

Queensland Statewide *Rehabilitation Medicine Services Plan*

2008–12

Acknowledgments

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Executive summary

In Queensland, the chronic under resourcing of rehabilitation medicine services has resulted in a shortfall of designated rehabilitation beds, a limited range of supporting services in the community, and a shortage of rehabilitation clinicians. Currently, rehabilitation medicine services in Queensland lack sufficient designated beds given the population. Apart from leading to 'bed blocking', this situation also results in patients not receiving appropriate care in the appropriate setting. In addition, services have grown organically rather than in a planned way in line with population growth and service developments. The increasing and ageing population will put further pressure on existing services.

Another consequence of the under resourcing of rehabilitation medicine services is the low profile of the medical specialty itself and the lack of recognition of the many valuable benefits rehabilitation medicine offers patients. People requiring rehabilitation services often have complex health needs and benefit from a specialised, interdisciplinary approach to their care. While rehabilitation and the management of disability is the responsibility of all medical practitioners, rehabilitation medicine provides specialist knowledge and expertise in the prevention, assessment, and continued management and medical supervision of a person to attain an optimal level of performance or quality of life.

In view of this, Queensland Health aims to improve services designed to cater for people requiring rehabilitation medicine. To maintain consistency in service provision, they will be coordinated through formalised clinical and service networks and staffed by clinicians who are well skilled in rehabilitation and who operate as an interdisciplinary team. This will ensure people receive the appropriate care in the appropriate setting—inpatient, outpatient, day hospital or community facility—and that their care is managed as effectively as possible.

Queensland Statewide Rehabilitation Medicine Services Plan 2008–12 contains strategies for improving Queensland's rehabilitation medicine services by increasing service provision, formalising service networks to coordinate rehabilitation services and raising the profile of the discipline of rehabilitation medicine. Changes to the provision of rehabilitation services will need to be made incrementally as the rehabilitation workforce grows, evidence of best practice is gathered, and service models are developed and implemented consistently. This Plan provides a starting point for addressing these challenges. Implementation will necessarily be staged as new staff are trained and new facilities developed. Phasing of implementation will occur as funds become available within the Resource Allocation Model.

As the state continues to grow, Queensland's need for an adequate and coordinated rehabilitation medicine service will only increase. It is imperative that the provision of this important health service—as outlined in this Plan—is seen as a priority.

Queensland Statewide Rehabilitation Services Action Plan

While it is recognised that the Executive Management Team is ultimately accountable for implementing the *Statewide Rehabilitation Services Plan 2008–12* at a statewide level, General Managers at an Area level and District Managers at a District level, other parties will be responsible for leading the implementation. The Action Plan identifies the lead parties responsible for the implementation of each strategy. Those highlighted by bold type represent the primary lead party.

| Legend | | | | | |
|--------------|---|----------------|--|--------------|---------------------------------------|
| ABIOS | Acquired Brain Injury Outreach Service | ED—CS | Executive Director—Corporate Services | GM | General Manager |
| CHO | Chief Health Officer | ED—CaSS | Executive Director—Clinical and Statewide Services | FRB | Funding and Resourcing Branch |
| CIO | Chief Information Officer | ED—PPR | Executive Director—Policy, Planning and Resourcing | PAH | Princess Alexandra Hospital |
| CNO | Chief Nursing Officer | ED—RD | Executive Director Reform and Development | PCB | Planning and Coordination Branch |
| CPIC | Clinical Practice Improvement Centre | EMT | Executive Management Team | QCH | Queensland Children's Hospital |
| CWAMB | Capital Works and Asset Management Branch | WPCB | Workforce Planning and Coordination Branch | QSCIS | Queensland Spinal Cord Injury Service |

Objective 1: Increase inpatient rehabilitation service capacity

| Timeframe | Strategy | Responsibility level | Resourcing |
|-----------|---|---|---|
| | | Statewide | E = existing A = additional |
| 2008–10 | 1. Increase rehabilitation bed capacity, to meet current and future demand, by designating 270 acute beds to rehabilitation beds and establishing up to 43 new rehabilitation beds. | GMs with Statewide/Area Rehabilitation Networks | A |
| | 2. Formalise partnership arrangements among inpatient service providers (public and investigate private) to increase overall inpatient capacity. | | E |
| | 3. Redesignate/reorganise some acute beds in acute wards (e.g. general medical, neurology, orthogeriatric) to more appropriately manage rehabilitation care needs. This is likely to involve: <ul style="list-style-type: none"> reconfiguring wards to facilitate efficient management of rehabilitation-type patients e.g. creating zones or clusters within existing ward areas ensuring there is appropriate staffing, with allied health teams and aides to assist with mobilisation, personal care and activities of daily living changing culture, particularly in relation to nursing, to encourage greater functional independence and appropriate self-care among designated rehabilitation patients modifying environments to create 'patient-friendly' facilities with access to therapy areas. | | A |
| | 4. Conduct a feasibility study to determine the best approach to increase rehabilitation medicine and specialised rehabilitation bed capacity over the next 10 years. This would investigate the option to create and locate a rehabilitation medicine centre incorporating inpatient, outpatient, research, and staff training and development facilities in South East Queensland. It would inform future investment needs of such action. | | ED—PPR (PCB) with Statewide Rehabilitation Network |
| | 5. Develop early identification and referral practices to promote early start of therapy. Includes arrangements such as rehabilitation assessment teams, mobile therapy teams and Acute Care of the Elderly wards. | ED—RD (CPIC) with Statewide Rehabilitation Network | E |
| 2010–12 | 6. Continue to reconfigure beds systematically and establish new beds (designated rehabilitation beds will be included in new hospitals on the Gold Coast and the Sunshine Coast coming online 2012–14 and in the Queensland Children's Hospital, 2013–14). | GMs with Statewide/Area Rehabilitation Networks | A |

Objective 2: Establish Statewide Rehabilitation Clinical Network

| Timeframe | Strategy | Responsibility level | Resourcing |
|-----------|---|---|--------------------------------|
| | | Statewide | E = existing A = additional |
| 2008–10 | 7. Approve and establish the Statewide Rehabilitation Clinical Network. | EMT and ED—RD (CPIC) with Statewide Rehabilitation Network | A |
| | 8. Establish mechanisms and structures to support statewide policy direction, network coordination and service development, including clinical coordinator. | ED—RD (CPIC) | A |
| | 9. Advocate and inform other clinicians regarding the current and evolving roles, and expertise within rehabilitation teams. | | E |
| | 10. Clinical Network, with project officer support, will: <ul style="list-style-type: none"> conduct a review of Amputee Services to ensure greater consistency of practice finalise the models of care and suite of services that Queensland Health will adopt to better manage patients with brain injury, including transition to slow-stream services develop strategies to build capacity of dedicated rehabilitation workforce (see Objective 7 for more detail) develop and implement a coordinated and consistent approach to reporting and monitoring of clinical service delivery. | ED—RD (CPIC) Statewide Rehabilitation Clinical Network | A |
| 2010–12 | 11. Clinical Network, with project officer support, will: <ul style="list-style-type: none"> develop and implement clinical pathways, standard protocols for admission and discharge, eligibility criteria and consistent assessment procedures develop a statewide training and continued professional development program promote, support and initiate research (in partnership with academic institutions) in rehabilitation to achieve best practice and to develop rehabilitation services in Queensland develop and support mechanisms for consumer involvement and input into the development of rehabilitation-related service policy and provision. | ED-RD (CPIC) Statewide Rehabilitation Clinical Network | A |

Objective 3: Establish formalised rehabilitation service networks in each Area Health Service

| Timeframe | Strategy | Responsibility level | Resourcing |
|-----------|---|---|--------------------------------|
| | | Statewide | E = existing A = additional |
| 2008–10 | 12. Establish rehabilitation services as a priority for service development within the Area. | GMs with Statewide/Area Rehabilitation Networks | E |
| | 13. Identify present and future rehabilitation service requirements across the care continuum and align resources for an appropriate balance between acute, designated rehabilitation units and community-based care. | | |
| | 14. Develop rehabilitation service networks within a service cluster. The network will include: <ul style="list-style-type: none"> at least one dedicated rehabilitation unit with access to rehabilitation physician or geriatrician and dedicated interdisciplinary team. The number of beds required should be informed by the population-based benchmark of 30 beds (public and private) per 100,000 population and the level of acute inpatient activity (as this will affect the need for rehabilitation beds). Rehabilitation units should range from 10 to 26 beds and should meet the Adult Rehabilitation Medicines Services Public and Private Hospitals Standards, AFRM 2005 outpatient and community rehabilitation services including interaction with GPs and community care providers linked with existing inpatient services outreach to rural and regional area rehabilitation programs on an intermittent or 'visiting' basis including clinical consultation, follow-up of individual rehabilitation patients, staff support and education formalised structures and protocols to foster effective liaison between acute care rehabilitation and other sub-acute services, particularly where services are located on separate sites or involve partnership arrangements between different providers service links (inpatient and ambulatory settings) with statewide speciality services and relevant sub-specialist services within the Area (e.g. neurosurgery) | GMs with Statewide/Area Rehabilitation Networks | E |

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|--|---|--|--|
| | <ul style="list-style-type: none"> • case management of target populations of frequent hospital attendees, 'outliers' on acute wards or those at risk of hospitalisation. • referral protocols and pathways for access to rehabilitation medicine services, for example: complex medical and acute care of the elderly, complex orthopaedic and orthogeriatric, stroke/neurological/neurosurgical, vascular/amputee, major burns and multi-trauma • training and continued professional development arrangements for rehabilitation staff • relevant data collection, reporting and performance management • alignment with the Clinical Service Capability Framework • smaller regional and rural hospitals used to support step-down care from acute hospitals and offer locally based access to services • transport and accommodation for patients requiring ambulatory rehabilitation at facilities distant from their homes. | | |
|--|---|--|--|

Objective 4: Expand the capacity of outpatient and community rehabilitation services

| Timeframe | Strategy | Responsibility level | Resourcing |
|-----------|--|--|--------------------------------|
| | | Statewide | E = existing A = additional |
| 2008–09 | 15. Develop outcome measures for community-based rehabilitation to inform future service models. | GM—CAHS with CAHS Rehabilitation and Aged Care Network | E |
| 2009–12 | 16. Increase staffing levels of existing community-based rehabilitation teams. | GMs with Statewide/Area Rehabilitation Networks | A |
| | 17. Establish six additional community-based rehabilitation teams across Queensland. | | A |
| | 18. Include provision for community rehabilitation services in planned Health Precincts where possible. | | E |
| | 19. Collaborate with private and non-government sectors to develop flexible community-based rehabilitation services. | | A |

Objective 5: Enhance specialist rehabilitation medicine services

| Timeframe | Strategy | Responsibility level | Resourcing |
|--|---|--|--------------------------------|
| | | Statewide | E = existing A = additional |
| Develop capacity of spinal cord injury services | | | |
| 2008–09 | 20. Make the structural, resource and operational changes required to create a designated statewide service ¹ to better manage spinal injuries, formalising the network of services incorporating the Queensland Spinal Cord Injury Service, made up of PAH Spinal Injury Unit, Transitional Rehabilitation Program and Spinal Outreach Team and the North Queensland Spinal Injury Service. | GMs with Statewide Rehabilitation Clinical Network | A |
| | 21. Upgrade staffing levels at PAH spinal unit to meet Australasian Faculty of Rehabilitation Medicine allied health and nursing benchmarks to ensure a consistent standard of care. | GM—SAHS with DM PAH HSD | A |
| | 22. Undertake a feasibility study to determine the best location of Spinal Injuries Units in the future (metro and regional), bed numbers required (to align with a national benchmark of 1.2 beds per 100,000 population), patient mix (acute and rehabilitation of patients with spinal injury) and staffing and infrastructure to support best practice. | ED—PPR (PCB) with Statewide Rehabilitation Clinical Network and Queensland Spinal Cord Injury Service | A |
| 2010–12 | 23. Establish satellite transitional rehabilitation programs, for patients with spinal cord injury including access to supported living units, to ensure equitable access to patients across Queensland. | GMs with Statewide Rehabilitation Clinical Network and Dir QSCIS, Disability Services Queensland and Department of Housing | A |
| 2013–18 | 24. Build a new metropolitan Spinal Injuries Unit to replace existing facility in accordance with the results of the feasibility study. | GMs with DM related HSD | A |
| Develop capacity of brain injury rehabilitation service | | | |
| 2008–09 | 25. Undertake the structural, resource and operational changes required to create a designated statewide service for better management of acquired brain injury and improving access to specialist brain injury rehabilitation services. | GMs with Statewide Rehabilitation Clinical Network | A |
| | 26. Expand brain injury rehabilitation services for ambulatory rehabilitation, by establishing initially a facilitated discharge and intensified outpatient rehabilitation program at PAH. | GM—SAHS, Statewide Rehabilitation Clinical Network, DM PAH HSD | A |
| | 27. Undertake a feasibility study to determine the best location of brain-injury centres in the future (metro and regional), bed numbers and suite of services required (aligning with national benchmarks) and staffing and infrastructure to support best practice. | ED—PPR (PCB) with Statewide Rehabilitation Clinical Network | |

¹ A *statewide service* is a centrally planned and regulated service that is provided from one or two service bases in Queensland. The definitions and criteria for statewide and superspecialty services are currently under review as directed in the *Statewide Health Services Plan 2007–2012*. It is expected that facilities will be able to apply for statewide or superspecialty status in accordance with the developed criteria in 2008.

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| | 28. Expand the Skills to Enable People and Communities (STEPS) program to regional areas to build local community capacity, raise awareness and better support the patient's transition from the acute sector to home. | GM—SAHS with Statewide Rehabilitation Clinical Network | A |
| 2008–12 | 29. Develop satellite Acquired Brain Injury Outreach Service (ABIOS) at Townsville, Sunshine Coast and Gold Coast to respond to growing demand. | GMs with Statewide Rehabilitation Clinical Network | A |
| | 30. Continue to work with Disabilities Services Queensland (DSQ) and other government and non-government agencies to increase capacity to transition, in a timely manner, patients of slow-stream facilities into community-based accommodation. | ED—PPR (PB) with Statewide Rehabilitation Clinical Network | E |
| 2009–12 | 31. Develop and implement a statewide service model for brain-injury patients. This should include eligibility criteria, a suite of services, options for transitional living services and in the longer term, an expansion of inpatient capacity. | GMs with Statewide Rehabilitation Clinical Network | A |
| | 32. Develop services to support regional and rural brain-injury patients and implement professional development for community rehabilitation teams to improve opportunities for the provision of therapy for acquired brain-injury patients who are returning to their local area following hospital discharge. | | A |
| Develop capacity of paediatric rehabilitation services | | | |
| 2008–10 | 33. Increase access to services for children by reprioritising funding for paediatrics to allow the designating of rehabilitation beds at the Royal Children's Hospital. | GM—CAHS with Statewide/Area Rehabilitation Clinical Network | E |
| 2009–12 | 34. Develop strategies to increase access to relevant services for adolescents and services to assist adolescents transitioning to adult services. | GMs with Statewide/Area Rehabilitation Clinical Network and QCH | E |
| | 35. Undertake the structural, resource and operational changes required to create a designated statewide service for better management of paediatric rehabilitation services (including the Queensland Cerebral Palsy Health Service). | GMs with QCH | A |
| | 36. Increase the dedicated paediatric rehabilitation workforce in order to staff the Queensland Children's Hospital rehabilitation services. Including the establishment of a funded paediatric rehabilitation training position. | | A |
| Develop capacity of services for patients with severe burns | | | |
| 2009–10 | 37. Determine the appropriate service model for rehabilitation of patients with severe burns, including where services are best delivered in a designated rehabilitation unit or in designated rehabilitation beds in a burns unit. | GMs with Statewide/Area Rehabilitation Clinical Network | E |

Objective 6: Expand the availability of rehabilitation support services and technology

| Timeframe | Strategy | Responsibility level | Resourcing |
|-----------|--|---|--------------------------------|
| | | Statewide | E = existing A = additional |
| 2008–09 | 38. Establish formal links between each Area rehabilitation service network and an interdisciplinary pain management service. | GMs with Statewide Rehabilitation Network | E |
| | 39. Develop a Queensland Health policy on providing Driver Assessments, including determination of provider and funding of assessment. | ED—PPR (PB) with Statewide Rehabilitation Network | E |
| 2010–12 | 40. Increase Rehabilitation Engineering Services (assistive technology) to meet statewide service needs equitably, including outreach service capability. | GM CAHS with Statewide Rehabilitation Network | A |
| | 41. Review current prosthetic and orthotic services to determine the adequacy of existing service arrangements and define scope of future service delivery arrangements. | GMs with Statewide Rehabilitation Network | A |
| | 42. Increase prosthetic and orthotic delivery in order to meet projected demand. | | A |

Objective 7: Build the capacity of the rehabilitation workforce in line with proposed service developments

| Timeframe | Strategy | Responsibility level | Resourcing |
|-----------|---|---|--------------------------------|
| | | Statewide | E = existing A = additional |
| 2008–09 | 43. Critically review the use of the current staff resource through service redesign and skill mix review. | ED—PPR (WPCB), CNO, GMs AHS Workforce Units with Statewide Rehabilitation Network | E |
| | 44. Develop a 'Scope of Practice Framework' to inform delegation of tasks to Allied Health Assistants (AHAs) and Assistants in Nursing (AINs). | | E |
| | 45. Develop an agreed set of standards for staffing both inpatient and ambulatory/community rehabilitation services in Queensland, taking account of the AFRM guidelines, the range of services proposed in this plan and the realities of workforce supply, including the role of Rehabilitation Assistants. | | E |
| | 46. Develop self-directed learning packages to upskill allied health and nursing staff working in rehabilitation. | | A |
| | 47. Develop the community-based rehabilitation workforce through professional training and development opportunities. | | A |
| | 48. Increase the number of Advanced Allied Health Assistants who have attained Certificate IV in Allied Health Assistance Community Based Rehabilitation, thereby increasing their knowledge and expertise. | | A |
| | 49. Broaden the use of: <ul style="list-style-type: none"> • AHAs to expand the capacity of existing allied health services • AINs to complement Registered Nurses in rehabilitation (and other sub-acute) wards. | | A |

| 2010–12 | 50. Collaborate with the AFRM to systematically increase the number of rehabilitation physician training positions throughout the state, including potential collaboration with the private sector to secure appropriate number of positions. | ED—PPR (WPCB), CNO, GMs AHS Workforce Units with Statewide Rehabilitation Network | A |
|--|--|---|--------------------------------|
| | 51. Progressively increase the numbers of designated rehabilitation allied health and nursing positions to meet agreed staffing benchmarks. | | A |
| | 52. Encourage specialisation and enable career progression by developing within rehabilitation services: <ul style="list-style-type: none"> advanced practice positions for allied health professions specialist rehabilitation nursing posts rehabilitation nurse practitioner positions. | | A |
| | 53. Provide opportunities for staff to voluntarily rotate to other positions within the rehabilitation discipline to gain additional skills and knowledge. For example, staff members of the Queensland Spinal Injuries Service could be given opportunities to rotate to the Spinal Outreach Team or Transitional Rehabilitation Program. | | E |
| | 54. Collaborate with other allied health program initiatives related to leadership, recruitment, retention and professional development for allied health staff. | | A |
| Objective 8: Improve information management | | | |
| Timeframe | Strategy | Responsibility level | Resourcing |
| | | Statewide | E = existing A = additional |
| 2008–10 | 55. Implement consistent collection of functional independence measures on admission and discharge from a designated rehabilitation unit. | ED—RD (CPIC) and GMs with Statewide Rehabilitation Clinical Network and CIO | E |
| | 56. Link with and routinely report data to Australian Rehabilitation Outcomes Centre (AROC) in order to benchmark performance. | | A |
| | 57. Develop uniform methods of data collection and data analysis, and determine consistent clinical indicators and capacity to monitor demand (including unmet demand) across the rehabilitation continuum to better inform service and workforce planning. | ED—RD (CPIC) and CIO with Statewide Rehabilitation Network | E |
| | 58. Influence eHealth to ensure that accessing patient information across sectors by multiple carers is a priority. | | E |
| | 59. Influence eHealth to provide information systems within the ambulatory and community sector to allow data to be collected outside of the acute sector. | | E |
| 2010–13 | 60. Implement electronic patient information and referral systems to enable efficient identification, referral, transfer, management and follow-up of rehabilitation patients. | ED—RD (CPIC) and CIO with Statewide Rehabilitation Network | A |
| | 61. Implement clinical decision-making tools to support evidence-based practice, including development of a Rehabilitation Services Website managed and maintained by the Rehabilitation Clinical Network. | | A |

| Objective 9: Adequately fund rehabilitation services | | | |
|---|---|---|--|
| Timeframe | Strategy | Responsibility level | Resourcing |
| | | Statewide | E = existing A = additional |
| 2008–09 | 62. Seek increased provision of rehabilitation funding in upcoming Australian Health Care Agreement negotiations with the Australian Government. | ED—PPR (FRB) and ED—RD (CPIC) with Statewide Rehabilitation Network | E |
| | 63. Investigate and action if feasible, increasing outpatient services by leveraging Commonwealth funding. | | |
| | 64. Investigate options and action if feasible, conversion of existing block funding arrangements with Motor Accident Insurance Commission to a full-cost recovery model. | | |
| | 65. Investigate quarantining funds raised annually by Queensland Government from camera-detected offences revenue for road accident injury victims for rehabilitation programs. | | |
| | 66. Investigate packages provided through private health insurance (PHI) that could be used by private patients in Queensland Health facilities and what services PHI are prepared to cover in alternative settings e.g. 'in home', 'medi hotel'. | GMs and DMs with Statewide Rehabilitation Network | E |
| | 67. Investigate sourcing greater capacity of rehabilitation services from private sector; this could include annual service agreements with private hospitals to supply an identified number of bed days per year. | | |
| | 68. Investigate potential opportunities within the Funding Model to provide incentives for reconfiguring acute beds to designated rehabilitation beds. | ED—PPR (FRB) and ED—RD (CPIC) and GMs with Statewide Rehabilitation Network | E |
| 2011–12 | 69. Develop cost-benefit and revenue models arising from legislative reform for revenue recovery for services provided to patients compensated under third-party insurance schemes. | ED—PPR (FRB) and ED—RD (CPIC) with Statewide Rehabilitation Network | E |

Background

Rehabilitation is the process that brings about the highest level of recovery or improvement in function following loss of function and ability from any cause.² Rehabilitation planning needs to support services that are goal oriented and cater for:

- immediate time-limited management of a presenting disability
- preventative, review and maintenance services to provide long-term and possibly lifetime follow up
- where necessary, intermittent intervention.³

There have been several reviews of Queensland Health's rehabilitation services and many rehabilitation planning activities in the last decade. However, there has never been a systematic framework for the planning and delivery of rehabilitation services. As a consequence, the availability of Queensland Health's rehabilitation services is inconsistent.

Improving the rehabilitation system will require incremental change over the next five to 10 years and will depend on acquiring additional resources. There are shortages of inpatient rehabilitation beds and rehabilitation workers, and a lack of rehabilitation capacity in the community.

Unless the focus of health service provision shifts from the acute sector (diagnosis and cure) to the sub-acute care and long-term management of disability and handicap, the situation will not improve. However, Queensland Health must ensure that rehabilitation services are provided as effectively and efficiently as possible with improvements made where possible, using existing resources.

Aims of the Plan

Rehabilitation services span the continuum of care. The *Statewide Rehabilitation Medicine Services Plan 2008–12* focuses on one component, rehabilitation medicine, and outlines:

- the current use of and projected need for rehabilitation medicine services
- strategies to build public sector rehabilitation medicine capacity in line with national benchmarks
- strategies to improve and reorient rehabilitation medicine service delivery and better meet growing demand in the short, medium and long term.

Rehabilitation defined

While this Plan promotes the broader concept of medical rehabilitation as a fundamental component of a safe and sustainable health service, the focus of the *Statewide Rehabilitation Medicine Services Plan 2008–12* is on rehabilitation medicine services.

It is useful to make the distinction between medical rehabilitation and rehabilitation medicine. Medical rehabilitation in its broadest sense is part of all patient care. It is the function of every practising clinician and involves the preventive care, assessment, management and medical supervision of a person with disability until that person has attained an expected level of performance. Medical rehabilitation is fundamental to every person's health care path and a critical component of planned medical services.⁴ Rehabilitation services are provided in a wide

² Australasian Faculty of Rehabilitation Medicine (AFRM) Standards 2005: Adult Rehabilitation Medicine Services in Public and Private Hospitals.

³ Department of Human Services 1997, Rehabilitation into the 21st Century—A vision for Victoria.

⁴ Australasian Faculty of Rehabilitation Medicine (AFRM) Standards 2005 Adult Rehabilitation Medicine Services in Public and Private Hospitals.

range of clinical settings and by rehabilitation professionals and interdisciplinary teams that may be led by other professionals (such as geriatricians) with appropriate training and experience in rehabilitation.

In contrast, Rehabilitation Medicine is the specialty area of medicine involved with:

- the prevention and reduction of functional loss
- activity limitation and participation restriction arising from impairments
- the management of disability in physical, psychosocial and vocational dimensions
- the improvement of function.

A rehabilitation medicine service is specialised care for patients with conditions requiring more extensive, staged rehabilitation. This care is provided as a *designated rehabilitation service* and supervised by a rehabilitation physician who is a member of an interdisciplinary team.⁵

A substantial body of evidence shows rehabilitation following illness or injury leads to better functional outcomes for patients.^{6,7,8,9} Benefits include improved long-term quality of life as perceived by both the patient and the carer, improved functional ability (or reduced disability) and reduced incidence of death and disability from secondary complications. Maximising a person's potential saves money in acute health care, across other government departments and for society as a whole.

For the purposes of this plan, rehabilitation medicine focuses on rehabilitation care for people who are not frail aged, requiring aged care services. The rehabilitation of the frail aged should be considered as part of the aged care planning process and their rehabilitation needs will be met through aged care services.

People requiring rehabilitation

Rehabilitation medicine services are used by people of all ages with a wide variety of conditions; however, a large proportion of users are older people. Rehabilitation medicine can be short term, long term or episodic, depending on the nature of the condition—a rehabilitation episode can extend over days, weeks or months. People requiring rehabilitation medicine services may have:

- neurological conditions (e.g. stroke, traumatic brain injury, spinal cord dysfunction, multiple sclerosis, Parkinson's disease, cerebral palsy, spina bifida)
- musculo-skeletal conditions (e.g. orthopaedic, amputation, pain, arthritis)
- multiple trauma
- burns
- deconditioning following an acute illness.

A subset of patients require rehabilitation medicine services that are more specialised, such as services for patients with a spinal cord or brain injury, or rehabilitation after a severe burn or amputation. Often these services are distinguished by their level of clinical specialisation and need for a highly skilled workforce, and in comparison to other rehabilitation medicine services, require more intensive treatment. Because of the complexity of care provided, some of the more specialised services (for example, services for spinal cord and brain injury) are only available in one or two designated locations across the state.

5 Ibid.

6 Bethoux F, Calmels P, Gautherin V and Minaire P (1996) 'Quality of Life of the spouses of stroke patients: a preliminary study', *International Journal of Rehabilitation Research* 19:291–9.

7 Dennis M and Langhorne P (1994) 'So stroke units save lives: where do we go from here?' *British Medical Journal*, 309:1273–7.

8 Elmstahl S, Malmberg B and Annersteldt L (1996) 'Caregiver's burden of patients 3 years after stroke assessed by a novel caregiver burden scale', *Archives of Physical Medicine and Rehabilitation* 77(2) 117–56.

9 Indrevdavic B, Slordahl SA, Bakke F, Rokseth R and Hoheim LL (1997) 'Stroke unit treatment long-term effects'. *Stroke* 28:1861–1869.

Rehabilitation settings

Rehabilitation planning and services must cover the continuum of care from prevention, to the immediate management of a presenting disability and return to the community.

Rehabilitation medicine is provided:

- in a hospital setting, such as
 - an acute bed where rehabilitation is overseen by a rehabilitation medicine physician or geriatrician
 - an inpatient (overnight) bed in a rehabilitation unit, referred to as a 'designated' rehabilitation bed (one of several care types under the umbrella term of 'sub-acute')
- in an ambulatory setting, such as
 - outpatient clinics
 - day hospitals or day treatment centres
- in the community.

As a sub-acute service, rehabilitation is distinct from, but complementary to, both acute and non-acute care. More detail on these care types is provided in Appendix 1.

Interdisciplinary team

In rehabilitation, the focus is on improving functional status through providing a goal-directed program rather than curative treatment. Patients require management by a range of clinicians and other professionals with a mix of skills rather than management by a single specialty.¹⁰ Typically management by an interdisciplinary team includes medical specialists, nurses, physiotherapists, occupational therapists, speech pathologists, social workers, psychologists and/or neuropsychologists, dieticians, prosthetists, orthotists, podiatrists and allied health therapy assistants. The interdisciplinary team supports patients through individual assessment, treatment, regular review, discharge planning and follow up. Patients may also receive social, educational and vocational services.

Scope of the Plan

The focus of the *Statewide Rehabilitation Medicine Services Plan 2008–12* is on rehabilitation medicine services. This Plan provides a starting point for progressing incremental change. It highlights the immediate pressure points in rehabilitation medicine. Once system capacity is increased and more evidence-based data is available to inform service planning, further planning work will be required to develop a comprehensive and sustainable rehabilitation system to meet the demands of the future.

The rehabilitation component of some clinical specialty services such as surgery, cardiac, respiratory and chronic disease, has appropriately been identified as part of the overall management of people with these conditions. The planning for the rehabilitation component of these services is outside the scope of the *Statewide Rehabilitation Medicine Services Plan 2008–12*. Planning has also been undertaken separately for the unique rehabilitation services needed in Mental Health Services and Alcohol, Tobacco and Other Drug Services. Again, such services are not within the scope of this Plan.

¹⁰ Wentworth Area Health Service 2002, Area Rehabilitation Services Plan to 2011.

Policy, planning and funding context

Planning for health services takes place within the context of the Queensland Government's commitment to reform health service delivery across the state. This commitment is evident in the following documents.

Action Plan—Building a better health service for Queensland

The Action Plan—Building a better health service for Queensland¹¹ released in October 2005, announced the Queensland Government's intention to reform the public health system. It identified an agenda highlighting

- improvement of health services to all Queenslanders regardless of where they live
- creation of new models for service delivery
- strengthening of partnerships and arrangements with non-government and not-profit organisations.

Training, recruitment and retention of health professionals were also highlighted as critical components for inclusion in health service planning.

Queensland Health Strategic and Statewide Health Services plans

The *Queensland Health Strategic Plan 2007–12*¹² identifies the strategic directions for Queensland over the next five years. The *Statewide Health Services Plan 2007–12* lays out a vision for the reform of health services in Queensland over the next five years. It identifies two clear objectives:

- Improving access to safe and sustainable health services
This will be achieved by developing service networks, planning statewide and superspecialty services, developing and implementing referral pathways to ensure that clinicians and patients know how to access these services, and enhancing the use of technology to improve links to local service providers and remote specialist services.
- Better meeting people's needs across the health continuum
This will be addressed by systematically implementing community-based models of service delivery; determining the appropriate mix of beds (acute and sub-acute); increasing the capacity of sub-acute services where significant gaps in service delivery negatively affect the capacity of the acute care sector to meet demand for inpatient services and improve the efficiency of service delivery.

These objectives are reflected in the Queensland Health Strategic Plan, along with two other directions:

- enhancing organisational work processes and systems to support service delivery and business effectiveness

¹¹ Queensland Health 2005, Action Plan—Building a better health service for Queensland, Queensland Government.

¹² Queensland Health 2007, *Queensland Health Strategic Plan 2007–2012*, Queensland Government.

- developing our people in a way that recognises and supports their role in the delivery of health services.

Queensland Health Disability Services Plan 2007–10

This plan provides the tool by which Queensland Health aligns with the requirements of the *Disability Services Act 2006*. It guides Queensland Health in determining how to better meet the needs of people with a disability by systematically improving support, services and responses over the coming years.

A Trauma Plan for Queensland (2006)

This plan affirms that Queensland is significantly behind other states in its rehabilitation services and that a planned and considerable investment is needed to expand and improve existing services. It similarly notes the impact of workforce shortages and the need to consider appropriate rehabilitation models in the longer term.

Memorandum of Understanding between Disability Services Queensland and Queensland Health 2005–08

One of the schedules of the memorandum of understanding relates to improving the service provision to people with acquired brain injury (ABI) and their families in partnership with the private and non-government sectors. Initial pilot research has been completed on service and support models during and after transition from hospital to the community. Disability Services Queensland (DSQ) is currently investigating alternative accommodation and means to support individuals. A report on the broad profile of individuals with an ABI currently residing in Queensland Health facilities is being finalised. Queensland Health and DSQ are considering how best to meet the needs of patients in slow-stream care. Slow-stream rehabilitation focuses on community re-integration and maximising functional capacities for brain-injured patients. Sustained improvements in function for these patients can take 18 to 24 months.

Queensland Strategy for Chronic Disease 2005–15

This strategy includes a rehabilitation objective: 'To maximise function, improve quality of life and reduce the risk of further complications for people with chronic disease, especially those who have had a stroke or heart attack and people with chronic obstructive pulmonary disease (COPD)'. Implementation of initiatives, primarily medical rehabilitation (cardiac, pulmonary and stroke) have included an allocation of \$16.6 million in 2006–09. Queensland Health has allocated these funds to increase the capacity of the rehabilitation sector to provide timely, coordinated and integrated cardiac, stroke and pulmonary rehabilitation services.

Funding context

Rehabilitation services are funded primarily through Queensland Health and other public sources with some contribution from the private sector. Funding sources include the following.

Department of Veterans' Affairs (DVA)

The Hospital Services Arrangement between the Commonwealth of Australia, the Repatriation Commission and the Military Rehabilitation and Compensable Commission (collectively acting through DVA) and the State of Queensland (acting through Queensland Health) 2004–10, provides for the treatment and care of eligible veterans and other beneficiaries in Queensland public hospitals¹³. In 2005–06, veterans received care in acute and designated rehabilitation units and represented 2% of total public rehabilitation services.¹⁴ Typically, DVA covers the full cost of providing rehabilitation services in public hospitals for eligible veterans.

Home and Community Care (HACC)

The HACC Program is a joint federal, state and territory initiative that provides frail older people and younger disabled people with non-acute services to assist them to live as independently as possible at home. While rehabilitation services are beyond the scope of the HACC Program, some patients who have received rehabilitation in an inpatient or community setting may be eligible to receive HACC-funded support services to aid them to return to their own home. For example, a person who has returned home following a spinal cord injury may be eligible to receive HACC-funded services to assist with domestic and self-care activities as required.

Motor Accidents Insurance Commission (MAIC)

MAIC is the regulatory authority responsible for the ongoing management of the Compulsory Third Party (CTP) scheme in Queensland. In Queensland, the CTP scheme operates on an 'at fault' basis, where the injured person must establish negligence to seek compensation for personal injury and other related losses.¹⁵ MAIC collects funds from the CTP insurance scheme and a proportion of these funds are distributed as block funds to Queensland Health. These funds do not equate to full cost recovery. The Queensland system is different from the 'no fault' scheme operating in some other jurisdictions. Under a 'no fault' scheme negligence does not have to be proven in order to access CTP funds for health care following an accident.

¹³ Department of Veterans' Affairs Unit 2007, *Veterans' Affairs Unit homepage*, Queensland Government, 2007, <<http://qheps.health.qld.gov.au/vetaffairs/home.htm>>.

¹⁴ Data supplied by Veteran Affairs Unit Queensland Health November 2007

¹⁵ Motor Accident Insurance Commission 2007, *Motor Accident Insurance Commission homepage*, Queensland Government, 2007, <<http://www.maic.qld.gov.au/>>.

Workers' compensation

Workers, employees and contractors of a Queensland-based employer are covered by the *Workers' Compensation and Rehabilitation Act 2003*. It is a legal obligation for all employers to have workers' compensation coverage for their workers in case of a work related injury or illness.¹⁶ Patients who are injured or become ill during the course of their work may be entitled to compensation from workers' compensation insurers for medical costs and loss of income. Queensland Health negotiates directly with the workers' compensation regulatory body, QCOMP, to set the fees for services provided to workers' compensation patients. Queensland Health is able to recover the full cost of these services.

Private health insurance

In Queensland public hospitals, patients with private health insurance may elect to be treated as a public or a private patient. Treatment of private patients in public hospitals provides an important contribution to a viable public health system.¹⁷ Queensland Health earns revenue from patients who elect to use their private health insurance.

Cross border arrangements

Queensland Health recovers costs from respective state governments for inpatient treatment of people whose principal place of resident is in another Australian state. In the case of New South Wales residents, the agreement includes recovering costs for outpatient treatment.

¹⁶< http://qheps.health.qld.gov.au/rspu/html/rrc_fund/rrc_fund_wc1.htm>

¹⁷ The Allen Consulting Group 2006, Health Economist Review: Report to Queensland Health.

Geographic catchment and population to be serviced

Geographic catchment

The approach used to assess the need for rehabilitation services and the adequacy of existing services incorporates several strands of analysis including consideration of:

- population factors and their potential impact on demand
- current patterns of service utilisation
- comparison with recognised planning benchmarks.

The main population centres of Queensland are located in the south-east corner of the state and along the coastal regions, becoming progressively more concentrated in the dispersed centres of northern and far-north Queensland. Based on estimates for 2006, about 27% of Queenslanders lived in regional areas, 17.5% in remote areas and 3% in very remote areas, with almost two-thirds of the population concentrated in the south-east corner of the state.¹⁸

While substantial populations reside in regional centres along the coast, vast rural and remote areas of the state are only sparsely populated—a distribution pattern that is reinforced by population trends. Such population dispersion presents challenges for the delivery of health services.

Statewide, the population is growing at just over 2% per year, but growth rates vary across areas with the most rapid growth rates projected in West Moreton, Sunshine Coast and Cooloola, Mackay and Gold Coast Health Service Districts.

Queensland Health is divided geographically into three Area Health Services. The following provides a broad overview of the characteristics of each Area.

- The Northern Area Health Service (NAHS)
 - accounts for 43.3 % of the total area of the state
 - has a population of around 640,000 people (16% of Queenslanders)
 - has a population density of 0.9 people per km²¹⁹
 - has major health facilities located in Cairns, Townsville and Mackay.
- The Central Area Health Service (CAHS)
 - accounts for 31.5% of the total area of the state
 - has a population of around 1.5 million people (38% of Queenslanders)
 - has a population density of 2.8 people per km²²⁰
 - has major health facilities located in North Brisbane, Redcliffe, Rockhampton and Sunshine Coast.
- The Southern Area Health Service (SAHS)
 - accounts for 25.2% of the total area of the state
 - has a population of approximately 1.8 million people (46% of Queenslanders)
 - has a population density of 4.3 people per km²²¹
 - has major health facilities located in South Brisbane, Toowoomba, Ipswich and Gold Coast.

¹⁸ Queensland Health 2006, Estimated Resident Population by Statistical Local Areas, Sex and Age Groups, Queensland as at 30 June 2006 (revised), Queensland Government.

¹⁹ Queensland Health 2007, Northern Area Health Service Population Report 2007–2008, Queensland Government.

²⁰ Queensland Health 2007, Central Area Health Service Population Report 2007–2008, Queensland Government.

²¹ Queensland Health 2007, Southern Area Health Service Population Report 2007–2008, Queensland Government.

The Areas are divided into clusters of Health Service Districts as outlined in Table 1 below.

Table 1: Queensland Health Areas, Clusters and Districts—2007

| Area | Cluster | Health Service Districts |
|----------|-------------------------------------|--|
| Northern | Townsville | Townsville, Mount Isa |
| | Cairns | Cairns and Hinterland, Cape York and Torres Strait |
| | Mackay | Mackay |
| Central | Northside | Northside, Royal Children's Hospital and Royal Brisbane and Women's Hospital |
| | Sunshine Coast | Sunshine Coast and Cooloola |
| | Central Queensland | Central Queensland and Central West |
| | Wide Bay | Wide Bay and Fraser Coast |
| Southern | Southern Corridor | Princess Alexandra Hospital, Mater Southside and Gold Coast |
| | Toowoomba and South West Queensland | South West, Toowoomba and Darling Downs |
| | West Moreton South Burnett | West Moreton South Burnett |

Source: <<http://qheps.health.qld.gov.au>>

Population to be serviced

Queensland has a population of 4.1 million, which represents 20% of Australia's population with an average annual growth rate of 2.4%.²²

Two key demographic factors related to this growth will have a major impact on the health care needs of, and delivery of health services to, Queenslanders over the next decade or so. They are:

- sustained population growth
- increasing aged population.

Population growth

Queensland attracts an increasing share of the Australian population, with relatively higher growth than other states evident over the past 20 to 30 years. Queensland's population is projected to increase by 1.17 million people between 2006 and 2021, taking the projected population to approximately 5.2 million by 2021.²³

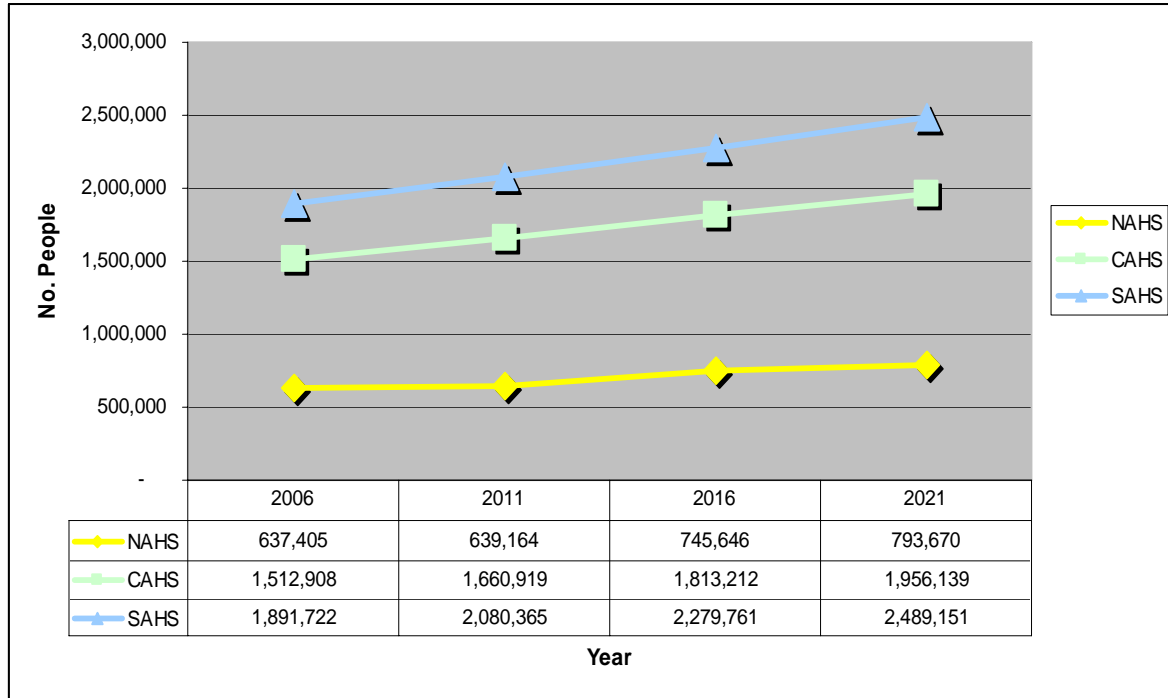
Area population growth

The population projections by Areas are demonstrated in Figure 1 on the next page. The increase in total numbers and percentage is largest for the Southern Area (21%). The Central Area is predicted to grow by 20% and the Northern Area by 17%.

²² Australian Bureau of Statistics 2006, *Census Data Online*, viewed October 2007 <<http://www.abs.gov.au/websitedbs/d3310114.nsf/home/Census%20data>>.

²³ Department of Local Government and Planning 2006, *Population Projections (Medium Series) by Age and Sex 2006 to 2026 for Health Districts (based on 2001) census figures by LGA, 2nd edn.*

Figure 1: Population projections 2006–21



Source: *Population Projections (Medium and High Series) by Age and Sex 2006 to 2026*, Health Service Districts (based on 2001 census figures by SLA) as at October 2006 Version—2nd edition

This pattern reflects the population growth in the two key corridors of South East Queensland—from Brisbane to the Gold Coast and the Sunshine Coast corridor. In response to this population growth, these are key areas for investment in new infrastructure by Queensland Health with new hospitals to be built at the Gold Coast and Sunshine Coast and the new Queensland Children’s Hospital at South Brisbane.

Queensland has a relatively young age profile compared to other states, but population ageing is accelerating as a result of both natural ageing and in-migration from the southern states.

Between 2006 and 2016, the population aged 65 years or more is expected to increase at an average of 5.4% per year: more than twice the rate of the population as a whole. Table 2 shows the expected increase in Queensland’s older population between 2006 and 2016, in both numbers and population share.

Table 2: Population aged 65 years and older in Queensland

| Area | 2006 | | 2016 | |
|------------|------------|--------------------|------------|--------------------|
| | Number 65+ | % Total population | Number 65+ | % Total population |
| NAHS | 64538 | 10.1% | 102727 | 13.8% |
| CAHS | 207484 | 13.7% | 316348 | 17.4% |
| SAHS | 227822 | 12.0% | 348493 | 15.3% |
| Queensland | 499844 | 12.4% | 767568 | 15.9% |

Source: ABS Population Projections, based on 2001 Census

This trend has major implications for rehabilitation service needs in Queensland. The need for

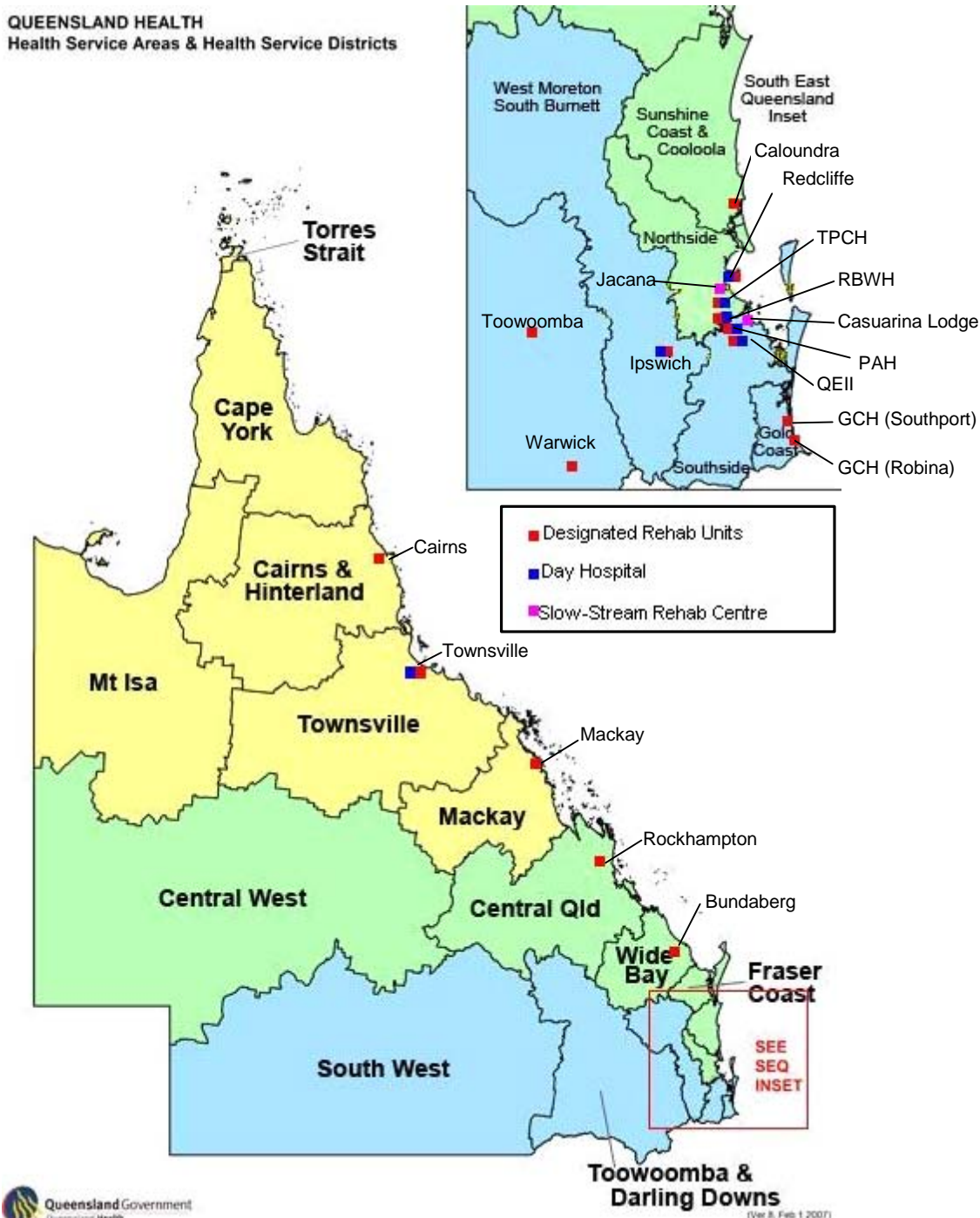
rehabilitation (and other sub-acute) services increases steeply with age. Reflecting this trend, the profile of rehabilitation patients in the public hospital system has been changing over the past decade, with an increase in the proportion of older patients with general debility and/or multiple comorbidities, as distinct from the more traditional impairments of stroke, orthopaedic conditions, neurological conditions, or amputation.

Even among the patient population with more traditional rehabilitation impairments, the average age and degree of frailty of those in public sector rehabilitation units is increasing. This is partly due to factors such as population ageing and more acute interventions in older age groups, but the other factor driving this trend is the increasing provision of private sector rehabilitation services to younger, fitter patients with less complex conditions.

Current service arrangements

Facilities providing rehabilitation medicine services are shown in Figure 2. Most metropolitan and regional hospitals have designated rehabilitation units. Some have rehabilitation services that in-reach to acute wards; others have some—albeit limited—rehabilitation services that outreach into the community. There are very few community-based rehabilitation services across the state. Models of care for rehabilitation vary depending on location, complementary services, historic models, funding and staffing. Some services are led by rehabilitation physicians, some by geriatricians and others may have no specialist medical involvement.

Figure 2: Map of rehabilitation medicine services in Queensland



Inpatient

Table 3 on the next page summarises rehabilitation services as at July 2007, showing a total of 454 designated rehabilitation beds in the public sector and 313 in the private sector. This is equivalent to 19 rehabilitation beds per 100,000 population with 11 public rehabilitation beds per 100,000 population. It is important to acknowledge that some units—for example those at Royal Brisbane and Women’s, Princess Alexandra and Cairns Base Hospitals—are a combination of geriatric and rehabilitation units. In particular, Princess Alexandra Hospital has three units with 76 geriatric and rehabilitation beds. One of these units is dedicated to rehabilitation care, with the other two units operating as a combination of aged care and rehabilitation. The care delivered in these beds can be for other sub-acute care types other than rehabilitation, such as geriatric evaluation and maintenance.

Table 3: Rehabilitation inpatient beds summary June 2007 (including specialist units)

| AHS | HSD | Designated rehabilitation beds | | |
|--|-------------------------------------|--------------------------------|------------|--|
| | | Public | Private | |
| Northern | Cairns and Hinterland | 25 | 10 | 10 beds at Cairns Private Hospital |
| | Cape York | 0 | 0 | |
| | Mackay | 12 | 0 | |
| | Mount Isa | 0 | 0 | |
| | Torres Strait | 0 | 0 | |
| | Townsville | 20 | 0 | |
| Northern total | | 57 | 10 | |
| Central | Central Queensland | 14 | 15 | 15 beds at Mater Hospital Rockhampton (Mercy Boyan) |
| | Central West | 0 | 0 | |
| | Fraser Coast | 0 | 0 | |
| | Northside | 40 | 20 | 20 beds at Peninsula Private Hospital |
| | Royal Brisbane and Women's Hospital | 26 | 33 | 16 beds at Brisbane Private 17 beds at St Andrew's War Memorial Hospital |
| | Royal Children's Hospital | 0 | 0 | |
| | Sunshine Coast and Cooloola | 41 | 36 | 36 beds at Eden Healthcare Centre |
| | Wide Bay | 14 | 0 | |
| Central total | | 135 | 104 | |
| Southern | Gold Coast | 50 | 65 | 45 beds at Allamanda Private Hospital 20 beds at John Flynn Private Hospital |
| | Mater Hospitals | 0 | 20 | 20 beds at Mater Private Hospital |
| | Princess Alexandra Hospital | 76 | 0 | |
| | South West | 0 | 0 | |
| | Southside | 28 | 114 | 20 beds at Mt Olivet Hospital 24 beds at Canossa Private Hospital 46 beds at Greenslopes Private Hospital 24 beds at Sunnybank Private Hospital |
| | Toowoomba and Darling Downs | 16 | 0 | |
| | West Moreton South Burnett | 26 | 0 | |
| Southern total | | 196 | 199 | |
| Specialty Rehabilitation Beds Princess Alexandra Hospital | | 66 | | 26 beds in Brain Injury Rehabilitation Unit 40 beds in Spinal Injuries Unit |
| Queensland total | | 454 | 313 | |

Source: Sub-acute and Rehabilitation Reform Initiative and confirmed by Area Health Services August 2007.

Source for Private Hospital Bed number: Australasian Rehabilitation Outcomes Centre August 2007.

Ambulatory care

Ambulatory care enables health services to be provided without admitting the patient for overnight stay in a hospital. Ambulatory services in Queensland Health are provided through day hospitals, outpatient clinics such as falls clinics (usually attached to acute hospital facilities) and in the community.

The availability and level of outpatient and community rehabilitation services vary across the state. Just over 50% of designated rehabilitation units within Queensland Health have day hospital beds and 70% have outpatient clinics.

Queensland Health operates a number of Community Health Centres that provide a variety and mix of rehabilitation services for patients who are ambulatory and able to access the facility. These clinics vary in format and frequency, based on local need and resource allocation.

Rehabilitation service related initiatives

Community Based Rehabilitation Teams

There are seven existing Queensland Health Community Based Rehabilitation Teams (CBRT). Five of these teams were established as election commitments for stroke rehabilitation. These teams are based at Southside (Logan area), Fraser Coast, Mackay, Northside (Redcliffe Caboolture area), and the Sunshine Coast and Cooloola Health Service Districts. The other two CBRTs are located at QEII Hospital and The Prince Charles Hospital.

The purpose of CBRTs is:

- to improve access for patients to community-based rehabilitation services closer to their place of residence and allow the patient's family to be more involved in their rehabilitation
- to reduce demand on hospital-based rehabilitation programs
- to enable earlier discharge from hospital services.

The five CBRTs initially funded to provide stroke rehabilitation services now provide rehabilitation medicine services more broadly. Each of these teams varies according to staffing levels and the model of care. In 2008, an evaluation will explore the models of care used and identify other locations in Queensland that would benefit from the addition of a CBRT.

Driver assessment services

Driver assessments are conducted by specially trained occupational therapists who are able to provide an assessment and rehabilitation to drivers with medical conditions or disabilities. There are issues identified by rehabilitation clinicians with the provision of publicly funded driver assessments for rehabilitation patients. These include: limited publicly funded services available with long waiting lists, significant demand for driving assessments and lack of clear Queensland Health policy on driver assessments.

Health Precincts

Queensland Health has identified Health Precincts as a model for the provision of community-based services in selected major regional centres and in urban growth areas, where the population is projected to grow rapidly over the next 20 years. Health Precincts will offer a comprehensive range of co-located public, private and non-government health and human services matched to the local population profile. The model will establish the opportunity to provide rehabilitation medicine services in selected communities.

Pain management

Management of chronic (persistent) pain is a significant issue for many people, including many of those with a disability who require rehabilitation. It is seen as a core component of rehabilitation medicine. The only comprehensive interdisciplinary pain clinic in South East

Queensland is located at the Royal Brisbane and Women's Hospital (RBWH) and has a long waiting list to access services. There is no designated paediatric chronic pain service. Paediatric patients are referred to the interdisciplinary pain clinic at RBWH.

Townsville, Gold Coast, Sunshine Coast, Rockhampton and Princess Alexandra Hospital run small interdisciplinary pain clinics. Coordinated statewide planning for chronic pain services is currently being considered.

Pathways Home

Under the 2003–08 Australian Health Care Agreement, the Australian Government has provided funds as part of the Pathways Home Initiative. Queensland Health has matched these funds, which have been specifically targeted for building rehabilitation capacity, and since 2004, a range of initiatives have been implemented across Queensland with a total budget of \$9 million. Projects have included:

- Rehabilitation and Geriatric Evaluation and Management Performance Indicators (GEMS)
- Recording of a Delayed Assessed Separation Event (DASE)
- Queensland Health Community Rehabilitation Workforce Project
- various capital projects funded in some Health Service Districts, including
 - refurbishment of some rural sites to enhance rehabilitation and transitional care
 - construction of innovative rehabilitation and step-down care at a range of sites across Queensland.

Program funding will continue until July 2008.

Patient outcome data submission to Australasian Rehabilitation Outcomes Centre (AROC)

In order to progress systematic and standardised comparison of performance of its designated rehabilitation services, Queensland Health has recently entered into an arrangement with AROC—based at the University of Wollongong—for the provision of Queensland Health patient information to be included in national AROC collections. This central national database uses data from different jurisdictions to compare rehabilitation patient outcomes for benchmarking.

Rehabilitation engineering

Services collectively called 'rehabilitation engineering' supply the rehabilitation patient with certain assistive technologies—for example, customising wheel chairs and modifying aids for daily living. The Department of Rehabilitation Engineering (REC) in Central Area Health Service provides services for the state at the Royal Brisbane and Women's Hospital. Patients are currently experiencing lengthy delays to access these services. For example, patients are experiencing waits of nine months for customised seating and five months for aids to assist with pressure ulcer management. Patients who live outside the south-east corner of the state or who are physically unable to attend the REC are further disadvantaged as REC is unable to provide outreach services.

Current patterns of use

Analysis of rehabilitation patients

Patients requiring rehabilitation medicine can be treated either in dedicated rehabilitation units or in acute beds under the guidance and care of a rehabilitation professional (such as a rehabilitation physician or geriatrician). The Queensland Health Admitted Patient Data Collection (QHAPDC) can identify patients who receive rehabilitation care via a 'care type' indicator that, for rehabilitation patients, can have the care types shown in Table 4.

Table 4: Rehabilitation care types

| Care type code | Care type |
|----------------|--|
| 21 | Rehabilitation—delivered in a designated unit |
| 22 | Rehabilitation—according to a designated program |
| 23 | Rehabilitation—principal clinical intent |

Source: *Queensland Health Data Dictionary*

The following analysis is based on an extract from QHAPDC for the year 2005–06 for patients with the care types listed in Table 4. It includes patients receiving rehabilitation for acquired brain injury and spinal cord injury who have been classified with these care types. It does *not* include patients receiving other acute or sub-acute care types (such as geriatric evaluation and maintenance, psychogeriatric maintenance care or palliative care). All analyses of bed numbers are based on a 90% occupancy rate for rehabilitation beds.²⁴

In 2005–06, there were 33,746 separations for rehabilitation care type 21, which represents two-thirds of total rehabilitation activity. Table 5 shows the numbers of patients by overnight and day-only status in public and private hospitals.

Table 5: Rehabilitation separations by hospital type and stay type

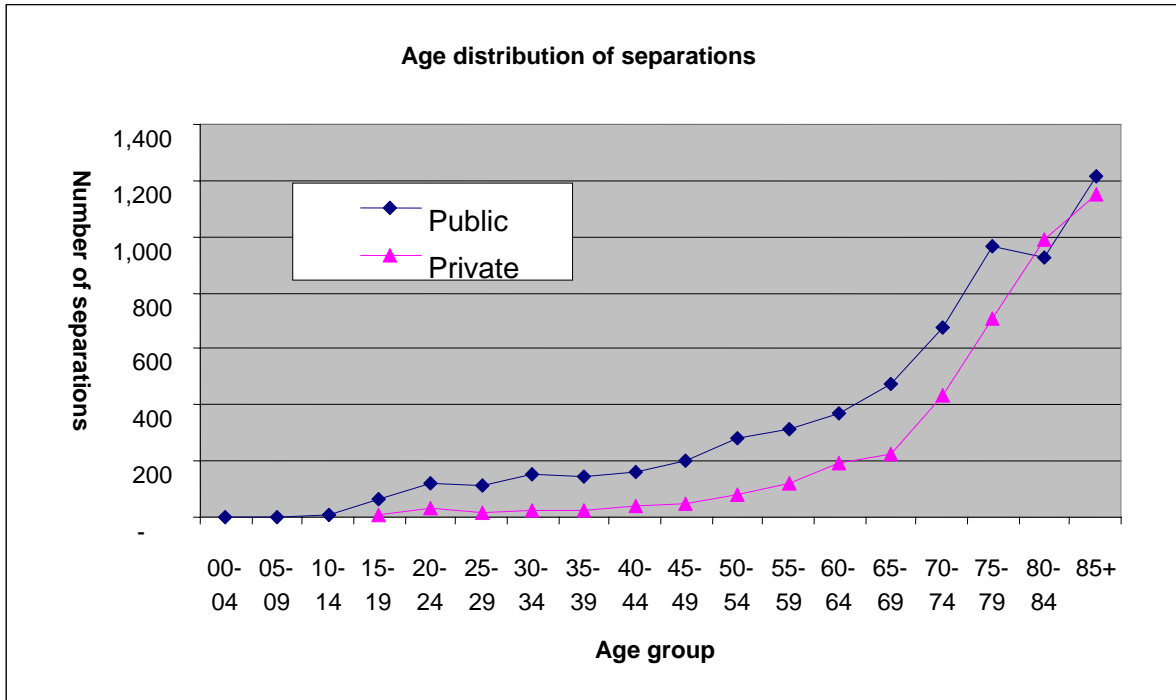
| Hospital type | Day only | Overnight | Total |
|---------------|---------------|---------------|---------------|
| Public | 9,754 (42%) | 6,187 (60%) | 15,941 (47%) |
| Private | 13,708 (58%) | 4,097 (40%) | 17,805 (53%) |
| Total | 23,462 (100%) | 10,284 (100%) | 33,746 (100%) |

Source: QHAPDC 2005–06

By far the greatest number of patients using rehabilitation inpatient services care in 2005–06 occurs in the older age groups (both in public and private sectors) as shown in Figure 3.

²⁴ New South Wales Health (2008) Service Planning Series Occupancy Rates Benchmarking V1.0
This report examines national and international benchmarks for subacute care

Figure 3: Number of separations by age group, public and private hospitals, 2005–06



Source: QHAPDC 2005–06

Major providers of rehabilitation medicine and other rehabilitation services

Table 6 shows the public hospitals in Queensland that provide rehabilitation care in decreasing order of bed days. All hospitals that deliver rehabilitation care were examined for this analysis. It is evident that several public hospitals provide rehabilitation care in non-rehabilitation-designated beds, as the equivalent bed use exceeds, in some cases significantly, their actual number of designated rehabilitation beds. Major private providers for rehabilitation services include Greenslopes Private Hospital, Allamanda Private Hospital, Mount Olivet, and Canossa, St Andrew’s Private Hospital (Brisbane) and Eden Private Healthcare.

Table 6: Top ten public rehabilitation service providers ²⁵

| Hospital name (<i>italics indicates private hospital</i>) | Total bed days | % of total Queensland bed days | Equivalent bed use* | Actual designated rehabilitation beds as at 31 July 2007 |
|---|----------------|--------------------------------|---------------------|--|
| <i>Princess Alexandra</i> | 36,080 | 14.42% | 110** | 142 |
| <i>Gold Coast</i> | 24,295 | 9.71% | 74 | 50 |
| <i>Royal Brisbane and Women's</i> | 19,608 | 7.84% | 60 | 26 |
| <i>Caloundra</i> | 8749 | 3.50% | 27 | 29 |
| <i>Townsville</i> | 7,867 | 3.14% | 24 | 20 |
| <i>Prince Charles</i> | 7,797 | 3.12% | 24 | 26 |
| <i>Cairns</i> | 6,920 | 2.77% | 21 | 19 |
| <i>Q.E. II</i> | 6598 | 2.64% | 20 | 28 |
| <i>Ipswich</i> | 5702 | 2.28% | 17 | 26 |
| <i>Nambour</i> | 4,944 | 1.98% | 15 | # |

*Based on 90% occupancy rate, 365 days per year

** This figure includes 66 beds for patients receiving care in the Spinal Injury Unit and Brain Injury Rehabilitation Unit. Patients occupying beds in these units flow from all over Queensland and Northern New South Wales

Number unknown

Source: QHAPDC 2005–06

Inter Area flows

Table 7 shows level of self-sufficiency for public patients in each Area Health Service. Interstate flows into Queensland hospitals accounted for 335 separations (and 6,691 patient days or 20 equivalent beds), most of which were from New South Wales (266 separations and 5,237 bed days or 16 equivalent beds), and most of whom received care in the private sector.

Table 7: Public hospital inter-Area flows in public sector

| Area of usual residence | Area Health Service of treatment | | |
|-------------------------|----------------------------------|---------|----------|
| | Northern | Central | Southern |
| Northern | 96.80% | 0.27% | 1.13% |
| Central | 0.76% | 95.14% | 7.03% |
| Southern | 0.15% | 3.48% | 89.13%* |
| Interstate | 2.13% | 1.03% | 2.54% |
| Unknown | 0.15% | 0.08% | 0.17% |
| Total | 100.00% | 100.00% | 100.00% |

²⁵ 83 Public Hospitals provided overnight rehabilitation care types 21,22 and 23 in 2005-06. 44 of these Queensland hospitals provided less than 10 occasions of service.

* While Southern Area Health Service appears the least self sufficient their data includes patients from specialty rehabilitation units who may come from Central Area Health Service, Northern Area Health Service or Northern New South Wales.
 Source: QHAPDC 2005–06
 (% based on percent of total patient days for each AHS)

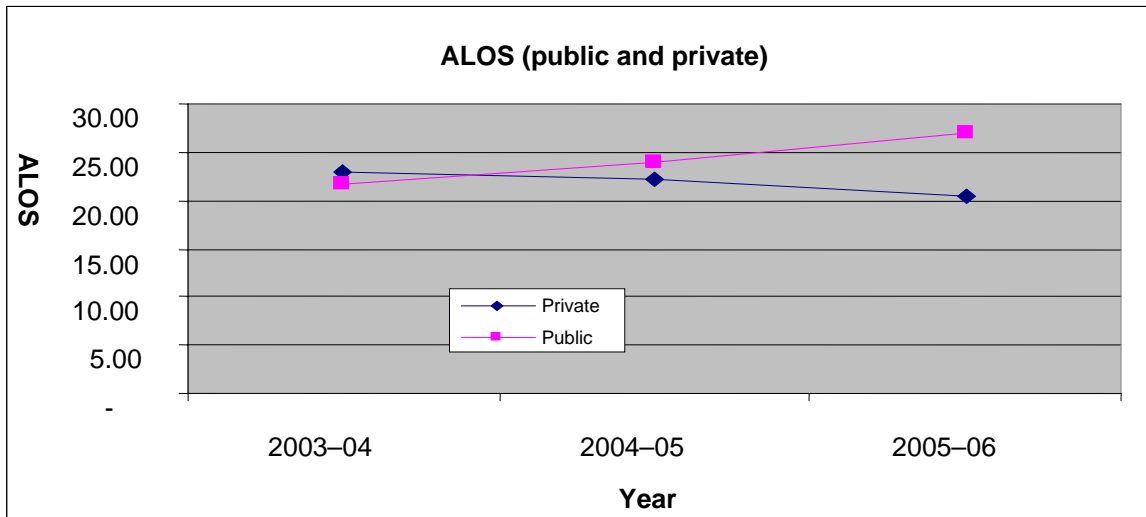
Average length of stay

In the public sector, NAHS had the highest average length of stay (ALOS) of 33 days, compared with SAHS 28 days and CAHS 24 days. This contrasts to the private sector, where private hospitals located in NAHS had the shortest ALOS with seven days, followed by CAHS (20 days) and SAHS (22 days).

ALOS for overnight stays in the public sector was 27 days, compared with 20 days in the private sector. The shorter length of stay in the private sector may reflect the different clinical treatment offered in the public and private sectors, with the public sector performing more rehabilitation services for catastrophic or severe clinical complications or comorbidities.

Analysis of data collected over three years (2003–04 to 2005–06) revealed a downward trend in the ALOS for private hospitals, but an increase in the ALOS for public hospitals (see Figure 4).

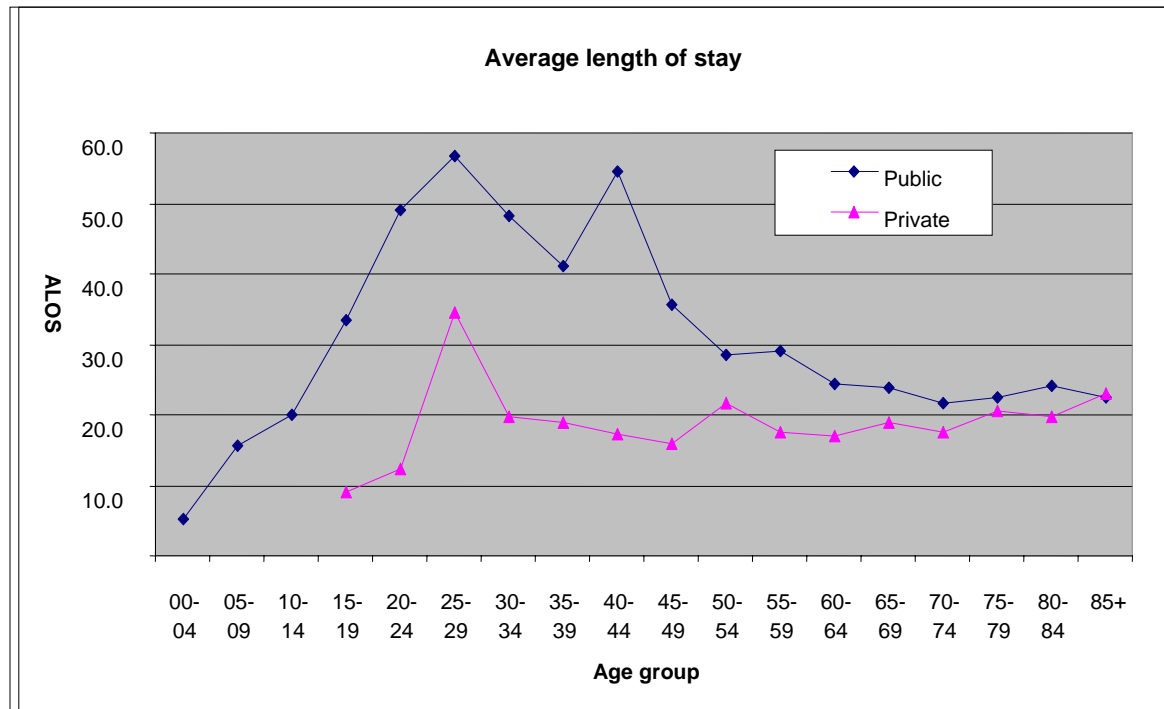
Figure 4: Average length of stay for public and private sectors, 2003–04 to 2005–06



Source: QHAPDC 2003–06

The longest ALOS occurs in the younger patient groups (but not the 0–14 year groups) in the public sector (see Figure 5). This may be a result of the treatment of traumatic injury in younger patient groups (especially spinal cord patients) and subsequent rehabilitation care. Average length of stay also differed by age group across public and private sectors with ALOS being longer for all ages in the public sector, but also having a markedly higher differential in the younger age groups (see Figure 5).

Figure 5: Average length of stay by hospital type and age group



Source: QHAPDC 2003–06

Analysis of patients with rehabilitation sensitive diagnostic related groups

In addition to the designated rehabilitation care types, a large number of acute care beds are occupied by people in a rehabilitative or restorative care phase. Such patients may initially be admitted for an acute episode of care, with appropriate care needs being met in an acute ward; however, the latter part of their stay may be more appropriately termed rehabilitative rather than a continuation of the acute phase. Analysis using ‘rehabilitation-sensitive’ diagnostic related groups (R*-DRGs) uses a proxy measure to identify patients whose care in the acute sector is more appropriately identified as rehabilitation. The methodology used in this section relies on a list of rehabilitation-sensitive DRGs, organised into functional loss groups. These are DRGs in which a significant proportion of patients require rehabilitation care.

To focus on rehabilitation medicine patients, Planning and Coordination Branch further refined this subset. A complete listing of the final set of R*-DRGs chosen for this analysis is in Appendix 2.

QHAPDC data was then used to identify all patients in public hospitals who were separated with the R*-DRGs, and whose care type was not termed ‘rehabilitation’ (i.e. they would not appear in the patient numbers discussed in the previous section). Additionally, this subset was further refined to only include those patients whose care type was listed as ‘acute’—thus other care types, such as maintenance, palliative, geriatric evaluation and management, were not included for further analysis.

The number of separations and total bed days occupied by patients in these DRGs is presented

in Table 8.

Table 8: Rehabilitation sensitive DRGs in the post-acute phase

| | |
|---|---------|
| Number of separations with R*-DRGS in acute public beds where LOS>10 Days | 7,133 |
| Total patient days for those R*-DRGs | 160,058 |
| Assumed acute care days for each R*-DRG | 10 |
| Total acute care days (i.e. first 10 days of stay) | 71,330 |
| Remaining patient days (post-acute i.e. post 10 days) | 88,728 |
| Equivalent rehabilitation type beds (at 90% occupancy)* | 270 |

*To calculate equivalent beds: $\text{Equivalent beds} = (\text{Patient days}) / (365 \times \text{occupancy rate})$

Source: QHAPDC 2005–06

As Table 8 shows, the equivalent of 270 beds was used by patients with rehabilitation-sensitive diagnoses. It is reasonable to assume that these patients occupied beds in acute wards, when they may have been more appropriately cared for in designated rehabilitation wards

Statewide this suggests that a total of 779 beds (509 rehabilitation type care beds and 270 acute care beds with rehabilitation type patients) are actually being used for rehabilitation type care within Queensland public hospitals. There are only 454 formally designated public rehabilitation beds across the state (some beds are contained in geriatric wards so the actual number designated for rehabilitation may be even less). This suggests a shortfall of at least 325 rehabilitation beds (based on actual rehabilitation and rehabilitation sensitive DRG type activity).

Comparison with planning benchmarks

Population-based planning benchmarks are the benchmarks most commonly used to plan inpatient rehabilitation services. As shown in the Table 9, the benchmark used by other jurisdictions ranges from 28–32 rehabilitation beds per 100,000 population. This includes both public and private sector beds.

Table 9: Summary of jurisdictional bed-planning benchmarks

| Source | Rehabilitation beds per 100,000 population |
|--------------------------------------|--|
| NSW Sub-acute bed projections 2006 | 28.8–29.4 |
| NSW Health (1994) | 28–32 |
| Victoria (Dept Human Services, 2001) | 29–32 |

Source: Rehabilitation Services in Tasmania: current situations and future plans

In the absence of any other evidence based benchmark, a Queensland benchmark of 30 beds/100,000 has been adopted (i.e. the median of the benchmarks used above).

The public hospital contribution is approximately 60% of total rehabilitation bed provision. Using the population based benchmark this equates to 19 public beds per 100,000 population. Table 10 compares this benchmark against current public bed provision.

Table 10: Current designated public rehabilitation beds versus planning benchmarks

| Area | Population | Public beds required to meet benchmark | Current public rehabilitation beds | Deficit |
|-------------------------------|------------------|--|------------------------------------|------------|
| NAHS | 637,405 | 121 | 57 | 64 |
| CAHS | 1,512,908 | 287 | 135 | 152 |
| SAHS | 1,891,722 | 359 | 196 | 163 |
| Specialty Rehabilitation Beds | | | 66 | |
| Total | 4,042,035 | 767 | 454 | 313 |

Source: QHAPDC 2005–06

Table 10 demonstrates that a total of 767 beds should be designated for rehabilitation care in Queensland public hospitals. There are currently 454 designated beds, indicating a need to increase designated rehabilitation beds by 313 to meet this benchmark.

A comparison of the suggested rehabilitation bed allocation—based on the population-based benchmark with the actual bed use identified in the preceding analyses (consisting of 509 beds used for rehabilitation type care and 270 rehabilitation-sensitive DRG beds)—reveals close congruence between the benchmark (767) and actual bed use (779 beds). It could therefore be argued that the benchmark of 19 public beds per 100,000 population provides a relatively accurate prediction of the number of beds that should be designated to rehabilitation type care.

The identified deficit of 313 beds would actually decrease to a deficit of 43 beds *if all the acute beds that are currently used for rehabilitation (270) were formally re-designated as rehabilitation beds*. Such a re-designation would *not* result in a decrease in Queensland public hospitals' ability to provide acute services, *as these 270 beds are currently not providing acute care*. Thus, the actual number of new rehabilitation beds required is 43 across state public hospitals.

Data summary

- One-third of rehabilitation care occurs outside of designated rehabilitation units, which may have implications for the quality of care that can be delivered to those patients outside of formal rehabilitation settings.
- Based on population benchmarks, Queensland has a shortfall of 313 designated rehabilitation beds.
- Data analysis of bed use in Queensland public hospitals shows that there are approximately 270 acute care beds currently being utilised by rehabilitation patients. If these beds were designated to rehabilitation, the shortfall of designated rehabilitation beds is 43 across the state
- Private sector activity differs from public sector activity in that the public sector is more likely to treat patients who may require more extensive and intensive rehabilitation care.

Projected demand

Based on a planning benchmark of 19 public beds per 100,000 population and population projections, the projected rehabilitation bed numbers (by AHS) required for future years is outlined in Table 11.

Table 11: Projected public bed numbers required by AHS in future years

| AHS | Year | Population* | Number of public beds needed (based on 19 per 100,000) |
|----------|-------------------|-------------|---|
| Northern | 2006 | 637,405 | 121 |
| | 2008 [#] | 659,576 | 125 |
| | 2011 | 692,832 | 132 |
| | 2016 | 745,646 | 142 |
| Central | 2006 | 1,512,908 | 287 |
| | 2008 [#] | 1,574,578 | 299 |
| | 2011 | 1,667,082 | 317 |
| | 2016 | 1,813,212 | 345 |
| Southern | 2006 | 1,891,722 | 359 |
| | 2008 [#] | 1,964,694 | 373 |
| | 2011 | 2,074,153 | 394 |
| | 2016 | 2,279,761 | 433 |

*Population projections sourced from Queensland Health InfoBank

[#]Based on linear interpolation of 2006 population and 2011 forecast population

Demand for ambulatory, outpatient and other community based services

There is insufficient data collected to accurately assess demand for ambulatory and community-based services. Some of the hospitals in metropolitan areas collect some data; however, this is not considered rigorous enough to be used to draw evidenced based-conclusions on which to base this Plan. Further analysis of locally available data may inform Cluster-based planning.

Specialised rehabilitation medicine services

Spinal cord injury rehabilitation

Incidence

In 2005–06, 68 people with acute spinal cord injury were admitted to the Spinal Injuries Unit (SIU) at the Princess Alexandra Hospital (PAH) in Brisbane. The number of patients admitted to SIU may not correlate to the number of patients who have suffered a spinal cord injury as not all people—especially those with less severe injuries—will be referred to the SIU. Data on the incidence of new spinal cord injury is not available.

The SIU is a combined acute and rehabilitation unit that admits people directly from the accident and emergency department or ICU. As a result, patients may not commence the rehabilitation episode of their care immediately. Of these admissions, 74% had traumatic injuries and 26% had non-traumatic injuries. Traumatic spinal cord injury is caused by accident, for example, motor vehicle accident, fall or diving injury. Non-traumatic spinal injuries occur as a result of conditions such as tumours, epidural abscesses and infections.

Due to the nature of spinal cord injuries, the patient may initially require time in the acute sector (usually acute episode in SIU or in an intensive care unit) to stabilise the spinal cord and receive treatment for other injuries. The ALOS in SIU in 2005–06 rose slightly to 150 days (including the acute episode time in SIU and the rehabilitation period). This represents an increase of six days on 2004–05 figures.

Current service arrangements

The Queensland Spinal Cord Injuries Services is made up of the SIU, the Transitional Rehabilitation Program and Spinal Outreach Team. It services Queensland and northern New South Wales.

The SIU is a 40-bed inpatient unit, with six beds for acute spinal patients, 30 committed for rehabilitation and four beds funded for re-admissions due to complications such as pressure ulcers and urinary tract infections. There are no designated spinal injury beds in Queensland outside the SIU in Brisbane.

The Transitional Rehabilitation Program (TRP) provides additional time-limited, patient-centred goal-directed rehabilitation services for people with spinal cord injuries who have undergone inpatient rehabilitation in the SIU. The program is designed to relocate the final weeks of rehabilitation from the hospital setting to the community and provides interdisciplinary rehabilitation for 50 to 60 spinal cord injury patients per year, as they make the transition from hospital rehabilitation to community living. TRP services are provided in the home-like setting of TRP accommodation or in the patient's home if they reside within approximately 120 kilometres of the PAH.²⁶

The Spinal Outreach Team (SPOT) assists patients with spinal cord injuries by providing ongoing care and management of their spinal cord injury. The team comprises occupational therapists, physiotherapists, social workers and clinical nurses and provides advice on equipment, home modifications, work and educational information, posture and seating issues, bowel and bladder management, pain management techniques, community services, counselling and activities of daily living. SPOT is able to offer these services through home visits only to patients who reside within 200 kilometres of PAH due to limited resources.

²⁶ Queensland Health 2007, *Transitional Rehabilitation Program*, Queensland Government, <<http://www.health.qld.gov.au/qscis/TRP.asp>>.

SPOT has an average of 433 new referrals per year and provides over 6,500 occasions of service.²⁷ There is a steady increase in the number of referrals with over a third in rural and regional areas.

The North Queensland Spinal Service assists people with a spinal cord injury in north Queensland, including Thursday Island and Papua New Guinea. This is an interdisciplinary service providing clinical intervention, rehabilitation, consultancy and education to patients within Townsville Hospital as well as other clients in the Northern Area Health Service. This is not an inpatient spinal cord injury unit. This service is funded and operates separately from the Queensland Spinal Cord Injuries Services.

Spinal Cord Injuries Response Initiative is a joint program between Queensland Health, Disability Services Queensland and Department of Housing. The Program was developed to facilitate earlier discharge from the Spinal Injuries Unit and provide support for patients with a recent spinal cord injury, in making the transition from the SIU to the community. This transition entails specialised equipment and safe, secure, appropriate and affordable housing with the necessary home modifications and personal care assistance to enable the best possible quality of life through self-determination and community participation. This initiative has enabled patients who have suffered a traumatic spinal cord injury and been treated at the SIU to access greater support in personal care, equipment and capital funding for appropriate accommodation. It has been successful in supporting patients who were not able to be compensated by any other means, such as injuries covered by workers compensation claim or sustained in a motor vehicle accident and are covered under a compulsory third party insurance claim.

Issues

Clinicians across Queensland have identified a number of issues with spinal injury services. These include:

- difficulty accessing SIU beds. Clinicians at some hospitals, including Townsville and Gold Coast, report that some spinal injury patients (often those with non-traumatic aetiology) need to be managed locally due to difficulties accessing SIU beds in Brisbane. However. Data analysis shows that this service has patient demographic in proportion to statewide population disbursement. This does not account for possible increased incidences of spinal injuries in different Area Health Services, for example, anecdotal evidence is that there is a greater incidence of spinal cord injury occurring in Northern Area Health Service.
- lack of infrastructure to support nursing staff to maintain advanced management and clinical skills in the area of spinal cord injuries and rehabilitation nursing
- inadequate levels of allied health staffing
- increasing demand on the services provided by the SIU due to
 - increasing life expectancy as a result of improvements in medical and rehabilitation management. Complications of spinal cord injury can develop as patient ages and lives longer. These include progressive bowel and bladder problems, degenerative changes in upper limb joints and neurological deterioration from peripheral nerve compression
 - an increase in incidence of patients with a pre existing mental health and drug and alcohol dependency at time of the spinal cord injury
 - spinal cord injury patients being ventilator dependent. Only in the last 10 years have patients who require permanent ventilation following spinal cord injury survived. Patients with a spinal cord injury who require permanent ventilation are a new patient group. No additional staff have been provided to manage these patients
- the age and limited space of the facility. Housed in an old building, the SIU is not optimally configured to support contemporary clinical practice

²⁷ An occasion of service is an examination, consultation, treatment or other service provided to a non-admitted patient in a functional unit of a health service facility. Examples of occasions of service are outpatient appointments and community health visits. An occasion of service may consist of a number of service events. *Queensland Health Data Dictionary*

- equity of access to Spinal Cord Injuries Response Initiative. This initiative was established to facilitate the discharge of patients from the SIU and as such is not available to patients who have suffered a spinal injury but have not been admitted to the SIU.

Acquired brain injury rehabilitation

Incidence

Acquired brain injury (ABI) can result from a number of causes, including head trauma, stroke, hypoxia, infection, tumour, substance abuse, stroke and degenerative neurological disease. It can cause physical, cognitive, psychosocial and sensory impairments, which may cause severe restrictions to a person's quality of life.

The most recent report by the Australian Institute of Health and Welfare²⁸ identified that Queensland has the highest incidence and prevalence of acquired brain injury (ABI) in Australia. According to this report:

- Queensland has an ABI prevalence of 2.5% for people younger than 65 years. This rate is significantly higher than the Australian average of 1.8%, even after accounting for differences due to age and sex
- ABI is common. One in 45 Australians (432,700 people) had an ABI with a permanent activity limitation (in self-care, mobility or communication) due to their disability. Almost three-quarters of these people were aged less than 65 years.

Current service arrangements

In spite of the high rate of brain injury, the number of brain injury rehabilitation beds in Queensland is relatively low in comparison with other states.

Table 12: Publicly funded inpatient beds for brain injured patients

| State | *Beds per population | # Adjusted Queensland figures |
|--|--|--|
| Queensland | 1 bed per 152,461 of state population 0.65 beds per 100,000 of state population | Currently 26 beds |
| South Australia (receives patients from NT) | 1 bed per 55,071 of state population 1.82 beds per 100,000 of state population | Approx. 72 beds |
| Western Australia | 1 bed per 69,313 of state population 1.44 beds per 100,000 of state population | Approx. 57 beds |
| New South Wales | 1 bed per 141,129 of state population 0.71 beds per 100,000 of state population | Approx. 28 beds (Note: relates solely to Traumatic Brain Injury patients) |

Source: BIRU-PAH Benchmarking Report

*Bed numbers and population statistics are current as at 30 June 2006. Beds refer to publicly funded ABI beds for individuals aged between 16–65 years, except where otherwise stated.

#Adjusted figures represent the number of ABI beds needed in Queensland to match that of the rate for the corresponding state.

The Brain Injury Rehabilitation Unit (BIRU) is the only one in the state, located at the PAH in Brisbane. This 26-bed unit services Queensland and Northern New South Wales. It provides intensive rehabilitation for those patients with an acquired brain injury who meet BIRU admission criteria.²⁹

²⁸ Australian Institute of Health and Welfare 2007. *Disability in Australia: acquired brain injury*. Bulletin no.55. Cat no. AUS 96. Canberra. AIHW.

²⁹ Queensland Health 2007, Brain Injury Rehabilitation Unit (BIRU) Referrals

Slow-stream rehabilitation

The aim of slow-stream rehabilitation services is to maximise functional recovery, minimise long-term disability and optimise the quality of life of severely injured patients who are slow to recover. Brain-injured patients move from the acute sector to slow-stream therapy and then, ideally, into the community to longer term supported accommodation. Two centres provide slow-stream rehabilitation for brain-injured patients; Jacana in CAHS (providing eight dedicated ABI slow stream beds) and Casuarina Lodge in SAHS (with five).

Acquired Brain Injury Outreach Service

The Acquired Brain Injury Outreach Service (ABIOS) facilitates community integration for people with acquired brain injury, and provides training and consultancy to service providers and carers. Services include client assessment, rehabilitation service coordination, counselling, behaviour management, family education, advocacy, independent living skills, vocational goal setting, pre-vocational activities and referral to appropriate services. Client programs are based in the community and include a range of services and supports to assist people in establishing themselves in their own community. ABIOS assists the patient and their family to build formal and informal networks of support, based on individual need.³⁰

The Skills to Enable People and Communities (STEPS) program was established and managed by ABIOS and is funded until 2008 by the Department of Health and Ageing Pathways Home initiative. This program has developed a model of self-managed support networks for people with ABI to provide:

- resources to establish and sustain individual and group self management strategies and programs
- training of community facilitators to develop and sustain support networks
- a group intervention comprising a core curriculum to establish networks in metropolitan and regional Queensland
- sustainability through use of existing services such as community health, neighbourhood centres and disability services.

The principal aim of STEPS is to improve the health, psychosocial and environmental outcomes for people with ABI and their families. Additionally, it is expected that STEPS will improve the knowledge and perceived ability of communities to support people with ABI.

Issues

Clinicians across Queensland have identified a number of issues with ABI services. These include the following.

- The lack of ABI beds causes significant 'bed block' in the acute sector. There are patients awaiting admission to BIRU who remain in neurosurgical or other beds in public hospitals. Due to the associated cognitive impairments often suffered with this type of injury, these patients are often difficult to manage in acute and general rehabilitation wards.
- There are limited slow-stream brain injury rehabilitation beds. This also affects patient flows from the acute sector, as patients can experience lengthy delays waiting for an available slow-stream bed. Slow-stream beds also become "blocked" when patients, who are no longer benefiting from such rehabilitation, are unable to be transferred to the community due to the lack of community care options, specifically appropriate accommodation and community care support. (This issue is being further investigated through a Memorandum of Understanding between Disability Services Queensland and Queensland Health).
- There is a lack of community services for ABI patients. Due to resource constraints, ABIOS is only able to case manage patients who reside within a 150-kilometre radius of Brisbane.

<<http://paweb.sth.health.qld.gov.au/sqrm/qiu/dmp>>.

³⁰ Queensland Health 2007, *Acquired Brain Injury Outreach Services ABIOS*, Queensland Government, <<http://www.health.qld.gov.au/pahospital/services/abios.asp>>.

- Unlike some other jurisdictions, Queensland does not offer a comprehensive suite of services (including community-based rehabilitation teams for ABI patients). The day hospital at the PAH is only able to offer a limited number of appointments per week for ABI rehabilitation. Other ABI services across Australia have capacity to offer outpatient/community based services up to five days per week.
- Some ABI patients, who are unable to access BIRU or ABIOS services, access general outpatient rehabilitation services, which may not appropriately address ABI patient needs.
- There is a lack of cohesive statewide organisational structure and established networks.

Amputee and prosthetic rehabilitation

Incidence

In Queensland in 2005–06, 121 new amputations were performed.³¹ Data on the number of amputees requiring rehabilitation treatment is not available.

Current service arrangements

Amputees are cared for in acute, geriatric and rehabilitation settings across Queensland. The rehabilitation of a person following an amputation requires early specialist expertise and long-term follow up.³² Queensland hospitals do not consistently deliver or follow the same clinical management following amputation. Some hospitals lack a full interdisciplinary team, and the entire rehabilitation program is dependent on one practitioner or discipline (usually a physiotherapist). In the absence of a rehabilitation physician, geriatrician or interdisciplinary team, this person may sometimes be required to determine the eligibility of patients to receive ongoing prosthetic rehabilitation.

On discharge, patients will ideally attend an amputee clinic—usually provided by a public hospital—for ongoing interdisciplinary amputee rehabilitation and prosthetic prescription. The Queensland Amputee Limb Service (QALS) is the administrative body of Queensland Health responsible for the provision of artificial limbs (prostheses) and related prosthetic services to eligible residents of Queensland. Currently, 3,500 amputees are registered with QALS and being reviewed at Amputee Clinics across Queensland.

Issues

QALS conducted focus groups in 2006 to identify key issues in amputee services. Patients reported the following.

- The care and treatment provided are disjointed.
- They were uninformed of their long term care requirements after the early stages of amputation and treatment.
- They experienced inconsistent care and treatment during the rehabilitation stage.
- They were confused about the range of prosthetic services available to them.

Clinicians also identified a number of issues with amputee services. These include the following:

- While the interdisciplinary team approach prior to amputation and during the rehabilitation period is ideal, it is not available in some parts of the state.
- There is a need to review amputee services to establish and implement a best practice model of care.
- Three hospitals, Royal Brisbane and Women's, Princess Alexandra and The Townsville Hospitals offer publicly funded prosthetic and orthotic services. Private providers are also

³¹ Queensland Hospitals Admitted Patient Data Collection 2005-6.

³² Department of Human Services Rehabilitation into the 21st Century —A Vision for Victoria.

contracted by Queensland Health to conduct prosthetic and orthotic services. However, the availability of publicly funded prosthetic and orthotic services, which are integral to amputees, also varies significantly across the state.

Severe burns rehabilitation

Incidence

The number of people with burns injuries is increasing each year—from 200 in 2001, to 255 in 2003, to 340 in 2005. With improvements in the management of burns the survival rate of patients with severe burns has also increased.³³ This in turn increases the number of burn patients requiring rehabilitation. Patients with burns of greater than 25% total body surface area require intensive rehabilitation given the extent of their injuries, and this represents 10–15% of total burns admissions.³⁴ Rehabilitation following a burn is complex with patients experiencing ongoing physical and psychological issues.

Burns patients requiring rehabilitation are currently managed in three ways. They are:

- transferred to the Geriatric Assessment and Rehabilitation Unit (GARU), located close to the Royal Brisbane and Women's Hospital (even though the mean age of a severe burn patient is 38 years)³⁵
- managed in an acute bed, with available acute burn staff providing rehabilitation when able according to their work loads, with acute care necessarily prioritised over rehabilitation care
- referred to other rehabilitation services that may not be staffed by nurses or allied health staff skilled in rehabilitation for patients with severe burns.

The Professor Stuart Pegg Adult Burn Centre at Royal Brisbane and Women's Hospital is the only adult burns unit in Queensland. Patients access this unit from across Queensland, northern New South Wales and the Pacific Islands. This unit consists of six acute beds and there is no specific funding for rehabilitation for burns patients.

Issues

Clinicians across Queensland have identified a number of issues with burns rehabilitation services. These include the following.

- There are no dedicated burns rehabilitation beds in the burns unit and there is a lack of other designated rehabilitation beds onsite at the Royal Brisbane and Women's Hospital. Other states in Australia provide designated rehabilitation beds within their burns unit, where staff have the specialised allied health skills to deliver a quality rehabilitation program under the care of both a rehabilitation physician and a burns surgeon.
- Adolescents and patients younger than 65 years of age may receive rehabilitation in a geriatric assessment and rehabilitation unit.
- There is a lack of allied health staff with the expertise to care for burns patients.
- With continued improvements in the resuscitation and intensive care management of patients with severe burns, they are more likely to survive, but require extensive rehabilitation, including physiotherapy (in excess of three hours per day), occupational therapy, speech pathology, psychology, nutrition advice and other services.

³³ Data supplied by Professor Stuart Pegg Adult Burn Centre

³⁴ Herndon D (2002) Total Burn Care. Second edition. WB Saunders. London

³⁵ Management of burns rehabilitation patients 2004–07, Professor Stuart Pegg Burn Centre

Paediatric rehabilitation services

Paediatric rehabilitation is complex. It needs to take into account the growth and developmental stage of the child. While adult rehabilitation is directed at restoring function, paediatric rehabilitation focuses on maximising function from early childhood in accordance with developmentally appropriate milestones. Paediatric rehabilitation provides specialised rehabilitation for those children and adolescents with a range of disabilities. These disabling conditions include acquired brain injury, spinal cord dysfunction, cerebral palsy, limb loss or limb deficiency and neuromuscular conditions, for example muscular dystrophy. Paediatric rehabilitation requires physicians, allied health staff and nurses with both paediatric and rehabilitation skills.

Current service arrangements

Currently, Queensland Paediatric Rehabilitation Service (QPRS), based at the Royal Children's Hospital, operates an in-reach, day patient and outreach service. Rehabilitation patients are located in medical or surgical wards, where the focus of care is acute and not rehabilitation. There is no designated paediatric rehabilitation inpatient service in Queensland. As part of the planning for the new Queensland Children's Hospital, a service plan is being developed that has examined current activity and projected future demand for paediatric rehabilitation services (see Table 13).

Table 13: Estimated current and projected paediatric rehabilitation activity

| Service type | Patients per year | | |
|---|-------------------|------------|------------|
| | 2006–07 | 2011 | 2016 |
| Current activity number | 120 | 148 | 168 |
| Non-referred | 30 | 37 | 42 |
| Cardiac | 10 | 12 | 14 |
| Young people | 20 | 25 | 28 |
| Inpatient rehab—Cerebral Palsy Health Interventions | 20 | 25 | 28 |
| Slow-stream rehabilitation | 10 | 12 | 14 |
| Family transitional living unit (if available) | 10 | 12 | 14 |
| Total patient numbers per year | 220 | 271 | 308 |
| Bed days at LOS of 19 days | 4,180 | 5,141 | 5,852 |
| Beds required at 85% occupancy | 14 | 17 | 19 |

Source: Draft Queensland Children's Hospital Service Plan—Paediatric Rehabilitation

An estimated three to four patients are receiving intensive rehabilitation and a further two to three patients are receiving rehabilitation medicine care in acute beds at the Royal Children's Hospital³⁶. These children have complex needs and regularly require prolonged lengths of stay. Bed availability is restricted. As a consequence, many children and young people fail to receive timely rehabilitation intervention and are at risk of:

- developing preventable medical complications such as muscle contracture and mental health sequelae

³⁶ Draft Queensland Children's Hospital Service Plan—Paediatric Rehabilitation June 2007

- developing avoidable educational and social consequences, such as difficulties at school, inability to return to school, social isolation and risk-taking behaviours
- family stress and disintegration.

Issues

A number of issues have been identified when considering rehabilitation services for children including the following.

- There is a lack of designated rehabilitation beds for children.
- Children with moderate brain injury may miss out on receiving a rehabilitation program, particularly when treated in regional hospitals. These children often encounter difficulties when they return to school and then require additional rehabilitation interventions.
- The number of appropriately trained paediatric rehabilitation physicians, nursing and allied health staff is limited. As paediatric rehabilitation programs need to both maximise function and promote development, this requires a workforce with specialised skills. If the paediatric rehabilitation workforce is not urgently increased, there are concerns that specialised staff numbers will be insufficient to support the new Queensland Children's Hospital planned services, where the current service plan proposes 20 designated paediatric beds commissioned in 2014.
- There are no formalised transitional support services to assist children moving from paediatric to adult care services. These patients have separate needs from adults and many children encounter difficulties adjusting to rehabilitation in adult settings. More children are surviving with complex disabilities and they require specialised young adult rehabilitation and whole-of-life services.

Rehabilitation workforce

Recruitment and retention of a dedicated rehabilitation workforce is imperative for the sustainable future of rehabilitation services in Queensland. This clinical area has in the past suffered a lower profile than other specialty areas of medicine and has encountered difficulties attracting medical staff.

Queensland has fewer rehabilitation physicians than other jurisdictions. This has implications for the training of more rehabilitation physicians with fewer training posts because there are not enough rehabilitation physicians to provide the supervision required.

The Australian Faculty of Rehabilitation Medicine (AFRM) has developed guidelines for staffing levels in designated rehabilitation units, where patients are under the care of a rehabilitation physician. Workforce recruitment and retention has been a clearly articulated priority area in consultation with key stakeholders in the preparation for this Plan.

Rehabilitation physicians

Queensland currently has 21 Fellows of the AFRM; however, not all 21 are actively practising in clinical areas of rehabilitation medicine. In designated rehabilitation units the AFRM benchmark for rehabilitation physicians is 0.5 per 10 patients and 0.625 per 10 patients in specialty units for acquired brain injury and spinal cord injury.

Table 14: Current AFRM Fellows

| | NSW | NT | Qld | SA | TAS | Vic | WA |
|--|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|---------------------------------|----------------------------------|
| Active ³⁷ | 135 | 2 | 21 | 17 | 4 | 76 | 7 |
| Proportion of Fellows per head of population ³⁸ | 1 per 48,962 (.02 per 1,000) | 1 per 100,000 (.01 per 1,000) | 1 per 173,333 (.005 per 1,000) | 1 per 88,823 (.01 per 1,000) | 1 per 117,500 (.008 per 1,000) | 1 per 63,421 (.01 per 1,000) | 1 per 271,42 (.003 per 1,000) |

Source: Sub-acute rehabilitation and reform initiative February 2006.

Queensland currently has 14 rehabilitation registrar training posts across Queensland accredited with the AFRM.

In geriatric units in Queensland, a substantial component of patient care is considered to be rehabilitation medicine. Older patients are more medically complex and may require higher levels of input from nursing, allied health and medical staff. These units are managed by geriatricians. In Queensland, a geriatrician will oversee the geriatric patient's care, including their rehabilitation requirements. It is important to note that Table 15 is based on AFRM benchmarks and therefore does not include benchmarks for Geriatricians. However, anecdotal evidence gathered through consultation also suggests that Queensland is experiencing workforce shortages across medicine, nursing and allied health. As this plan does not focus on the older person, these shortages have not been fully explored.

An ideal situation for workforce would be that Queensland has sufficient numbers of geriatricians for the care of the frail aged including meeting their rehabilitation needs, and

³⁷ Fellows as at 17 February 2006. Source data supplied by Dr T Geraghty to Sub-acute and Rehabilitation Reform Initiative February 2006.

³⁸ Information provided to the Australian Bureau of Statistics by Auslig, the Australian Surveying and Land Information Group.

sufficient numbers of rehabilitation physicians who would support the rehabilitation care needs of those who are not frail aged.

Nursing

Nursing staff levels are also below AFRM benchmarks across the state. In designated rehabilitation units the AFRM benchmark for nurses is 12.2 per 10 patients. Specialty units, such as the Spinal Injuries Unit, have particularly reported difficulties in recruiting staff to work in rehabilitation. There is also a lack of appropriately trained and experienced nurses to supply the necessary mentoring and support for nurses who enter this field. These factors impact on the standard of care that nursing staff are able to administer to rehabilitation patients. Interest has been expressed by nursing directors of rehabilitation to enter into an agreement with a tertiary institution to develop modules to upskill nurses to work in designated rehabilitation units. For this to be sustainable, senior nurses need to operate in clinical nurse consultant or nurse educator roles to ensure appropriate support for all nurses wishing to move into work in the rehabilitation sector. Ideally these modules should be adaptable to allied health.

Allied health workforce

Adequate allied health staffing is integral to providing quality rehabilitation services. Feedback from allied health staff suggests the work pressures associated with lower staff numbers and limited professional development time are barriers to recruitment and lead to poor retention. In particular, rural and regional areas experience difficulty in recruiting specialist allied health professionals.

The Community Rehabilitation Workforce Project is funded by the Commonwealth Department of Health and Ageing Pathways Home Program until June 2008, and has contributed towards identifying and supporting new models of care and workforce redesign in community rehabilitation. Areas of interest include:

- two new postgraduate courses in community rehabilitation
- training and development activities for over 500 allied health and nurses, 70 postgraduate scholarships and research scholarships, with a further 30 being offered in 2008
- developing and piloting the advanced community rehabilitation assistant role
- funding the development of a relevant, national qualification for allied health assistants in community rehabilitation.

Providing these workers are appropriately supervised by allied health staff, the development of the allied health assistant role is an important step in developing the future rehabilitation workforce.

Table 15: Current staffing levels compared to AFRM benchmark

(Please note: benchmarks are calculated on staffing ratio per 10 patients).

| AHS | Service location | Nursing | PT | OT | SP | SW | Clinical psych | Neuro-psych | Rehab physician |
|------|---|---------|------|------|------|------|----------------|-------------|-----------------|
| | AFRM benchmark for general designated rehabilitation unit | 12.2 | 1.5 | 1.35 | 0.6 | 1 | 0.4 | 0.2 | 0.5 |
| NAHS | Mackay Base Hospital | 14.3 | 0.8 | 0.8 | 0 | 0.4 | 0 | 0 | 0 |
| | Townsville Hospital | 10.2 | 1.5 | 1.5 | 1 | 0.5 | 0 | 0.3 | 0.5 |
| | Cairns Hospital | 8.0 | 1.2 | 0.8 | 0.4 | 0.4 | 0 | 0 | 0.4 |
| CAHS | RBWH | 10.25 | 1.1 | 0.7 | 0.3 | 0.3 | 0 | 0 | 0.3 |
| | Rockhampton Hospital | 1 | 1.1 | 1.3 | 0.36 | 0.4 | 0.36 | 0 | 0 |
| | Redcliffe Hospital | 9.5 | 1.4 | 1 | 1 | 0.35 | 0.14 | 0 | 0.07 |
| | Bundaberg Hospital | 9.5 | 1.07 | 1 | 0.14 | 0.8 | n/a | n/a | 0.1 |
| | Caloundra Hospital | n/a | 1.0 | 0.96 | 0.3 | 0.52 | n/a | n/a | 0.3 |
| | TPCH | 10.85 | 0.3 | 0.96 | 1.05 | 0.67 | n/a | 0.5 | n/a |
| SAHS | QEII Hospital | 8.4 | 1.03 | 0.8 | 0.34 | 0.17 | 0 | 0 | 0 |
| | PAH | 6.5 | 0.79 | 0.7 | 0.2 | 0.34 | 0 | 0 | n/a |
| | Toowoomba Hospital | 10.57 | 1.5 | 1 | 0.4 | 0.5 | 0.2 | 0 | 0 |
| | Gold Coast Hospital—Southport | 12.5 | 1.5 | 1.5 | 0.75 | 0.5 | 0 | 0 | 0.4 |
| | Gold Coast Hospital—Robina | 10 | 1.0 | 1.0 | 0.3 | 0.3 | 0 | 0 | 0.3 |
| | Ipswich Hospital | 23.61 | 0.4 | 0 | 0 | 0 | 0.4 | 0 | 1.0 |
| | Warwick Hospital | n/a | 1.6 | 1.6 | 1.6 | 1.6 | n/a | 0 | n/a |

| AHS | Service location | Nursing | PT | OT | SP | SW | Clinical psych | Neuro-psych | Rehab physician |
|------------------------------|-------------------------------------|---------|-----|------|------|------|----------------|-------------|-----------------|
| Statewide Specialty Units | AFRM benchmark Spinal Injuries Unit | 12.8 | 2 | 2 | 0.25 | 1.2 | 0.5 | n/a | 0.625 |
| | Spinal Injuries Unit PAH | 14.27 | 1.5 | 1 | 0.07 | 0.75 | 0 | 0.125 | 0.375 |
| | AFRM benchmark Brain Injuries Unit | 11.75 | 1.5 | 1.8 | 1.5 | 1.2 | 0.7 | 0.5 | 0.625 |
| | BIRU PAH | 8.54 | 1.3 | 0.96 | 0.78 | 0.77 | 0 | 0.385 | 0.576 |

Source: Sub-acute and Rehabilitation Reform Initiative data, updated and confirmed by Area Health Services Planning August 2007

Key service issues

Issues in delivering rehabilitation services have been highlighted in previous planning activities. In 1999, a service status audit of rehabilitation services across Queensland was conducted to understand resource and workforce shortfalls. Further consultation has been undertaken for recently developed plans including the *Central Area Health Services Adult Rehabilitation Services Plan 2005–10*, the preliminary discussion paper *Rehabilitation Services in the Northern Zone* and the *Rehabilitation/Sub-acute Reform Initiative* completed a draft *Statewide Rehabilitation Plan 2007–12*. Despite these consultation and planning activities, many of the key issues raised over the last decade have not been addressed, nor have substantial changes to rehabilitation service delivery been made.

To consolidate the substantial consultations that have already taken place and to confirm any emergent issues for this Plan:

- key informant interviews were undertaken between July and October 2007 with providers of rehabilitation medicine services across Queensland
- a workshop was convened September 2007, bringing specialists from around the state together with planners, Area Health Service executives and other stakeholders, to prioritise key issues and consider strategies to address these in the short, medium and long term.

Profile of rehabilitation

Rehabilitation services are under resourced compared to the acute sector. This chronic under resourcing contributes to the view of rehabilitation as a secondary consideration and rehabilitation professionals as less vital in ensuring effective patient care.

Rehabilitation medicine has a low profile in Queensland. Strong clinical leadership and investment are needed to raise the profile of rehabilitation services, drive service development and make rehabilitation as a specialty more attractive to clinical staff. Establishing a *Statewide Rehabilitation Clinical Network* could raise the profile and enhance the appreciation of the need for rehabilitation medicine and other rehabilitation services, and provide statewide policy direction, service planning and workforce training.

Access to inpatient rehabilitation services

Providing the appropriate number and distribution of inpatient rehabilitation beds across Queensland is a significant challenge. The current deficiency in rehabilitation beds in Queensland (relative to Australian standards) affects the range and depth of services that can be provided with some patients missing out altogether. Issues include the following:

- There is an estimated shortfall of 270–313 *designated* rehabilitation beds in Queensland public hospitals. This results in ‘bed block’ in the acute environment as patients remain in acute beds, rather than moving to beds designated for rehabilitation medicine.
- Redesignating beds for rehabilitation will result in only a deficit of 0–43 beds. Area Health Services should commence redesignating beds over the next twelve months.
- The limited number and range of specialised rehabilitation medicine services, including consultation with specialist rehabilitation clinicians and access to outreach services, results in delays for people who need to access specialist services and leads to bed blocking in designated rehabilitation units. In addition, these specialist services are concentrated in the south-east corner of the state.
- There is a paucity of ambulatory and community-based services for rehabilitation. This greatly affects patient flows and recovery, as limited access to ambulatory and outpatient services, community-based services, and transitional care services may lead to longer

lengths of stay for rehabilitation patients and delays in accessing an appropriate level of care in the appropriate setting.

- Across the state, access to aged-care facilities, disability services and maintenance therapy is inadequate. This also affects the capacity of inpatient services to discharge some patients, again reducing service efficiency and throughput.

Service integration

Rehabilitation service provision in Queensland is disjointed and fragmented, affecting the ability of services to provide timely and appropriate intervention. This is evidenced by:

- difficulties in 'streaming' patients to the 'right' service, in the 'right' location/setting at the 'right' time
- lack of integration between inpatient rehabilitation services and community-care services
- limited or inconsistent access to certain inpatient program types, such as ABI and spinal injuries services, and outpatient programs
- limited formalised service networks among rehabilitation services in different regions. This limits opportunities to optimise the use of available specialist resources, to support common training/staff development programs and to implement collaborative approaches to patient management.

The rehabilitation service system is complex and the various elements need to link more effectively and be configured to optimise continuity of care. While rehabilitation medicine services often commence in an inpatient setting, they continue across the continuum of care and better interfaces need to occur across the service continuum. This should include a range of human service providers including Departments of Communities, Disabilities, Housing and Transport, and private sector and non-government support services, such as social support services and volunteer support organisations.

Model of service delivery

The ability to discharge patients from an inpatient setting often depends on access to rehabilitation services in the community, such as ambulatory care, outpatient services, and home-based services.

There is a need to increase the capacity of community rehabilitation services, and develop and implement new evidence-based service models. These may include:

- acute care liaison teams, responsible for the timely identification and assessment of potential rehabilitation patients in the acute care setting and for promoting early commencement of rehabilitation
- acute in-reach rehabilitation with mobile teams, enabling early commencement of rehabilitation for patients receiving care in acute care settings following illness, injury and/or surgery, with the aim of preventing functional deterioration and optimising rehabilitation outcomes
- models that support self-management and case management
- increased provision of population health services targeted at early intervention on the rehabilitation continuum (e.g. falls prevention).

Funding rehabilitation

The rehabilitation system is complex in its funding and service provision. In addition to the current under resourcing of rehabilitation services, the growth of acute services continues without the accompanying growth in the sub-acute sector. The challenge is to achieve and maintain a balanced supply of acute care, rehabilitation and other sub-acute inpatient beds to avoid inappropriate use of acute care beds by patients requiring rehabilitation or restorative care.

Queensland operates a no fault compulsory third party insurance scheme. Queensland Health receives block funding from Motor Accidents Insurance Commission (MAIC) which is distributed to the Area Health Services according to the Resource Allocation Model. The cost of providing health care services, including rehabilitation to eligible MAIC patients consistently exceeds the revenue from the MAIC grant with Queensland Health subsidising the shortfall. Other jurisdictions in Australia such as New South Wales and Victoria, operate an at fault compulsory third party scheme which allows full cost recovery for health care services for eligible patients. Increased funding and changing funding models for rehabilitation service provision for insured patients as occurs in other jurisdictions, should be more actively pursued. This will require legislative change.

Workforce

The rehabilitation workforce must be developed in order to provide rehabilitation services at the level required to respond to population needs. Levels of clinical staffing in most designated rehabilitation units are low in relation to Australian standards. To progressively upgrade staffing levels to national standards, there is a need for additional investment, particularly in specialist medical, nursing and allied health staffing.

Specific issues include the following:

- The availability of formal training and development programs for rehabilitation clinicians is limited.
- The lack of therapy/allied health assistants, enrolled nurses/assistants and patient care assistants. Increasing this element of the rehabilitation workforce would allow senior rehabilitation professionals more time to educate patients and their carers, train and mentor less skilled staff and participate in personal professional development activities.
- The shortage of rehabilitation medicine specialist physicians results in challenges in expanding and supporting registrar training and resident supervision.
- The numbers of community and rural allied health staff are limited, and their roles and responsibilities are not always clear. Also, the range and depth of expertise tends to be uneven across disciplines. This reduces the ability to provide community-based interdisciplinary rehabilitation for patients with more complex needs.
- Caring for patients in acute wards where the focus of their care is rehabilitation is challenging for staff and may compromise the care of patients. This patient mix also makes managing the ward staff profile more difficult as skills in both acute and rehabilitation care are required.

Transport

Access to transport is a key factor in limiting access to medical rehabilitation services. The need for patients to leave their family or community to access specialised rehabilitation medicine services, often for long periods of time, places an enormous social and economic burden on the family.

Specific issues surrounding transport and accommodation that need to be considered include:

- improving access to community-based transport for provision of treatment
- providing patients and their escorts with access to appropriate accommodation and adequate financial assistance for travel and accommodation
- addressing the difficulties faced by people who have treatment regimes requiring frequent attendance, or who must attend a range of services with different providers.

These issues are currently being considered through the Integrated Patient Transport Reform Project led by Queensland Health. Specific strategies will be identified within the next 12 months and will need to be integrated in future service planning activities.

Data and information

The complexity of the rehabilitation system and its span across the continuum of care presents challenges for clinicians and patients in accessing and using information. Patients may receive rehabilitation care in multiple places (acute, sub-acute, outpatient and community settings). Currently, information on patients is site specific and not always available electronically. This also hampers the ability of medical, nursing and allied health staff to case conference and work as an interdisciplinary team. In addition, access to information outside the acute environment is minimal.

Designated Rehabilitation units currently enter data into HBCIS according to reporting requirements that provide information about which patients were transferred in a timely manner and the benefits this may have had on functional outcomes. Currently, this service is not reported back to the facility which entered the data.

Queensland Health has recently joined AROC to participate in national benchmarking of rehabilitation outcomes. Some facilities have not been able to participate as they do not have an information system to support data entry or solution exists and data entry is duplicated.

Functional Independence Measure (FIM) scores are used by rehabilitation facilities to measure patient outcomes. To ensure FIM scores are recorded consistently adequate training and accreditation is required. A statewide FIM training strategy is needed.

Evaluation of rehabilitation

This planning process has highlighted the need for a coordinated approach to gathering reliable and consistent information about rehabilitation activity. This would enable meaningful information to be available for monitoring (e.g. unit case mix, level of patient acuity) and evaluation purposes (e.g. patient outcomes), and to inform future service planning. Issues include difficulty quantifying rehabilitation activity, lack of standardised data collection methods and lack of consistent patient outcome measures. It is also necessary to:

- better examine where and to what extent rehabilitation is occurring (by identifying both designated and non-designated beds activity)
- further analyse the distribution of beds across patient groups and the utilisation patterns of high-volume and/or high cost rehabilitation client groups.

This data would assist clinicians, planners and administrators to anticipate demand, plan for services and accurately cost the service.

Issues relating to more specialised rehabilitation services and rehabilitation support services have been identified in previous sections of the Plan.

Principles for rehabilitation service planning

The following principles should be used as the basis for planning future rehabilitation services in the future. These principles have been used to formulate the strategies within the Action Plan.

Principle 1—Respect and involve the patient and their family

The patient is considered an equal partner in the rehabilitation process and has a right to autonomy and choices. Health professionals encourage the patient to take responsibility and make choices for their own health and quality of life. They use a flexible and individualised treatment approach with interventions focusing on roles and activities that are meaningful to the patient, adapting where necessary and being sensitive to age, cultural diversity and gender. It is important to recognise the patient is part of a family and community with all the demands, needs and strengths that this entails.

Principle 2—Provide early intervention and assessment

Early intervention is one of the basic premises of medical, psychosocial and vocational rehabilitation and the key to rehabilitation success. It provides an opportunity to educate the patient, family, and significant others (such as caregivers) about the process and engage their participation. Early assessment and intervention in a hospital or community is necessary to prevent avoidable admissions and functional decline, and to maximise patient outcomes.

Principle 3—Service is delivered by an interdisciplinary team

To deal with the diversity and complexity, the interdisciplinary team works together towards a common clinical goal with clear planned outcomes. The team may involve physical, speech, occupational and recreational therapists, physicians, nurses, social workers, and/or other health professionals. Family and significant others should be included. To work efficiently, members of the team rely on mechanisms to facilitate communication, collaboration, and decision making.³⁹

Principle 4—Care is coordinated

Rehabilitation services are coordinated across acute, rehabilitation and community services to enable each patient to move smoothly from one service to another.

Principle 5—Services are accessible

Patients can access services that will support them to attain a reasonable quality of life. Patients will move across the health system continuum to access the right type of rehabilitation in the right setting for their needs, supported by the appropriate workforce.

³⁹ Wade, D.T., de Jong B.A. (2000) *Recent advances in rehabilitation*. British Medical Journal 320:1385–1388.

Action Plan strategies

Data analysis has validated that Queensland has a shortfall of designated rehabilitation beds, an underdeveloped community rehabilitation sector and a shortage of dedicated rehabilitation clinicians. The consequences are:

- rehabilitation patients occupy acute beds and create 'bed block' in the acute sector
- patients occupying designated rehabilitation beds as they are unable to return home or to their community in a timely manner, or require prolonged stays in other residential care options
- insufficient specialised rehabilitation medicine capacity
- limited and/or insufficient rehabilitation services for Queenslanders.

The future direction of rehabilitation medicine services in Queensland requires increased focus and greater investment. A number of strategies are required, including:

1. Increasing designated beds and ensuring an appropriate mix of acute to rehabilitation beds. The number of beds designated for rehabilitation can be increased by reconfiguring acute beds and opening new designated rehabilitation beds.
2. Raising the profile of rehabilitation as a discipline. A higher profile and greater clinical leadership will assist to recruit and retain staff, and create greater momentum to progress and implement initiatives to improve service provision. A centre of excellence should be established in South East Queensland to provide sustainable clinical expertise in rehabilitation. This centre will incorporate inpatient, outpatient, research and staff training and development.
3. Increasing the services available in the community. Along with providing better inpatient services and more of them, it is necessary to build the service capacity in the community. This should be done on the basis of evidence—what works and what is most cost effective. It will be necessary to develop consistent service models that can be customised to suit local needs.
4. Networking of services. It is necessary to better integrate services to better meet service demand—inpatient care should be coordinated with outpatient and community-based care with clearly identified pathways across the continuum of care.
5. Increasing the funding for rehabilitation. Options to link revenue to service usage need to be investigated.

More detail is provided in the Action Plan on pages 6-14.

The actions to improve the provision of rehabilitation services align with the strategic directions in the *Statewide Health Services Plan 2007–12* (SHSP), particularly:

- 1.1: Establish links between services to create safe and sustainable service networks
- 1.2: Define hospital/facility roles to improve planning and service delivery
- 1.3: Define statewide and superspecialty services to ensure that all Queenslanders have access to highly specialised services that cannot be provided locally
- 1.4: Improve the safety of health services
- 1.6: Develop strategies to assist patients to access services more easily
- 1.8: Work in partnership with other service providers
- 2.2: Build capacity in the community to provide comprehensive health care
- 2.3: Expand acute care services to meet population growth
- 2.4: Increase capacity in services that manage demand in the acute care sector

- 2.5: Improve the efficiency of service delivery
- 3.1: Distribute health care resources efficiently and effectively
- 3.2: Optimise revenue.
- 4.1: Integrate comprehensive patient information to support patient centred care.
- 4.2: Consolidate information to support decision making.
- 4.4: Support delivery of location-independent health services.
- 4.6: Provide trusted information for decision-making, accountability and public reporting.
- 5.1: Develop strategies to grow the health workforce in Queensland to meet service needs.
- 5.2: Develop a framework to determine the best utilisation of workforce skills and labour to meet service demand.
- 5.3: Develop and coordinate support structures to attract and retain the health workforce.
- 5.4: Develop skills and competence maintenance programs for quality assurance and safety.
- 5.5: Develop a workforce to support service reforms.

The Action Plan on page 6 outlines strategies, accountabilities, timeframes and resources required to improve rehabilitation services in Queensland.

Implementation and evaluation

The *Queensland Statewide Rehabilitation Medicine Services Plan 2008–16* provides both the strategic and operational direction to service delivery and resource investment in rehabilitation services statewide. Areas will take main responsibility for developing and implementing operational service plans for major aspects of this document. Governance structures for Queensland Health's rehabilitation medicine services will continue to coordinate and monitor progress, and provide strategic direction and expert advice.

The objectives and strategies in this Plan—the *Queensland Statewide Rehabilitation Medicine Services Plan 2008–12*—establish the direction for future development of rehabilitation medicine services in Queensland.

Implementation arrangements

Planning, implementation and evaluation are iterative processes that are integral to delivering health care services in Queensland.⁴⁰ This statewide planning process has been guided, led and supported by clinicians, and this continued leadership is essential to the success of the implementation and evaluation of this Plan at a statewide, Area and local level.

Accordingly, the proposed Statewide Clinical Rehabilitation Medicine Network should lead the review process of this statewide Plan, updating it every two years to ensure objectives and strategies remain current and reflect the changing health service needs of the community.

Good governance is essential to ensuring the successful implementation of the *Queensland Statewide Health Services Plan 2007–2012* and this associated Plan. Effective governance includes competent management of resources in a way that is fair, open, accountable and responsive to people's needs. It requires that the recommendations in the Plan are properly debated, endorsed as considered appropriate, and implemented in a timely and equitable manner. Effective governance also requires that individuals or groups of individuals take responsibility for such implementation, being held accountable for implementation achievement.

The Director-General

The Director-General of Queensland Health has two levels of responsibility and accountability:

- whole-of-government level—contributing to the development and achievement of high-level strategic goals for the government
- department level—responsible for the effective and efficient running of the Queensland Health and delivering the implementation of the extensive health reform agenda.

In the context of this Plan, the Director-General is responsible and accountable for endorsing the Plan, and ensuring its implementation, in line with whole-of-government policy.

The Executive Management Team

The Executive Management Team (EMT) is the principal advisory body to the Director-General and provides advice on strategic service, policy and high-level administrative issues. EMT is responsible for endorsing Statewide Health Services plans such as this Plan. EMT is also responsible and accountable for monitoring the implementation of the Plan and the review process. It is recommended that such monitoring occurs on a yearly basis.

General Managers

⁴⁰ Eager, K., Garrett, P. & LIN, V. (2001) *Health Planning: Australian Perspectives*, Sydney, Allen & Unwin.

The Area General Managers are responsible and accountable for the delivery of statewide and Area services including the implementation of this Plan.

Area Health Service plans should provide detail on how the reforms and endorsed objectives and strategies in this Plan will be implemented at an Area and local level. Area plans should also incorporate implementation and evaluation processes. Any implications for rehabilitation medicine services arising from the Area planning processes will also need to be considered.

Statewide Clinical Network

A Statewide Rehabilitation Medicine Clinical Network will inform decision making and may carry responsibility for certain functions in this Plan, but it is not a formal authority structure.

Queensland Health has recently released the *Clinical Networks Policy*⁴¹ that promotes Clinical Networks as key components of planning and decision making for health services. Within the policy, a clinical network is defined as ‘a formally recognised group, principally comprising clinicians, established to address problems in quality and/or efficiency of health care.’⁴²

The policy gives guidance regarding the functions, types, establishment, composition, support provided to, and evaluation of performance of, statewide and Area Clinical Networks. Currently there are no statewide Clinical Networks within the specialty of rehabilitation medicine, and the only Area Network is in CAHS. Clinical Networks can act as links between Districts, Area Health Services and statewide networks.

A statewide clinical rehabilitation medicine network, in collaboration with Executive Management Team and other formal governance structures, would be well placed to lead planning, policy development, and monitoring of clinical outcomes for renal services.

Evaluation

It is recommended that reporting at an Area level for rehabilitation medicine services be reviewed yearly. This reporting will flow into the bi-annual review and reporting on the statewide objectives and strategies in the Plan. As statewide plans are reviewed, Area Health Service plans should also be reviewed and updated to ensure stated initiatives and actions are current and reflect changing health service needs of the community.

Evaluation should, at a minimum, comprise a review of all strategies, including assessment of service utilisation data. As stated earlier, the reliability of some projections in the Plan is uncertain given limitations with our current data. As new data becomes available, the projections should be reviewed, original projections adjusted and the implications of any variance assessed, and the Plan amended as appropriate.

Risk assessment

Possible risks to the successful implementation of the Plan include:

- inability to recruit and retain an appropriately trained workforce, particularly in regional areas
- lack of clinician engagement in implementing the strategic and operational direction outlined in this Plan
- insufficient levels of investment for the required capital builds
- insufficient levels of investment for the required increases in treatment services capacity

⁴¹ http://qheps.health.qld.gov.au/cpic/documents/networks/clin_net_policy_v2.0.

⁴² *ibid*, page 1.

- delays in the delivery of capital builds or other mismatches in timing between expansion of capacity and demand
- inability to capture accurate, reliable and representative data to support monitoring and ongoing refinement of planning parameters and system performance.

The risk of any and all of these issues is real and high. Area plans will need to address each of these issues and develop mitigation strategies. It is also important to note that implementation of this Plan will involve a complex array of individual projects and project teams across a range of Areas, Districts and functional areas (e.g. capital works). As specific project plans are developed and projects progressively implemented, identified risks will be further defined and addressed. The Statewide Clinical Network will fulfil a key role in monitoring the progress and achievement of these projects within the context of the strategic and operational direction outlined in this Plan. They will also provide leadership and clinical expertise to assist in mitigating risk and driving reform.

Glossary

Acute bed

Beds in a facility set aside for acute care.

Acute care

Immediate treatment for a medical condition. This type of care can include short-term hospital stays, doctor's visits, surgery and x-rays.

Acute sector

Hospital facilities providing services intended for short-term medical and/or surgical treatment.

Allied health professional

One of the following group of healthcare workers: physiotherapists, occupational therapists, social workers, prosthetists and orthotists, speech and language pathologists, dietitians/nutritionists, medical imaging technologists, psychologists, audiologists, music therapists, radiation therapists, and others.

Ambulatory rehabilitation program

Any rehabilitation service provided to an individual as an outpatient. Services can be provided in community health clinics, outpatient departments or day hospitals.

Ambulatory setting

Health services provided to a patient who is not admitted to a facility. The service may be mobile or fixed.

Assistive or adaptive technology

Refers to products, devices or equipment—whether acquired commercially, modified or customised—that are used to maintain, increase or improve the functional capabilities of individuals with disabilities.

Bed block

When a patient cannot be moved to another medical facility due to systemic issues such as lack of beds or lack of staff.

Casemix

Casemix is a generic term for a method of classifying the activities delivered by a health service. It measures the mix and type of patients treated in a hospital. Casemix is used to benchmark services and compare relative efficiency in Queensland hospitals and manage health care resources.

Community health services

Non-hospital services providing prevention, promotion, protection, early identification and intervention, assessment, treatment, health maintenance and continuing care services. These are delivered by a variety of providers such as child health services, mental health services and Indigenous health services.

Comorbidity

Conditions that exist at the same time as the primary condition in the same patient.

Continuum of care

The full spectrum of health services that contribute to improving the health of the population. This includes promotion, prevention and protection; primary health care; ambulatory care; acute inpatient services; and rehabilitation and extended care. Also referred to as the health continuum.

Chronic Obstructive Pulmonary Disease (COPD)

Chronic obstructive pulmonary disease (COPD) is a group of lung diseases that cause swelling of the airways, causing breathing difficulties.

Diagnosis related group (DRG)

A coding system used to classify admissions into groups with similar clinical conditions (related diagnoses) and similar resource use. This allows the activity and performance of hospitals to be compared on a common basis. In Australian hospitals, Australian Refined DRGs (AR-DRGs) are used to classify acute admitted patient episodes in public and private hospitals.

Designated rehabilitation unit

A facility or a unit (unit pertains to dedicated beds and spaces) within a health service facility that provides rehabilitation services.

Hypoxia

Deficiency in the amount of oxygen reaching body tissues.

Inter-rater reliability

The degree of consistency achieved by raters (individuals carrying out surveys or tests), used as a verification tool in qualitative studies.

Maintenance care

Care given to an individual to maintain function and health status.

Model of service delivery

A multifaceted concept that broadly defines the way health services are delivered.

Non-acute care

Treatment that focuses on maintaining function and current health status if possible. Non-acute care may be provided in an inpatient, community or residential care setting.

Orthotic

The discipline that deals with the use of specialised devices to support or supplement weakened or abnormal joints or limbs.

Orthotic service

The service of providing specialised devices to support or supplement weakened or abnormal joints or limbs.

Outpatient

A patient who is receiving care at a hospital or other facility without being admitted to the facility.

Outpatient clinic

A facility providing health services to a non-admitted patient.

Palliative care

The active total care of patients whose disease is not responsive to curative treatment.

Pathways Home program

A program funded by the Australian Government under the 2003–08 Australian Health Care Agreements to enhance rehabilitation/transitional care services. The program ceases in June 2008.

Patient acuity

A general term used to describe the amount of care one patient may need. The greater the acuity, the more time and attention that one person needs.

Population health

The sector of public health which focuses on preventative health care. It promotes health and reduces the incidence of preventable disease and disability by improving access to opportunities and prerequisites for good health.

Primary health care or primary care

A person's first point of contact with the health care system. In mainstream health throughout Australia, primary health care is normally provided by general practitioners, community health nurses and pharmacists.

Prosthetic service

The provision of care to people who have a congenital limb deficiency or have had amputation of a limb (or limbs). It excludes the surgical episode.

Prosthesis

An artificial extension that replaces a missing body part. Prostheses are typically used to replace parts lost by injury (traumatic), disease processes, missing from birth (congenital) or to supplement defective body parts.

Referral pathway

A series of steps between services, including clinical interventions, for managing the overall care of a patient.

Residential care

Care provided to individuals at home or in a facility to assist with daily living enabling the individual to function independently. Care can be 24-hour or partial (e.g. respite care, in-home help with domestic duties) depending on the individual's needs.

Separation

The period of time between a patient being admitted and discharged from a hospital facility.

Step down care

Care provided to facilitate movement of patients from one level of care to a less intensive level of care.

Sub-acute care

Treatment focused on improving and maintaining a person's functional capacity and maximising their independence.

Sub-acute service

The provision of services to improve and maintain a person's functional capacity and maximise their independence.

Transitional care

Care associated with the transition between hospital and home e.g. independent living units.

Appendixes

Appendix 1 Types of sub-acute and non-acute care

The definitions of each of the care types within sub-acute and non-acute care have good inter-rater reliability⁴³ and are as follows:

Rehabilitation

Rehabilitation is an episode of care provided for a person with an impairment, disability or handicap, for whom the primary treatment goal is improvement in functional status. This is evidenced by:

- an individualised and documented initial and periodic assessment of functional ability by use of a recognised functional assessment measure
- an individualised interdisciplinary rehabilitation plan, which includes negotiated rehabilitation goals and indicative timeframes.

Rehabilitation includes:

- rehabilitation care provided in both community and hospital settings
- care meeting this definition and provided in a designated unit
- care meeting this definition and provided according to a designated program
- care in which the principal clinical intent meets this definition.

Geriatric evaluation and management

Geriatric evaluation and management refers to an episode of care provided for a patient with complex multidimensional medical problems associated with disabilities and psychosocial problems. The patient is usually (but not always) an older person for whom the primary treatment goal is maximising health status and/or optimising living arrangements. This type of care includes:

- evaluation and formulation of a management plan for complex medical problems
- interdisciplinary assessment and management of functional and psychosocial needs
- regular assessments of current management plan working towards negotiated goals within indicative timeframes.

Geriatric evaluation and management includes:

- evaluation and management provided in both community and hospital settings
- evaluation and management of younger adults with clinical problems generally associated with old age
- care meeting this definition and provided in a designated unit
- care meeting this definition and provided according to a designated program
- care in which the principal clinical intent meets this definition.

Maintenance care

Maintenance care is an episode of care provided for a person with a disability who, following assessment or treatment, does not require further complex assessment or stabilisation and for whom the primary treatment goal is, if possible, the maintenance of function and current health

⁴³ Eagar, K 1997, 'Defining an Episode of Care: a study of five Case Types', *Australian Health Review*, vol 20, no 3, pp. 105–119.

status. This type of care is evidenced by the provision of health and treatment services and psychosocial support.

Types of maintenance care include:

- maintenance care provided in both community and hospital settings
- care and support of a person in an inpatient setting while they are awaiting transfer to residential care or alternate support services, or where there are factors in the home environment (physical, social, psychological) that make discharge to home inappropriate for the person in the short term
- ongoing care and support of a person in a residential setting
- short-term hospital care for patients who usually receive care in another environment (e.g. at home, in a nursing home, by a relative or with a guardian) when that care is temporarily unavailable
- care and support of a person with a functional impairment for whom there is no interdisciplinary program aimed at improving functional capacity
- patients classified as Nursing Home Type Patient, (i.e. when a patient has been in hospital for a continuous period exceeding 35 days and does not have a current acute care certificate).

Transition Care

Transition Care is a new national program. Depending on an assessed level of need, transition care will offer eligible older people several or all of the following:

- nursing support
- low intensity therapy or rehabilitation (such as physiotherapy, occupational therapy and social work) to maintain physical and cognitive functioning and to facilitate improved capacity in activities of daily living
- personal care
- medical support such as GP oversight
- case management including establishing community supports and services, and where required, identifying residential care options.

To access transition care, a person must first be approved for transition care by an Aged Care Assessment Team (ACAT). Transition care can be delivered in either a residential or community setting. After a hospital episode, a person can directly enter transition care delivered in a community setting—there is no need to receive transition care in a residential setting first. All transition care clients will have been discharged from hospital and can therefore access the Pharmaceutical Benefits Scheme and the Medicare Benefits Schedule.

A person is eligible to receive flexible care in the form of transition care only if:

- they have completed their acute and sub-acute episodes of care, are medically stable and ready for discharge at assessment, and discharged from hospital upon entry to transition care
- they have been assessed by ACAT as eligible to receive permanent residential aged care at least at the low level of care. This would have occurred if they applied for residential aged care
- they have been assessed by the ACAT as able to benefit from a period of care in a non-hospital environment to
 - access low intensity therapy and support such as physiotherapy, occupational therapy and social work as part of an ongoing but slower recovery process
 - assess their circumstances, together with their carers and families, and identify and consider the care options available to them

- explore their preferred aged care option, including whether they can return to the community
- they wish to access transition care.⁴⁴

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It is important to note that these definitions are based on the patient, the care goal and the care provided, not on the medical speciality of the treating doctor. A geriatrician, for example, may provide care to patients classified as any of these care types. Likewise, a rehabilitation physician may provide care to patients of any care type. This includes patients who have completed their rehabilitation program and, having been recorded as a 'type change', begin a new episode (e.g. as a maintenance episode).

⁴⁴ Australian Government Department of Health and Ageing 2005, *Transition Care Program Guidelines*, final draft, May 2005.

Appendix 2: List of rehabilitation-sensitive diagnosis related groups (DRGs)

| Rehabilitation functional groups | DRG V4.2 code | Diagnosis related group name |
|----------------------------------|---------------|---|
| Amputees | F11A | Amputation for Circ System Except Upper Limb and Toe With Catastrophic Complications or Comorbidities |
| | F11B | Amputation for Circ System Except Upper Limb and Toe Without Catastrophic Complications or Comorbidities |
| | F13Z | Upper Limb and Toe Amputation for Circulatory System |
| | I07Z | Amputation |
| | I14Z | Stump Revision |
| Arthritis | I69A | Bone Diseases and Specific Arthropathies Age>74 With Catastrophic Complications or Comorbidities |
| | I69B | Bone Diseases and Specific Arthropathies Age>74 Without Catastrophic Complications or Comorbidities |
| | I71A | Musculotendinous Disorders Age>69 With Catastrophic Complications or Comorbidities |
| | I71B | Musculotendinous Disorders (Age<70 With Catastrophic Complications or Comorbidities) or (Age>69 Without Catastrophic Complications or Comorbidities) |
| | I76A | Other Connective Tissue Disorders Age>69 With Catastrophic Complications or Comorbidities |
| | I76B | Other Connective Tissue Disorders (Age<70 With Catastrophic Complications or Comorbidities) or Age>69 Without Catastrophic Complications or Comorbidities |
| Arthritis after care | I73A | Aftercare of Connective Tissue Disorders Age>59 With Catastrophic or Severe Complications or Comorbidities |
| | I73B | Aftercare Connective Tissues Disorder (Age<60 With Catastrophic Complications or Comorbidities) |
| | I73C | Aftercare of Connective Tissue Disorders Age<60 Without Catastrophic Complications or Comorbidities |
| Chronic pain (back and neck) | I68A | Non-Surg Neck & Back Condition Without Pain Management Procedure/Myelogram |
| | I68B | Non-surgical Neck & Back Condition Without Pain Management Procedure |
| | I68C | Non-surgical Neck & Back Conditions With Pain Management Procedure/Myelogram |
| Complex joint replacement | I03A | Hip Revision With Catastrophic or Severe Complications or Comorbidities |

| | | |
|-----------------|------|---|
| | I03B | Hip Replacement With Catastrophic or Severe Complications or Comorbidities or Hip Revision |
| | I04A | Knee Replacement and Reattachment With Catastrophic Complications or Comorbidities |
| Complex Medical | F21A | Other Circulatory System O.R. Procedures with Catastrophic Complications or Comorbidities |
| | F60A | Circulatory disorders W AMI Without Invasive cardiac investigative procedures with catastrophic or severe complications |
| | F60B | Circulatory disorders W AMI Without Invasive Cardiac Investigative Procedures with Catastrophic or Severe Complications or Comorbidities |
| | F65A | Peripheral Vascular Disorders with Catastrophic or Severe Complications or Comorbidities |
| | F65B | Peripheral Vascular Disorders without Catastrophic or Severe Complications or Comorbidities |
| | F75A | Other Circulatory System Diagnoses with Catastrophic Complications or Comorbidities |
| | F75B | Other Circulatory System Diagnoses with Severe Complications or Comorbidities |
| | F75C | Other Circulatory System Diagnoses without Catastrophic or Severe Complications or Comorbidities |
| | I64A | Osteomyelitis (age<65 with Catastrophic or Severe Complications) or Age>64 |
| | I66A | Inflammatory Musculoskeletal Disorders (Age<65 with Catastrophic or Severe Complications or Comorbidities) or Ag>64 |
| | I74A | Injury to Forearm, Wrist, Hand or Foot Age>74 with Catastrophic Complications or Comorbidities |
| | I74B | Injury to Forearm, Wrist, Hand or Foot Age<75 with Catastrophic Complications or Comorbidities |
| | I75A | Injury to shoulder, arm elbow, knee, leg or ankle Age>64 with Catastrophic Complications or Comorbidities |
| | I75B | Injury to shoulder, arm elbow, knee, leg or ankle Age<65 with Catastrophic Complications or Comorbidities or Age>64 without Catastrophic Complications or Comorbidities |
| | JO2A | Lower Limb with Skin Graft/Flap Repair with Ulcer /Cellulitis with Catastrophic Complications or Comorbidities |
| | JO2B | Lower Limb with Skin Graft/Flap Repair with Ulcer /Cellulitis without Catastrophic Complications or Comorbidities |
| | JO3A | Lower Limb with Skin Graft/Flap Repair without Ulcer /Cellulitis with Catastrophic or severe Complications or Comorbidities |
| | JO3B | Lower Limb with Skin Graft/Flap Repair without Ulcer /Cellulitis without Catastrophic or severe Complications or Comorbidities |

| | | |
|--|------|---|
| | JO4A | Lower Limb without Skin Graft/Flap Repair with Ulcer /Cellulitis with Catastrophic Complications or Comorbidities |
| | JO4B | Lower Limb without Skin Graft/Flap Repair with Ulcer /Cellulitis without Catastrophic Complications or Comorbidities |
| | J60A | Skin Ulcers Age>64 |
| | J64A | Cellulitis Age>59 With Catastrophic or severe complications or comorbidities |
| | J64B | Cellulitis Age>59 Without catastrophic or severe complications or comorbidities |
| | J65B | Trauma to the skin, subcutaneous tissue and breast age>69 |
| | J66A | Moderate skin disorders with catastrophic or severe complications or comorbidities |
| | KO1Z | Diabetic Foot |
| | K60A | Diabetes with catastrophic or severe complications or comorbidities |
| | K60B | Diabetes without catastrophic or severe complications or comorbidities |
| | K61Z | Severe nutritional disturbance |
| | K62A | Miscellaneous metabolic disorders with catastrophic complications or comorbidities |
| | K62B | Miscellaneous metabolic disorders with severe complications or comorbidities or age >74 without severe complications or comorbidities |
| | K64A | Endocrine Disorders with catastrophic or severe complications or comorbidities |
| | L60A | Renal failure with catastrophic or severe complications or comorbidities |
| | L60B | Renal failure with severe complications or comorbidities or (Age>69 without severe complications or comorbidities |
| | L63A | Kidney and urinary tract infections age>69 with catastrophic complications or comorbidities |
| | L63B | Kidney and urinary tract infections age>69 without catastrophic complications or comorbidities |
| | Q62A | Coagulation Disorders Age>69 |
| | T60A | Septicaemia with catastrophic or severe complications or comorbidities |
| | T60B | Septicaemia without catastrophic or severe complications or comorbidities |

| | | |
|-------------------------|------|--|
| | T61B | Postoperative and Post Traumatic Infection with catastrophic /severe complications or comorbidities or (age 54 without catastrophic /severe complications or comorbidities |
| | T63A | Viral illness age>59 |
| | T64A | Other infections and parasitic diseases with catastrophic or severe complications or comorbidities |
| | X61Z | Allergic reactions |
| | X63A | Sequelae of treatment with catastrophic or severe complications or comorbidities |
| | Z61Z | Signs and symptoms |
| Fractured neck of femur | I21Z | Local Excision and Removal Internal Fixation Device |
| | I22Z | Major Wrist, Hand and Thumb Procedures |
| | I62A | Fractures of Pelvis and Femoral Neck With Catastrophic Complications or Comorbidities |
| | I62B | Fractures of Pelvis and Femoral Neck With Severe Complications or Comorbidities |
| Joint replacement | I01Z | Bilateral or Multiple Major Joint Procedure of Lower Extremity |
| | I03C | Hip Replacement Without Catastrophic or Severe Complications or Comorbidities |
| | I04B | Knee Replacement and Reattachment Without Catastrophic Complications or Comorbidities |
| | I05Z | Other Major Joint Replacement and Limb Reattachment |
| | I18Z | Knee Procedures |
| | I19Z | Other Elbow or Forearm Procedures |
| Multi trauma and other | W02Z | Hip, Femur and Limb Procedure for Multiple Significant |
| | W03Z | Abdominal Procedures for Multiple Significant Trauma |
| | W04Z | Other OR Procedures for Multiple Significant Trauma |
| | W61Z | Multiple Trauma Without Significant Procedures |
| | X04A | Other Procedures for Injuries to Lower Limb Age>59 |

| | | |
|-------------------------|------|--|
| | X06A | Other Procedures for Other Injuries with Catastrophic or Severe Complications or Comorbidities |
| | X60A | Injuries Age>64 With Complications or Comorbidities |
| | X60B | Injuries Age>64 Without Complications or Comorbidities |
| | Y02A | Other Burns With Skin Graft Age>64 or With Cat/Severe Complications or Comorbidities or With Complicating Diagnosis/Procedures |
| | Y62A | Other Burns Age>64 or With Catastrophic or Severe Complications or Comorbidities or With Complicating Diagnosis/Procedures |
| Neurological conditions | B06A | Procedure for Cerebral Palsy, Muscular Dystrophy, Neurological |
| | B06B | Procedure for Cerebral Palsy, Muscular Dystrophy, Neurological |
| | B07A | Peripheral and Cranial Nerve & Other Nervous System |
| | B07B | Peripheral and Cranial Nerve and Other Nervous System |
| | B65Z | Cerebral Palsy |
| | B66A | Nervous System Neoplasm Age>64 |
| | B66B | Nervous System Neoplasm Age<65 |
| | B67A | Degenerative Nervous System Disorders With Catastrophic Complications or Comorbidities |
| | B67B | Degenerative Nervous System Disorders Without Catastrophic Complications or Comorbidities |
| | B68A | Multiple Sclerosis and Cerebellar Ataxia With Catastrophic Complications or Comorbidities |
| | B68B | Multiple Sclerosis and Cerebellar Ataxia Without Catastrophic Complications or Comorbidities |
| | B71A | Cranial and Peripheral Nerve Disorders With Catastrophic Complications or Comorbidities |
| | B71B | Cranial and Peripheral Nerve Disorders Without Catastrophic Complications or Comorbidities |
| | B72Z | Nervous System Infection Except Viral Meningitis |
| | B74Z | Nontraumatic Stupor and Coma |
| | B76B | Seizure Age>2 W/O Catastrophic or Severe Complications or Comorbidities |

| | | |
|---------------------------|------|--|
| | B81A | Other Disorders of the Nervous System With Catastrophic Complications or Comorbidities |
| | B81B | Other Disorders of the Nervous System Without Catastrophic Complications or Comorbidities |
| | Z65Z | Multiple, Other and Unspecified Congenital Anomalies |
| Other complex orthopaedic | I08A | Other Hip and Femur Procedures With Catastrophic or Severe Complications or Comorbidities |
| | I09A | Spinal Fusion With Catastrophic or Severe Complications or Comorbidities |
| | I10A | Other Back and Neck Procedures With Catastrophic or Severe Complications or Comorbidities |
| | I12A | Infection/Inflammation of Bone and Joint W Misc Musc Sys & Co |
| | I12B | Infect/ Inflamm of Bone and Joint With Misc Musc Sys & Co |
| | I13A | Humerus, Tibia, Fibula and Ankle Procedures With Catastrophic Complications or Comorbidities |
| | I67A | Septic Arthritis With Catastrophic or Severe Complications or Comorbidities |
| Other orthopaedic | I08B | Other Hip and Femur Procedures Age>54 Without Catastrophic Complications or Comorbidities |
| | I08C | Other Hip and Femur Procedures Age<55 Without Catastrophic Complications or Comorbidities |
| | I09B | Spinal Fusion Without Catastrophic or Severe Catastrophic Complications or Comorbidities |
| | I10B | Other Back and Neck Procedures Without Catastrophic Complications or Comorbidities |
| | I11Z | Limb Lengthening Procedures |
| | I12C | Infect/Inflamm Bone and Joint W Misc Muscle System & Complications or Comorbidities |
| | I60Z | Femoral Shaft and Open Femoral Condyle Fractures |
| | I61Z | Other Femoral Fractures |
| Rehabilitation/other | Z01A | O.R. Procedures With Diagnoses of Other Contacts With Health |
| | Z01B | O.R. Procedures With Diagnoses Other Contacts W Health |
| | Z63A | Other Aftercare With Catastrophic or Severe Complications or Comorbidities |

| | | |
|-----------------------------|------|--|
| | Z63B | Other Aftercare Without Catastrophic or Severe Complications or Comorbidities |
| | Z64A | Other Factors Influencing Health Status Age>79 |
| | Z64B | Other Factors Influencing Health Status Age<80 |
| Spinal cord dysfunction | B03A | Spinal Procedures With Catastrophic or Severe Complications or Comorbidities |
| | B03B | Spinal Procedures Without Catastrophic or Severe Complications or Comorbidities |
| | B60A | Non Acute Paraplegia/Quadriplegia With or Without OR Procedures |
| | B60B | Non Acute Paraplegia/Quadriplegia With or Without OR Procedures |
| | B61A | Spinal Cord Conditions With or Without OR Procedures With Catastrophic Complications or Comorbidities |
| | B61B | Spinal Cord Conditions With or Without OR Procedures Without Catastrophic Complications or Comorbidities |
| Stroke | B04A | Extracranial Vascular Procedures With Catastrophic Complications or Comorbidities |
| | B04B | Extracranial Vascular Procedures Without Catastrophic Complications or Comorbidities |
| | B70A | Stroke With Severe or Complicating Diagnosis/Procedure |
| | B70B | Stroke With Other Complications or Comorbidities |
| | B70C | Stroke Without Other Complications or Comorbidities |
| Traumatic brain dysfunction | B02A | Craniotomy With Catastrophic Complications or Comorbidities |
| | B02B | Craniotomy With Severe or Moderate Complications or Comorbidities |
| | B02C | Craniotomy |
| | B78Z | Intracranial Injury |
| | B79Z | Skull Fractures |
| | B80Z | Other Head Injury |

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Appendix 3: Australasian Faculty of Rehabilitation Medicine

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The Faculty is grateful to a number of allied health (*Allied Health Rehabilitation Consultative Committee, Guidelines for Allied Health: Resources required for the provision of Quality Rehabilitation Services. Version 8, March 2004*) nursing, health industry, consumer and medical bodies for their comments on these Standards. Their comments have been carefully considered and incorporated in the document where appropriate.

Standards 2005: Adult Rehabilitation Medicine Services in Public and Private Hospitals

Introduction

The Australasian Faculty of Rehabilitation Medicine is committed to the provision of comprehensive, high-quality care in the services in which its Fellows practise. This document on Standards for Adult Rehabilitation Medicine Services in Public and Private Hospitals refers only to specialist rehabilitation medicine units. In particular, it is stressed that the Standards do not refer to medical rehabilitation programs conducted by other physicians who are not specialists in rehabilitation medicine.

Standards

1. Governance

A designated Rehabilitation Medicine Service under the direction of a rehabilitation physician (Fellow of the Australasian Faculty of Rehabilitation Medicine or equivalent) provides interdisciplinary care, which documents progress of the functional status of patients with the objective of the patient achieving the highest level of function.

2. Staffing

There is a full range of team members with an appropriate skill base and training to provide comprehensive, current programs of care for the disabilities present in the patients in the service.

3. Facilities and equipment

The facilities and equipment are adequate in terms of space and usefulness to ensure a safe learning environment for retraining in lost skills.

4. Policies and procedures

There is documentation of policies and procedures to ensure safe, appropriate, accountable, effective and measurable improvement in the patients involved in rehabilitation programs following injury, disease or traumatic incident.

5. Quality management activities

The service has a quality management framework with appropriate single and interdisciplinary activities and projects addressing consumer involvement, access, appropriateness, effectiveness, safety and efficiency.

Demonstrating the standards

1. Governance

A designated Rehabilitation Medicine Service under the direction of a rehabilitation physician provides interdisciplinary care, which documents patients' progress in functional status.

1.1 Definitions of rehabilitation medicine and medical rehabilitation are acknowledged and utilised to identify a Rehabilitation Medicine Unit.

Rehabilitation Medicine is that part of the science of medicine involved with the prevention and reduction of functional loss, activity limitation and participation restriction arising from impairments; the management of disability in physical, psychosocial and vocational dimensions; and improvement of function. Rehabilitation Medicine was recognised as a Principal Specialty by the National Specialist Qualification Advisory Committee of the Health Insurance Commission in Australia in 1976.

Medical rehabilitation in its broadest sense is part of all patient care. It is the function of every practising doctor and involves the prevention, assessment, management and medical supervision of a person with disability until that person has attained an adequate and appropriate level of performance.

Rehabilitation Medicine Services are identified units of patient care providing comprehensive rehabilitation services for inpatients and non-inpatients as well as in the community, under the direction of a rehabilitation physician.

A rehabilitation medicine service aims to provide people who have a loss of function or ability due to injury or disease with the highest possible level of independence (physically, psychologically, socially and economically) following that incident. This is achieved through a combined and coordinated use of medical, nursing and allied health professional skills. It involves individual assessment, treatment, regular review, discharge planning, community integration and follow up of people referred to that service.

1.2 The designated rehabilitation medicine unit is directed by a rehabilitation physician and each patient's clinical management is under the supervision of a rehabilitation physician.

1.3 The Rehabilitation Medicine Service is an organised system comprised of clinicians from a variety of disciplines and is focused on functional improvement with the aim of the patient achieving the optimal level of function.

1.4 There is evidence of planned, coordinated care.

1.5 There is measurement of functional status on admission to and at discharge from the programs in the Service.

1.6 The designated Rehabilitation Unit is accredited with the Australian Council on Healthcare Standards or equivalent body.

2. Staffing

There is a full range of team members with an appropriate skill base and training program to provide comprehensive programs of care for the disabilities present in the patients in the service.

2.1 Staff establishment

2.1.1 The staff establishment includes an adequate number of professional and support staff for the functions of the Rehabilitation Medicine Service as outlined in the tables below.

| | Inpatient staff to patient ratios for 10 patients | | | | | | | |
|---------------|---|------|-----|------|------|---------|----------|--------|
| | Nurses | PTs | OTs | SPs | SWs | Clin Ps | Neuro Ps | R Phys |
| Amputation | 11.75* | 1.5 | 1 | | 0.6 | 0.5 | | 0.4 |
| Neurology | 11.75* | 1.5 | 1.5 | 1.5 | 1.25 | 0.5 | 0.5 | 0.625 |
| Orthopaedic | 11.75* | 1.25 | 0.8 | | 0.4 | 0.2 | | 0.4 |
| Spinal Injury | 14.5* | 2 | 2 | 0.25 | 1.2 | 0.5 | | 0.625 |
| TBI | 11.75* | 1.5 | 1.8 | 1.5 | 1.2 | 0.7 | 0.5 | 0.625 |
| Debility** | 11.75* | 1.25 | 1 | 0.2 | 0.6 | 0.2 | | 0.4 |

* Includes the nurse in charge—add 0.5 clinical nurse consultant and 0.5 nurse educator. The nursing staff will be skilled and experienced in rehabilitation nursing with a preponderance of registered nurses over enrolled nurses and assistants in nursing.

** Debility is a health and recent illness related functional limitation not specifically assignable to any other condition.

| | Ambulatory rehabilitation services—staff for each 10 patients | | | | | | | | |
|---------------|---|-----|-----|------|-----|---------|----------|--------|---------------------------|
| | Nurses | PTs | OTs | SPs | SWs | Clin Ps | Neuro Ps | R Phys | Prosthetist/ Orthotist |
| Amputation | 0.3 | 0.7 | 0.5 | | 0.2 | 0.1 | | 0.1 | 1 |
| Neurology | 0.7 | 0.9 | 1 | 0.75 | 0.4 | 0.5 | 0.5 | 0.2 | 0.2 |
| Orthopaedic | 0.3 | 0.7 | 0.3 | | 0.2 | 0.2 | | 0.1 | 0.2 |
| Spinal Injury | 0.7 | 0.9 | 1 | | 0.4 | 0.5 | | 0.2 | 0.2 |
| TBI | 0.7 | 0.9 | 1.5 | 1 | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 |

PTs = physiotherapists

OTs = occupational therapists

SPs = speech pathologists

SWs = social workers

Clin Ps = clinical psychologists

Neuro Ps = neuropsychologists

R Phys = rehabilitation physician

Note: Other health professionals available as required (refer to items 2.1.2 to 2.1.11)

2.1.2 Inpatient Services have allocated resident medical staff (registrar, RMO, CMO).

Specific numbers are not prescribed for resident medical staff allocation because of the variable case-mix in various inpatient services. For example, a 10 bed inpatient rehabilitation medicine service with a mix of neurologic, orthopaedic, amputation and other impairments, will have 0.5 FTE registrar and 0.5 FTE RMO/CMO. In some situations the resident medical staff duties may be covered by an additional allocation of rehabilitation physician time.

2.1.3 The majority of patients in a Rehabilitation Medicine Service will require input from dieticians and pharmacists.

2.1.4 Nominated staff from other disciplines such as diversional therapy, music therapy, orthotics, podiatry, rehabilitation counselling, rehabilitation engineering should be available when required.

2.1.5 Access to interpreters for optimal comprehension of rehabilitation, goals and overall process. Culturally appropriate goals and acknowledgement of cultural norms for certain patients where appropriate, should be in place.

2.1.6 The services of a neuropsychologist are available in services where patients with brain impairment are managed.

2.1.7 Clinical psychologists are employed in all units where patients with complex behavioural issues are treated and where adjustment to the disability may be an issue.

2.1.8 Brain impairment programs have nominated access to an outreach team comprising appropriate medical and allied health staff.

2.1.9 Amputee rehabilitation programs have close liaison with prosthetists who are able to provide a comprehensive prosthetic service and prepared to attend assessments when prosthesis is prescribed.

2.1.10 Where relevant, there are established links to community and vocational rehabilitation services.

2.1.11 If staffing levels differ from these recommendations the reasons are clearly documented via the process outlined in point 2.2.14.

2.2 Human resource management

2.2.1 The Service is directed by a Rehabilitation Physician.

2.2.2 The Director of the Rehabilitation Medicine Service is responsible for the coordination of treatment and monitoring of standards of treatment.

2.2.3 There is documented evidence of a line of responsibility from the person in charge of the Service to senior administration.

2.2.4 The senior clinician of each discipline is accountable to the Director of the Rehabilitation Service for the standard of clinical service provided by the practitioners in the Service.

2.2.5 Each allied health professional staff member is responsible for the quality of care given to individual patients under the overall care of the assigned consulting medical practitioner.

2.2.6 In each clinical Unit there is at least one senior therapist assigned permanently. Junior staff in the same discipline may be rotated to facilitate their professional development.

2.2.7 Nursing requirements vary according to the nature of the disability and reflect the recorded dependency scale of the patients. The nursing staff are sufficient in number and have appropriate experience to fully perform the nursing duties necessary for the proper care of patients at all times.

2.2.8 All staff are adequately skilled, qualified and knowledgeable about rehabilitation in order to perform their duties professionally and effectively.

2.2.9 There is a current list of professional staff including their qualifications, experience and duties. This list is updated annually and includes evidence of registration with the appropriate Board or agency where this is pertinent. There is evidence that qualifications have been verified.

2.2.10 There is a job description for each category of professional position.

2.2.11 Specialised procedures are undertaken only by staff with appropriate qualifications and experience, and an appropriate credentialing process and quality monitoring are established.

2.2.12 Where the Service's staffing complement does not contain a full range of the professional expertise required, there are documented arrangements for referral to other resources.

2.2.13 Annual staff appraisal is conducted with appropriate documentation. These are performed by each staff member's discipline-specific supervisor and overseen by the Director.

2.2.14 There is a documented management review process, which regularly reviews and adjusts the overall staffing needs of the organisation.

2.3 Continuing education

2.3.1 There is a documented policy concerning continuing education of medical, nursing and allied health professional staff.

2.3.2 A minimum of 3% of effective full-time hours is allocated for formal in-service staff training and development at no cost to the staff.

3. Facilities and equipment

The facilities and equipment are adequate in terms of space and usefulness to ensure a safe learning environment for retraining of lost skills.

3.1 Facilities

3.1.1 The Rehabilitation Unit conforms to the Australian Standards proclaimed by the federal and state governments and unless otherwise approved, to the requirements for design and construction detailed in the Licensing Standards of the Local Authorities.

3.1.2 There is wheelchair access to all areas—wards, therapy areas, dining rooms, toilets and outside areas.

3.1.3 Unless otherwise approved, a Rehabilitation Unit provides rails and hand holds in all corridors, ramps, stairs, bathrooms and toilets to ensure safe movement of people with disabilities.

3.1.4 There is ready access in the facility to all mobility equipment such as wheelchairs and walking frames to allow free access to all patients and their relatives.

3.1.5 There is a safe environment for patients with cognitive impairment.

3.1.6 In inpatient facilities there is a designated dining room area for patients.

3.1.7 There is a designated day room for the use of patients and their relatives when they are not involved in therapy.

3.1.8 There is a meeting room suitable for case conferences.

3.1.9 There is a physiotherapy treatment area* with adequate open space where gait training, general exercises, gymnastics and recreational activities may be performed.

3.1.10 There is an occupational therapy treatment area* including space for group activities.

3.1.11 There are rooms for individual therapy and consultations.

3.1.12 There is access to a room for the application and removal of plasters or bandages.

3.1.13 There is a heated hydrotherapy pool with access for people with disability.

**Note: Various designated spaces for these therapy areas may be combined as long as they do not interfere with patient treatment from the view of either of these two disciplines.*

3.1.14 There is access to a therapy workshop

3.2 Equipment

3.2.1 Unless otherwise approved, a Rehabilitation Medicine Unit provides:

- physical therapy equipment
- gait training facilities
- equipment for aerobic fitness training
- equipment for training for the activities of daily living
- equipment for recreation.

Where the service does not have all the above equipment available on site, there are documented arrangements for referral to facilities able to provide them.

3.2.2 A Rehabilitation Medicine Service provides information regarding community-based services to enable people with disabilities to make informed choices regarding services and equipment necessary to meet their ongoing needs.

4. Policies and procedures

There is documentation of policies and procedures to ensure safe, appropriate, accountable, effective and measurable improvement in the patients involved in rehabilitation programs following illness or injury.

4.1 Patient related care

4.1.1 There are clear written criteria for admission to the Service for rehabilitation either as an inpatient or as a non-inpatient.

4.1.2 There is a clearly defined assessment procedure for each patient admitted to the hospital for rehabilitation either as an inpatient or a non-inpatient.

4.1.3 There is a written rehabilitation plan for each patient based on the assessment. The plan states the disabled person's needs and limitations as well as the goals of the treatment plan. The plan is prepared by an interdisciplinary team with the active participation of the patient and family and includes provision for continuing care, review and discharge.

4.1.4 The progress of the patient is evaluated regularly against the established plan, and with standard measures of function. Documentation of progress forms part of the medical records.

4.1.5 There is a formal planned discharge procedure.

4.1.6 There is documented evidence of regular case management meetings at which individual program plans are reviewed, and these meetings involve the Rehabilitation Physician and appropriate allied health professionals.

4.1.7 All patients are offered follow-up care and review as often as it is considered necessary and practical.

4.1.8 There are documented policies for liaison with community-based services to ensure continuity and coordination of care.

4.1.9 There is a documented policy and evidence of ongoing consultation and communication with referring and treating healthcare practitioners.

4.1.10 There are documented policies for all procedures within the facility and there is evidence that these are updated regularly.

4.2 Management of patient records

4.2.1 There are secure storage and retrieval systems for patient records.

4.2.2 Confidentiality of records is maintained.

4.2.3 Records are retained and accessible for the statutory required periods.

4.2.4 A register of patients is maintained in a clearly defined order.

5. Quality management activities

The Service has a quality management framework with appropriate single and interdisciplinary activities and projects addressing consumer involvement, access, appropriateness, effectiveness, safety and efficiency.

5.1 Procedures exist to ensure evaluation of the quality of services provided. Quality management follows a process such as the EquiP (Evaluation and Quality Improvement Program) process of the Australian Council of HealthCare Standards (ACHS) or complies with the Private Sector Quality Criteria as set out in the Department of Health and Ageing Circulars PHI 32/03, PHI 05/04, PHI 38/04.

5.2 Evaluation of outcomes remains a major strength of Rehabilitation Medicine Services. This is achieved by monitoring selected procedures, collecting data and assessing information, giving feedback to the staff, taking action and reviewing results. These steps form the continuous quality management process. The Service should record rehabilitation outcome data on all patients and contribute to a national database such as the Australasian Rehabilitation Outcomes Centre (AROC).

5.3 The Service should regularly document the AFRM Rehabilitation Medicine Clinical Indicators.

5.4 Feedback is actively and regularly sought from customers of the Service.

5.5 The Service participates in undergraduate and postgraduate medical, nursing and allied health service research activities.

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