11	34	12
Increasing emphasis on hospital efficiency	43	20	25	13
Public hospitals contracting services	41	17	28	14
Access to beds, nurse etc.	37	15	31	16
The introduction of managed care	36	20	25	18
Public health resource allocation	33	24	25	18
Changes in work practices	31	16	36	16
Lifestyle changes that improve population health	19	28	45	8
Substitution of rehab. consultants by other health professionals	16	35	35	13
Safer procedural practices	14	30	46	10

Source: AMWAC/AFRM survey of consultants in rehabilitation medicine

## PROJECTIONS OF SUPPLY

### Additions to the Rehabilitation Medicine Workforce

The current number of training positions will produce an average of 16 additional rehabilitation medicine specialists per year from 1996 to 2000 in Australia. This will mean that the workforce can be expected to grow by approximately 3 to 4% per year.

### Work Intentions

Respondents to the AMWAC/AFRM survey were asked a series of questions on whether they intended to reduce their workload over the next ten years; leave the workforce for a period of three months in the next two years; and, when they would retire.

Approximately 53% of respondents intended to reduce their workload over the next ten years. The highest ranking age group that intended to reduce their workload over the next ten was the 51-60 years (18% of respondents), which is to be expected as they approach retirement age. Females in the 31-40 year age group intended to reduce workload (3% of respondents) due to family commitments.

Respondents to the survey who were aged over 50 years were asked what age they intended to retire. Table 29 indicates that 15% indicated the retirement age as 65-70 years of age. Female respondents to the survey made up 22%, of which approximately 10% were over 50 years of age. The majority of females aged over 50 indicated 65-70 age range as retirement age.

**Table 29: Consultants in rehabilitation medicine age of intended retirement; by age group and gender, 1996**

Gender	60-64 years	65-69 years	70-79 years	80 + years	No response
Female	1	2	0	1	20
Male	13	15	3	3	49
<b>Total</b>	<b>14</b>	<b>17</b>	<b>3</b>	<b>4</b>	<b>72</b>
% total	12.7	15.4	2.7	3.6	65.6

Source: AMWAC/AFRM survey of consultants in rehabilitation medicine

### Female Participation in the Workforce

It is expected that the proportion of women in the workforce will increase, as is demonstrated by the increase in the number of female trainees; women represent 18% of the current workforce but 34% of Australian trainees.

Generally, female specialists have a lifetime working contribution which is 75% of the male contribution. For female general surgeons the lifetime contribution is estimated at 68% of the male general surgeon lifetime contribution (AMWAC & AIHW 1996).

### **Provision of Services in Rural and Remote Areas**

Provision of specialist services outside capital cities and major urban areas will continue to be of concern, as there appears to be little incentive to practice in rural areas.

There are also obviously some communities where there is insufficient workload to warrant recruitment of consultants in rehabilitation medicine. In these rural communities, services will need to be provided by visiting consultants in rehabilitation medicine, general practitioners and by general medicine specialists in some areas; or by patients travelling to the specialists in urban areas. It will continue to be important to encourage GPs to obtain, maintain and utilise their skills in rehabilitation medicine to provide some of these services.

An incentive to attract consultants in rehabilitation medicine to rural areas could be achieved through funded outreach rehabilitation teams, consisting of a consultant in rehabilitation medicine and trainee consultant. Trainees would be provided with support and training and the issue of professional isolation that currently exists in rural areas would be reduced. For consultants, it would allow an opportunity to enhance their skills in health related disadvantages suffered by rural and remote communities and the sharing of knowledge and skills to younger colleagues. This outreach team would be responsible for ensuring that their clients have access to a range of services locally and that referral to such services is managed effectively and appropriately.

In rural areas that have a large Aboriginal population, it is important to ensure that services are developed in a co-ordinated manner with other Aboriginal services and in a culturally sensitive way.

The Working Party is of the view that rehabilitation medicine has considerable potential for improving access to health services for Aboriginal people. Rehabilitation services are currently offered in ways which differ from mainstream medical services and are more acceptable to indigenous people as a result. Expansion of inpatient rehabilitation services has important potential for improving access of mainstream medical services by virtue of the improved cultural sensitivity of rehabilitation services to indigenous people.

## Allied Health Professionals and Substitution of Services

A team of allied health professionals is important as they assess and treat a person's illness or injury, with the goal of increasing and maximising their independent and functional recovery. Medical input is essential in this process to ensure that the potential for recovery exists, and the treatment offered is both safe and effective. The input of a consultant trained in rehabilitation medicine should result in the rehabilitation needs of the community being properly addressed, and provide a co-ordinated inpatient and outpatient service.

The AFRM has suggested standards for rehabilitation medicine services in both public and private hospitals and has indicated staff establishment numbers of professional and support staff for the adequate functioning of rehabilitation services. In general, rehabilitation service acceptable staff/inpatient ratios are: medical specialist 1:25, speech pathologist 1:8, physiotherapist 1:8-12, social worker 1:15, occupational therapist 1:8-12, psychologist 1:25, varying according to the nature of the disability as described below in Table 30.

**Table 30: Acceptable AFRM staff:inpatient ratios for a rehabilitation service**

Impairment Group	Medical Spec.	Physio.	Occupat. Therapy	Speech Therapy	Social Work	Psychol.
General neurological (strokes, MS etc)	1:16	1:8	1:8	1:8	1:18	1:18
Traumatic brain injuries	1:16	1:6	1:6	1:8	1:8	1:10
Spinal injuries	1:16	1:8	1:5	*	1:15	1:20
Orthopaedic	1:25	1:8	1:12	*	1:25	*
Amputee	1:25	1:8	1:12	*	1:20	1:25

\* Nominated speech pathology and psychology services should be available to join the team when required

Source: AFRM Standards Rehabilitation Medicine Services in Public and Private Hospitals, 1995

The New South Wales Health Department has conducted some planning assessments for allied health professionals. For podiatry there is an emerging over supply, however, for physiotherapy, speech pathology, orthotics, prosthetists, occupational therapists and dietitians there is an emerging or increasing shortage of personnel (NSW Health 1995a).

There has been frequent discussion of the 'multiskilling' of allied health professionals and general medical practitioners (Hogson 1993). At an informal level, there is likely to be debate and difference of opinion amongst individual allied health professionals and general medical practitioners as to where the boundaries between varying health

professions lie and what training certain professionals should receive in the skills of others. It is important there is flexibility in role boundaries in rehabilitation because:

- there is a lack of community based support programmes existing for people once they leave hospital especially in rural settings;
- existing rehabilitation services are unevenly distributed, reflecting the absence of consistent planning standards and a historical lack of priority given to the development of rehabilitation services in the rural communities; and
- there is an emerging or increasing shortage of personnel in rehabilitation on a national basis.

The advantage of substitution of services by other health professionals, or flexible provision of services, such as through an outreach programme, particularly in the current environment where there is a short supply of consultants in rehabilitation medicine, is that it should allow access to a basic service for a wider population.

## CONCLUSIONS

The Working Party examined various sets of data to gain an overview of the rehabilitation services being provided as there is no universal model or set of data for rehabilitation. All available information on services have shortcomings and this has made it extremely difficult to gain an accurate assessment of the number of rehabilitation services being provided and in turn to produce supply requirements and projections.

The interpretation of data regarding rehabilitation is not possible, due to concerns regarding the reliability and validity of the rehabilitation data collection and data definition changes and the availability of a time series of data.

Projections of requirements have not been possible due to these limitations. For these reasons the Working Party feels it is not appropriate to conduct any projection analysis at the moment, and that it would be more prudent to wait for a time series of casemix trends is available. The work currently in progress to develop sub-acute and non-acute casemix classifications should be of value in assessing requirements trends in the future.

In an attempt to fill in the gaps caused by the omission of sub acute and outpatient rehabilitation services from the national casemix data the Working Party received information from each State/Territory. This approach served to highlight the substantial differences in the way rehabilitation services are provided by each State/Territory. One of the main reasons for this difference is that the scope of rehabilitation services is wide and in the absence of developed jurisdictions to support rehabilitation medicine a range of other practitioners provide these services. In almost all of these situations, there are no trainees in rehabilitation medicine, and this is likely to persist unless this situation is changed.

The Working Party concluded that given the apparent shortages in the workforce, priority should be given to ensuring all training positions are filled and that State/Territory health departments employ trained consultants in rehabilitation in their rehabilitation services. Until trainee numbers are increased, shortages of consultants in rehabilitation medicine are likely to continue. The success of increasing trainee numbers will clearly depend upon close co-operation between State/Territory health departments and the AFRM.

However, the Working Party is of the view that the situation is unlikely to improve without improvements in infrastructure and service delivery arrangements and that there needs to be an urgent examination by State/Territory health departments of these issues.

In view of the number of reviews already completed in some States/Territories into rehabilitation services and workforce requirements, this process may be best assisted by the formation, by State/Territory health departments, of a National Rehabilitation Network.

A National Rehabilitation Network would focus on best practice initiatives, benchmarking, resource utilisation and workforce requirements through a forum of exchange between State/Territory health departments. Such a strategy should result in improved rehabilitation services and infrastructure and in turn this should increase the profile of rehabilitation medicine and work to attract trainees to the specialty.

## RECOMMENDATIONS

The Working Party recommends:

1. The vacancies in the rehabilitation medicine training program should be filled as a priority given the current shortages in the workforce.
2. State/Territory health departments should work towards reducing the substitution that occurs in rehabilitation services by filling vacancies in existing services and staffing new services with trained consultants in rehabilitation medicine.

This should provide a clear signal that State/Territory health departments are committed to investing in rehabilitation and setting up appropriate infrastructures. In turn, this should then assist in attracting trainees to rehabilitation medicine.

3. There are clear indicators of a lack of rehabilitation services due to a shortage of trained consultants in rehabilitation and real and perceived infrastructure inadequacies. There should be an urgent examination by State/Territory health departments of these infrastructure issues.

In view of the number of reviews already completed in some States/Territories into rehabilitation services and workforce requirements, this process may be best assisted by the formation, by State/Territory health departments, of a National Rehabilitation Network. Such a network would focus on best practice initiatives, benchmarking, resource utilisation and workforce requirements (building further on the work in this report); through a forum of exchange between State/Territory health departments.

4. AMWAC conduct a further review of the rehabilitation medicine workforce in 2000, when a time series of rehabilitation casemix data should be available.

## APPENDIX A: AUSTRALIAN HOSPITAL CASEMIX REHABILITATION DATA

On a national basis, some comparisons can be made by using the DHFS Australian casemix reports on hospital activity. However, interpretation of data regarding rehabilitation is not possible, due to concerns regarding the reliability and validity of the rehabilitation data collection and data definition changes. Two AN-DRGs are defined as acute care rehabilitation: AN-DRG 940 planned same day rehabilitation; and AN-DRG 941 rehabilitation. Several others can also be considered as possible indicators they include: AN-DRG 19 non-acute quadriplegia/paraplegia, AN-DRG 57 cerebral palsy age >3 and AN-DRG 58 cerebral palsy age < 4. Table A1 shows these AN-DRGs nationally for both acute public and private hospitals in 1994-95.

**Table A1 : Rehabilitation AN-DRGs for acute care public and private hospitals, 1994-95**

<b>AN-DRG</b>		<b>Separations</b>	<b>Bed days</b>	<b>% Same day separations</b>	<b>Average length of stay (days)</b>	<b>Total average cost (\$)</b>
019	Public	4,194	67,119	11.7	19.0	8,925
	Private	605	6,384	17.0	10.6	3,688
<i>019</i>	<i>Total</i>	<i>4,799</i>	<i>73,503</i>	-	<i>14.8</i>	-
057	Public	181	796	37.6	4.4	5,964
	Private	283	2,907	27.9	10.3	794
<i>057</i>	<i>Total</i>	<i>464</i>	<i>3,703</i>	-	<i>7.35</i>	-
058	Public	116	639	36.2	5.5	4,471
	Private	144	688	11.4	6.0	698
<i>058</i>	<i>Total</i>	<i>260</i>	<i>1,327</i>	-	<i>5.75</i>	-
940	Public	10,327	10,622	99.9	1.0	182
	Private	6,972	7,072	99.9	1.0	230
<i>940</i>	<i>Total</i>	<i>17,299</i>	<i>17,694</i>	-	<i>1.0</i>	-
941	Public	3,351	88,617	0.0	26.4	10,555
	Private	1,881	36,569	0.3	19.4	5,432
<i>941</i>	<i>Total</i>	<i>5,232</i>	<i>125,186</i>	-	<i>22.9</i>	-
<b>Aust.</b>	<b>Total</b>	<b>28,254</b>	<b>221,413</b>	-	<b>10.36</b>	-

Source: DHFS & AHMAC, Australian Casemix Report 1994-95

Casemix classifications have only been developed for acute care, which is but one aspect of rehabilitation care. These classifications exclude prevention, primary care and community long term care. In addition data is only available for 1993-94 and 1994-95, removing any scope for assessing service trends.

The difficulty of using current AN-DRG data as a reliable indicator of service provision is further highlighted by AN-DRG data for 1993-94 and 1994-95 which excludes sub-acute episodes but not from the 1991-92 or 1992-93 AN-DRG data. For example, using AN-DRG rehabilitation 941 in 1993-94 the bed days nationally in a public acute hospital was 128,753 compared to only 88,617 in 1994-95 as is shown in Table A2.

**Table A2: AN-DRG 941 rehabilitation bed days, public acute hospitals; by State/Territory, 1991-92 to 1994-95**

State/Territory	1991-92	1992-93	1993-94	1994-95
New South Wales	43,666	35,617	5,238	40
Victoria	223,647	288,825	82,280	40,729
Queensland	11,204	7,042	13,675	22,439
South Australia	17,586	19,644	19,966	7,144
Western Australia	1,872	5,098	4,189	8,837
Tasmania	1,917	2,295	1,652	3,943
Northern Territory	48	49	159	197
ACT	3,715	2,105	1,564	5,288
<b>Australia</b>	<b>303,655</b>	<b>360,675</b>	<b>128,723</b>	<b>88,617</b>

Source: DHFS & AHMAC, Australian casemix reports

However, Table A3, which provides rehabilitation episodes excluded for purposes of the Australian casemix reports shows that the above table would be invalid because in 1993-94 in public acute hospitals there were 21,605 rehabilitation episodes with an increase in 1994-95 to 37,600 rehabilitation episodes and 10,285 in private acute hospitals, representing a substantial increase in rehabilitation episodes.

**Table A3: Rehabilitation episodes excluded for purposes of the Australian casemix report, by State/Territory, 1993-94 and 1994-95**

<b>State/Terr.</b>	<b>Public acute hospital 1993-94</b>	<b>Public acute hospital 1994-95</b>	<b>Private acute hospital 1994-95</b>
NSW/ACT	10,871	16,747	5,972
Victoria	10,685	19,401	4,265
Queensland	-	-	-
South Australia	-	1,094	48
Western Australia	1	-	-
Tasmania	48	61	-
Northern Territory	-	297	-
<b>Australia</b>	<b>21,605</b>	<b>37,600</b>	<b>10,285</b>

Source: DHFS & AHMAC, Australian casemix reports

Overall the Working Party concluded that it is difficult to use Australian casemix data to build an overview of service provision because the current data collection is not able to be interpreted due to variation in data collection and data definition changes.

## **APPENDIX B: REHABILITATION MEDICINE WORKFORCE WORKING PARTY LETTER SENT TO STATE/TERRITORY HEALTH DEPARTMENTS**

The Australian Health Ministers' Advisory Council (AHMAC) established the Australian Medical Workforce Advisory Committee (AMWAC) to provide ongoing advice to AHMAC on national medical workforce matters, including workforce supply, distribution and requirements.

In 1995, AMWAC established four working parties, to examine and report on the specialities of orthopaedics, anaesthetics, ophthalmology and urology. Each working party was asked to report on the optimal supply and appropriate distribution of specialists across Australia, including projections for future requirements to 2006. These working parties have completed their work and a process and methodology has been established for assessing the future requirements for specialist workforces.

AHMAC has now asked AMWAC to continue its specialist work and report to it on the future requirements in the specialities of ear, nose and throat surgery; general surgery; emergency medicine; geriatric medicine; rehabilitation medicine; and obstetrics and gynaecology.

At the first meeting of the Rehabilitation Medicine Working Party, it was decided that in order for the Working Party to establish a reasonably up to date and accurate profile of the current rehabilitation infrastructure and rehabilitation medicine workforce, it would be necessary to establish how services are provided. Therefore, would you please provide the Working Party with any available data on:

- number and distribution of rehabilitation beds (funded as rehabilitation specific), and utilisation of these beds, over the last five years, if possible;
- models of service provision in your State/Territory for rehabilitation;
- proportion of rehabilitation services that are provided in a community or outpatient setting (and utilisation trends in any of these services over the last five years);
- rehabilitation separations as an indicator of service requirements;
- policies in relation to rehabilitation; and
- studies on rehabilitation and/or research in progress that relate to the above.

The Rehabilitation Medicine Workforce Working Party is also seeking your department's views on trends that may affect the supply and requirement for rehabilitation medicine specialists to the year 2007, particularly:

- specific criteria regarding the staffing of rehabilitation departments and how implementation of such criteria might affect the demand for rehabilitation medicine physicians;
- proposed changes in rehabilitation bed usage, or projections that your State/Territory have made for the next five to ten years; and
- future plans for distribution, infrastructure and the role of rehabilitation medicine departments within organisations in your State/Territory.

In expressing your organisation's views, please feel at liberty to comment on any aspects related to the provision of rehabilitation medicine. In particular, the Working Party would appreciate your comments on rehabilitation medicine's trends in changing work practices, new technologies and the impact these may have on the rehabilitation medicine workforce. Your views on particular problems in relation to the rehabilitation medicine workforce would also be greatly appreciated.

**APPENDIX C: CONSULTANTS' IN REHABILITATION MEDICINE PERCEPTIONS OF SERVICE AND WORKFORCE TRENDS**

Respondents to the AMWAC/AFRM survey indicated that there were issues highlighting certain restrictions on the work they could do in the hospitals in which they worked. The most common restrictions were related to budget restrictions which ultimately led to inadequate support and infrastructure (50%) and inadequate provision of nurses/other allied health staff (48%) for both inpatient and outpatient services. These issues were common in all States/Territories with similar levels being expressed.

**Table A4: Consultants' in rehabilitation medicine perceptions of limitations on work in hospitals**

<b>Limitations on work</b>	<b>% yes</b>	<b>% no</b>
Limits in access to beds	54	31
Adequate hospital infrastructure	38	50
Adequate other Rehab infrastructure	38	50
Enough nurses/other allied health staff	36	48

Source: AMWAC/AFRM survey of consultants in rehabilitation medicine

Respondents (54%) indicated that there were limits in access to beds. The main problem identified was the restricted number of beds in relation to number of consultants in rehabilitation medicine. There are significant variations in the level of rehabilitation resources within States/Territories. The problem is even more significant when examining the lack of any consistency in the distribution of rehabilitation resources in community based services as was indicated by reports received from all States/Territories. Northern Territory, Western Australia and South Australia indicated that the current community based resources were far from adequate due to the lack of appropriate resources.

Many respondents indicated that they could do more sessions in the public hospital system, if resources were made available. Respondents also stated that there may be more leaving the public hospital system in the future due to the under resourced rehabilitation services currently available.

In the AMWAC/AFRM survey, the majority of respondents (53%) stated that they were overworked because of the need for more consultants in rehabilitation medicine to cover the workload. A large number of respondents indicated that long waiting times for rehabilitation services is mainly due to the inadequate rehabilitation and hospital infrastructure available to support these services or a lack of consultants especially in rural/remote areas.

Other concerns raised by respondents related mainly to shortage of staff at all levels. Respondents also suggested there was inadequate remuneration for consultants in rehabilitation medicine compared to other specialties; and no present career structure or recognition/respect of the specialty by other specialists.

Respondents were asked to indicate if they have sufficient time for education, teaching, clinical care and research. The responses are detailed in Table A10 and suggest that consultants in rehabilitation medicine have enough time to provide clinical care but are then restricted in all other activities included teaching and research.

**Table A5: Consultants' in rehabilitation medicine satisfaction with workload and workplace**

<b>Issue</b>	<b>% yes</b>	<b>% no</b>	<b>% non respondents</b>
The need for more consultants in rehabilitation medicine required in geographical areas	58	33	9
Sufficient rehabilitation medicine workload to maintain competence	55	31	14
Satisfied with workload	55	31	14
Enough beds	54	31	15
Overworked	53	29	18
Enough medical back-up in area	58	33	9
Adequate other rehab. infrastructure	38	50	12
Adequate hospital infrastructure	38	50	12
Enough nurses/other allied health staff	36	48	15
Enough staff qualified in the speciality of rehab. medicine	34	49	17

Source: AMWAC/AFRM survey of consultants in rehabilitation medicine

**Table A6: Consultants' in rehabilitation medicine perceptions of time for main activities**

<b>Activity</b>	<b>% yes</b>	<b>% no</b>	<b>% non respondents</b>
Continuing medical education	58	33	9
Teaching	43	42	5
Direct clinical care - public	52	29	19
Direct clinical care - private	45	28	27
Research	17	75	8

Source: AMWAC/AFRM survey of consultants in rehabilitation medicine

Respondents from the AMWAC/AFRM survey also included comments on various issues of concern which they believed created limitations on the service that they could provide. These comments are summarised below.

#### Absence of Rehabilitation Services

Respondents indicated that it is imperative that in establishing a rehabilitation unit and associated networks that there be clinical direction undertaken by a consultant in rehabilitation medicine. The specific training of the consultant in disability evaluation and management, and the role of the allied health professionals in this process were considered to be central elements to the proper development of specialist services.

#### Acute Care and Rehabilitation

Respondents indicated that generally there was a lack of encouragement of early commencement of discharge planning prompted by rehabilitation units within hospitals settings, and discharge planning seemed to occur in a haphazard way. This therefore leads to inappropriate use of acute bed day resources and also limits the availability of rehabilitation services being made available to patients in need. To compound this, it was also noted, there is a lack of a team approach resulting in allied health resources being inefficiently dispersed to acute wards with sub optimal outcomes.

There was also a general consensus that there was an inconsistency with respect to protocols for admission into and discharging from rehabilitation. Without clear protocols it is easy for service providers to be continually drawn into focussing on acute care.

#### Older Patients

Respondents indicated that a number of beds in hospitals are being filled by patients awaiting nursing home placement, sometimes in a rehabilitation unit, or in wards set aside for this purpose. This created an environment whereby the treatment of geriatric conditions resulted in high lengths of stay and utilisation of a relatively greater share of hospital resources, including therapy. There was a significant risk that the delays in providing appropriate accommodation for older patients tended to competitively disadvantage other patients, such as younger trauma patients.

#### Community Services and Supports

Almost all respondents indicated that there is a lack of community based support programmes for people once they leave hospital. Many inpatient based rehabilitation services are not currently providing outpatient services.

Community services were also considered to be project based without clear catchment and service responsibilities, resulting in fragmentation of service delivery. Respondents believed that this, therefore, makes it difficult for hospitals to refer rehabilitation patients to an appropriate community agency which will accept ongoing responsibility for continued care. As a result patient needs for these services go unmet.

### Rural and Remote Services

Within rural areas, rehabilitation services are usually integrated with geriatric services, centralised and strongly linked with base/regional hospitals. Clients requiring specialised rehabilitation services may need to be transferred to metropolitan tertiary centres. As a result of the centralised nature of rehabilitation services in rural areas, clients can be required to travel long distances to access rehabilitation services.

Local respite care and long term accommodation for young people with disabilities was also considered to be a particular issue requiring attention in rural areas.

The availability of specialist medical staff, allied health staff and nursing staff influences the range and availability of services in rural areas. The problem of recruitment of specialist staff to rural areas still persists.

### Aboriginal People and Torres Strait Islander Requirements

Respondents also mentioned that the rehabilitation services currently provided appear to place little emphasis on providing culturally appropriate services, or services seen as relevant by indigenous people. Rehabilitation services provided by acute hospitals and/or community services are not sited in indigenous communities and this results in the following:

- dislocation from the family;
- inappropriate accommodation for the family;
- early and inappropriate discharge practices;
- lack of appropriate support services for accommodation of disabled people in remote areas;
- admission into unfamiliar environments where there may be no-one who speaks their language;
- the risks associated with inadequate transport and roads prevents patients accessing hospitals for necessary treatment and follow up;
- costs for patients and their families associated with long distance travel are out of reach and this increases the patients' sense of isolation when placed in an urban acute setting alone; and
- the risk of dying far from ones country is a factor preventing many elderly Aboriginal patients from accessing distant health services.

It was felt that there was a great potential for rehabilitation medicine approaches, including efficient multidisciplinary, community based services, to benefit the health of Aboriginal patients.

### Perceived Service Gaps

From the AMWAC/AFRM survey and various reports received from State/Territory health department the following specific service gaps were considered to be clear:

- specific needs of Aboriginal People and Torres Strait Islanders are not being met;

- the lack of community/outpatient based rehabilitation support programmes for patients once they leave hospital, particularly in rural and remote communities;
- access to appropriate transportation and accommodation to visit hospitals for outpatient or day therapy limits the options for patients in rehabilitation;
- remote areas not only suffer from disadvantages of distance but also issues of access, it is not uncommon for those referred to urban hospitals from either regional facilities or remote areas to have extended waits prior to transfer.

It was also indicated that the absence of effective rehabilitation services in the acute hospital setting creates a scenario where:

- patients are managed within wards dedicated to particular clinical specialties for their entire period of hospitalisation;
- in some cases allied health services are allocated on a ward basis to these clinical specialties, resulting in considerable inefficiencies;
- generally, only for elderly patients are there any senior hospital medical staff able and ready to assume a rehabilitation role, and commencement of referral to rehabilitation relied solely on the decision making of the clinical specialist rather than the geriatrician; and
- even for those patients fortunate enough to have completed an inpatient rehabilitation program, return to home can involve a lack of adequate follow up services.

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