NSW Health

Rehabilitation Redesign Project

Diagnostic Report – Executive Summary

November 2010
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Summary of key findings

This report marks the end of the Assess phase of the project. The purpose of the report is to establish a baseline for the current status of rehabilitation services across NSW. The focus of this project is adult rehabilitation services, the primary rehabilitation impairments considered were stroke, orthopaedic, re-conditioning impairment and high impact areas (such as amputees). Specialty rehabilitation units including brain, spinal and burns along with paediatric rehabilitation services were deemed out of scope for this project, however any new models developed will consider the requirements to support the post traumatic/longer term care of these population groups when treated in general regional or rural rehabilitation services.

The observations and analysis presented in the body of this report are based on a range of activity: site visits, key stakeholder consultations and workshops, international and interstate comparisons and a literature scan. Throughout this phase of the project a range of key informants were consulted including Rehabilitation Physicians, Geriatricians, managers, nursing staff, allied health professionals, external service providers and consumers and carers.

The overarching key messages gleaned to date are outlined below:

1. There is no common approach or single model of care for rehabilitation services across NSW.
2. Rehabilitation services assist both the patient and also the health system to treat patient in the appropriate setting. The external environment in which rehabilitation services operate is complex and pressures vary dependant on geographical location and the availability of resources. Initial observations and key findings indicate that improvement is required in a number of areas.
3. Facilities providing rehabilitation services were comprised of dedicated professional teams where quality improvement was a key focus. A number of good practices and innovations in rehabilitation care have been identified across various points of the patient journey.
4. International rehabilitation comparisons revealed services faced a number of similar challenges to NSW services, however they also highlighted some key differences including: higher levels of therapy intensity, the presence of weekend therapy and a greater focus on provision of ambulatory rehabilitation services.

In the context of the above key messages and moving into the Design phase, there is an opportunity to expand upon good practice components and innovations that have worked well. In addition, prior to execution and implementation of any new models of care it will be important to address areas flagged as requiring improvement. This process will only serve to strengthen the overall model/s of care and contribute to the success and sustainability of rehabilitation services of the future.

Overview

The provision of rehabilitation in Australia continues to grow in volume, with 2008 seeing a 6.3% real increase in inpatient episodes of rehabilitation provided. In addition the casemix of patients requiring rehabilitation treatment is increasing in both acuity and complexity. Over the previous year inpatient rehabilitation episodes in NSW grew by 10% from 26,500 in FY0809 to 29,500 in FY0910. Continued growth in rehabilitation services will require considered planning for expansion of effective and efficient services to meet NSW Health’s needs.

The Rehabilitation Redesign project commenced in September 2010 to review existing models of care for adult rehabilitation in NSW with a view towards developing new and innovative models of care which may be suited for application in metropolitan, regional and rural areas of NSW.

Approach to the review

NSW Health is working closely with experts from the rehabilitation and aged care sector that have come together to form the NSW Rehabilitation Redesign Working Group. The Rehabilitation Redesign Working Group meet monthly to discuss the nature and needs of rehabilitation services and guide the progress of solutions design. The Rehabilitation Redesign Working Group has been chosen with representation from rehabilitation and aged care sectors, the Agency of Clinical Innovation and includes Rehabilitation Physicians, Geriatricians, Directors of Allied Health and Rehabilitation Nursing.

The Assess phase of the Rehabilitation Redesign project comprised an operational review of ten rehabilitation facilities across NSW, including subacute inpatient and ambulatory care services. In addition, primary research was complemented by soliciting input from industry stakeholders and interstate and international experts. A literature scan was also conducted. Importantly, the on-going involvement of the Rehabilitation Redesign Working Group, representing experts in rehabilitation from across the state, and NSW Health have informed the work to date and will continue to provide advice into the next phase of the project.
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The Assess phase and focused specifically on rehabilitation services. It is acknowledged that rehabilitation services do not exist in isolation; rather they play an integral role within the health care continuum and therefore must be considered within the context of the overarching health system. The Final Report and Model of Care will focus more broadly on rehabilitation services in the context of the overall health system and patient flow.

This report summarises the key themes and observations identified via site visits, workshops, key informant interviews and the literature scan.

In consultation with the Rehabilitation Redesign Working Group a generic patient journey pathway was adopted (as illustrated in the diagram below) together with key structural components of rehabilitation services. These formed the basis for the process mapping and information gathering exercise during the site visit operational review.

This review did not include quantitative analysis of rehabilitation activity data. One of the reasons for focusing on a more qualitative approach is the limitations associated with current clinical data systems in systematically capturing sub-acute activity related to rehabilitation. Data findings and limitations are discussed further in section Error! Reference source not found. of the report.

What is rehabilitation?

As an initial approach to this work, the Rehabilitation Redesign Working Group adopted a broad definition, based on the United Nations approach. As the project progresses however, it will be useful to refine this definition to more closely reflect the objectives of rehabilitation services in NSW and support the development of new and innovative models of care that can be operationalised and implemented.

The broad rehabilitation philosophy is an enablement model where therapy happens at every point of contact with a patient across the continuum of care. This philosophy is embedded in training and education programs for rehabilitation nurses. A number of services also indicated that they had commenced or were working towards educating and training staff in acute wards about the enablement model.

In reviewing the services and service models observed, a framework was considered to compare and contrast services. Each service was considered for its: capacity and capabilities (including infrastructure and workforce arrangements), accessibility, effectiveness, appropriateness and consumer participation. This framework is drawn from best practice definitions of quality as recommended nationally and internationally.¹ ²

Structural elements and patient journeys across various settings

There are numerous settings in which rehabilitation services are delivered in NSW, these are currently not well defined. Along the continuum of care rehabilitation may occur:

- in an inpatient setting (an acute unit or dedicated rehabilitation unit)

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- as an ambulatory patient (in the day hospital, outpatient clinic, community setting, in the person’s home).

The setting in which rehabilitation takes place is largely defined by the patient’s changing needs over time and the availability of rehabilitation services in particular areas. It is worth acknowledging that a rehabilitation patient journey is not a linear process and pathways are individually determined based on:

- the patient’s level of functional impairment (including ability to function safely in a given environment)
- medical acuity
- access and availability of rehabilitation services.

The rehabilitation journey most often commences with an acute presentation related to acute illness (eg stroke), trauma (eg fracture), elective surgery (eg joint replacement) or debilitation (eg decreased mobility due to chronic disease or inactivity) and continues through to transfer of care to an alternate setting or discharge from rehabilitation either with or without further support services.

Good practice and innovations

The operational review across the ten sites revealed a range of good practices and innovations throughout the patient journey. It should be noted that only a sample of rehabilitation services were visited and therefore not all innovations or good practices have been identified. The diagram below illustrates these good practices and innovations across the continuum of care.

Figure 1: Good practice and innovations

Further detail regarding some of these practices and innovations are summarised in Table 1, and will be used to inform the subsequent Design phase of the project.
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Table 1: Good practice and innovations summary

<table>
<thead>
<tr>
<th>Good practice/innovation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td><strong>Referral / Admission</strong></td>
<td></td>
</tr>
<tr>
<td>Integrated aged care and rehabilitation</td>
<td>Integrated aged care and rehabilitation model. All programs use a process of interdisciplinary evaluation and management to deal with the health care issues of sick, older persons.</td>
</tr>
<tr>
<td>Acute Care of the Elderly (ACE) team</td>
<td>The ACE Team is a MDT (includes geriatricians, nurses, physiotherapist, social worker and occupational therapist and a project leader). The team focus on patients aged 65 years and over who are admitted from ED under a medical specialist. The ACE Geriatrician and team share care with the medical specialist to develop a comprehensive care plan.</td>
</tr>
<tr>
<td>Acute care Rehabilitation Team (ART)</td>
<td>The program supports the philosophy that rehabilitation should be viewed as a continuum that commences in acute care, continues through inpatient rehabilitation if necessary and culminates in community re-integration. ART provides early rehabilitation to appropriate patients while they remain in the acute setting.</td>
</tr>
<tr>
<td>Sub-acute care team – inreach component</td>
<td>Rehabilitation in reach to the acute care wards of the hospital. Achieved via two models of care: ACE model and Orthogeriatrics model</td>
</tr>
<tr>
<td>Specialist Management with Acute Rehabilitation Treatment – SMART</td>
<td>Early commencement of rehabilitation in the acute phase. Care with a joint focus on acute care and active rehabilitation.</td>
</tr>
<tr>
<td><strong>Inpatient</strong></td>
<td></td>
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<tr>
<td>Parallel care/inreach – Orthogeriatrics</td>
<td>Rehabilitation Physicians/Geriatricians visit the orthopaedic and/or general surgical ward to identify patients requiring rehabilitation. Assessment and goal setting can be undertaken in a timely manner and planning for discharge or transfer commenced. Multidisciplinary teams operate in conjunction with doctors within this model to provide rehabilitation treatment.</td>
</tr>
<tr>
<td>Streamlining of care</td>
<td>This model involves streaming of rehabilitation wards to group particular impairment types together. This model promotes specialisation and education of staff.</td>
</tr>
<tr>
<td>Care coordinators/case managers</td>
<td>The implementation of care or case coordinators involves the allocation of a designated key contact person from the multidisciplinary team to each patient.</td>
</tr>
<tr>
<td><strong>Transfer of Care</strong></td>
<td></td>
</tr>
<tr>
<td>Sub-acute care team – outreach component</td>
<td>Hub and Spoke model to peripheral hospitals. Patient goals are identified and patients deemed suitable for peripheral hospital site management. Goal oriented progress is monitored, case conference and reviewed by local staff in conjunction with hub team therapy staff.</td>
</tr>
<tr>
<td><strong>Community / outpatients</strong></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation Discharge Team (RDT)</td>
<td>A community-based team providing comprehensive rehabilitation services in the home, for up to four weeks after discharge from hospital. The MDT provides regular home visits six days a week by nursing, physiotherapy and occupational therapy.</td>
</tr>
<tr>
<td>Day hospitals</td>
<td>Day Hospital has an innovative 6-8 week cycle of one-on-one and group therapy (programs available) eg Move to improve group, community mobility group</td>
</tr>
<tr>
<td>Ambulatory Care Team (ACT)</td>
<td>Multidisciplinary care team with services provided in the home or clinic setting.</td>
</tr>
<tr>
<td>Peripheral/Neighbouring hospitals</td>
<td>Peripheral hospitals are used in the hub and spoke model and serve two purposes: patients who are not yet ready for rehabilitation and patients deemed appropriate for rehabilitation in a peripheral hospital. Linkages with the local GP or medical officer are essential to the success of this model.</td>
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Key findings

The key findings from the Assess phase were developed through analysis of information collected: from rehabilitation services across NSW; and through consultation with Rehabilitation Redesign Working Group, industry stakeholders, interstate and international rehabilitation services.

The key findings are summarised below and are discussed in further detail in the body of the report. These findings will be used in the Design phase to inform the development of principles and operational aspects of rehabilitation care.

Capacity and Capability

Many of the services reviewed were provided in old accommodation not purposely designed for a rehabilitation service. The purpose-built facilities visited seemed better able to support the enablement model of rehabilitation care with space for equipment, ADL kitchens, independent living units and bathrooms.

Consultation identified that as far as possible rehabilitation units were using a multidisciplinary approach to service provision. Many sites were challenged by a limited ability to recruit new staff but all reported high staff retention rates.

While it was generally agreed that workforce ratios should be based around patient need and activity volumes, there was little evidence of a systematic approach to this. However, several innovative approaches to workforce utilisation were observed including the use of allied health assistants, diversional therapists and allied health professionals operating in a consultant capacity.

The findings associated with capacity and capability highlighted across the ten sites, include:

F1. The infrastructure where rehabilitation services are provided is a challenge as facilities have not specifically been designed for a rehabilitation service. Primary limitations in terms of infrastructure relate to the size of the wards and room configurations; the inability to manoeuvre required equipment such as patient lifters; and the lack of space for common areas such as gyms, dining rooms and lounge areas.

It should be noted that it is likely that the ten sites visited are better resourced and functioning. The resourcing and functioning of other sites is largely unknown as a broad scope of services not visited was not part of the methodology.

F2. In some instances, the availability of onsite equipment was flagged as a challenge. In particular the growing cohort of bariatric patients and the availability of appropriate bariatric equipment was discussed.

F3. The infrastructure of some rehabilitation services impacted timely access for patients requiring single rooms in the case of infectious conditions or where same sex rooms were unavailable.

F4. Rehabilitation staff operated in multidisciplinary teams and were flexible and dedicated to their work.

F5. The overall demand for services and the true availability of health professionals is unknown. Allied health staff in particular reported a decrease in staff numbers across all disciplines over the past few years. Staff burn out is a concern where demand is high and back fill or support is generally not available. A number of services were unable to provide outpatient clinics due to the absence of staff positions to support these services. Additionally services where rehabilitation staff were not quarantined often lost allied health staff to cover acute inpatient wards.

F6. Administrative support was unavailable in a number of areas. Some health professionals indicated that they were required to make their own client appointments, photocopy exercise programs and undertake general administration tasks. Clinicians agreed that these tasks took away from providing patient therapy and was perceived as an added burden.

F7. The overall demand for services is not truly identifiable as this is limited by the available resources.

F8. Leadership was considered a key element of a rehabilitation service. The actual ‘leader’ of the service was considered less important.

F9. Rehabilitation services reported difficulty in accessing the full complement of health professionals required to be involved in patient care. Across all services visited there was variable access to discipline specific services. Those disciplines where access was most difficult included: neuropsychology, diversional therapy and interpreters.

Access

All sites used Bed Board to manage access to rehabilitation services. Paper based waiting lists for inpatient rehabilitation services were also used across most sites visited. A computerised referral and waiting list system had been implemented at one site visited. Patient referral, entry and waiting list management for day hospital and outpatient services was coordinated locally.
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Sites that did not provide or had limited outpatient services often reported significant waiting lists due to unavailability of therapists and therefore the inability of therapists to provide the required intensity of treatment. Rehabilitation therapy provided on weekends was generally minimal.

Long length of stay is often related to difficulties in coordination with external agencies/services that support transition home for patients with complex needs, the homeless and patients requiring extensive home modifications, for example. A smooth transition across the continuum of care was demonstrated at sites where adequate provision of day hospital or outpatient services were available.

The findings associated with access highlighted across the ten sites, include:

F10. Waiting lists for both inpatient and ambulatory care rehabilitation services were generally managed locally (at the site or across a network of two or three hospitals). Identifying when a patient was 'ready for rehabilitation' was not standardised and the varying interpretations of this was a constant challenge for rehabilitation units.

F11. Challenges exist in relation to lengthy waiting lists for availability of equipment (for patients returning home) and level two home modifications. Patient length of stay can be impacted considerably in these cases where it is unsafe for the patient to return home without specific equipment or home modifications. Extended lengths of stay, although less frequent in number, can also be attributed to the unavailability of accommodation for patients under 65 years, homeless patients and patients requiring Guardianship rulings.

F12. Stand alone rehabilitation services frequently experience difficulties associated with transport for patients requiring other medical consults or tests not available onsite. Access to clinical support services, particularly radiology was also more difficult at these sites.

F13. A number of services identified the inability to access community services post rehabilitation, for example, ComPacks or transitional aged care packages. The inability to create linkages or refer patients to other services compromises patient access and overall outcomes.

F14. Anecdotal evidence indicated that there is a considerable unmet need in many areas following transfer of care from the sub-acute inpatient episode. The absence of day hospital or outpatient services impacts a patients smooth transition back into the community.

Appropriateness

There is currently no consistent decision-making guideline/tool to determine ‘ready for rehabilitation’. Patients admitted and not ‘ready for rehabilitation’ were reported as an ongoing challenge for most services. One of the key challenges in relation to patient referral and entry to rehabilitation services is the interpretation of ‘ready for rehabilitation’. Similarly the presence of exclusion criteria across the ten sites was minimal. All patients deemed ‘able to participate’ were generally considered for admission. The range of patient acuity and complexity also meant that a patients ability to participate was variable.

While the majority of rehabilitation care users are over the age of 70, there is a risk that the unique social and psychological requirements of younger patients, accommodated in predominantly aged rehabilitation wards, are not being met.

Consultation identified that patients are currently declining functionally in the acute hospital wards while waiting for rehabilitation; conversely, rehabilitation services face continuing pressure from acute services to take patients quickly when they are potentially not ready or appropriate for rehabilitation. This is a particular challenge in co-located facilities where rehabilitation units form part of the hospital’s wider bed-management solution.

The findings associated with appropriateness highlighted across the ten sites, include:

F15. A recurring challenge for rehabilitation services is the inappropriate referral of patients ‘not ready for rehabilitation’. Currently ‘ready for rehabilitation’ is based on the clinical judgement of a number of doctors or health professionals. There are no agreed objective criteria for what constitutes ‘ready for rehabilitation’ or a clear and accountable decision-making process. Rehabilitation services are reliant on acute care teams and visiting medical officers to understand rehabilitation eligibility criteria and make appropriate referrals.

F16. Rehabilitation services face continuing pressure from acute services to take patients quickly when they are potentially not ‘ready for rehabilitation’.

F17. Nursing staff are continually challenged by the increase in age and complexity of patients requiring rehabilitation. Patient care requirements have increased over the past few years. These demands, together with the presence of medical outliers on some rehabilitation wards, have impacted on the ability of nursing staff to promote enablement and take an active role in patient therapy.

F18. Increasing age and complexity of rehabilitation patients may be attributable to the increase in patients coded under the ‘reconditioning’ impairment type. Patients are currently declining in the acute hospital wards while waiting for rehabilitation. Rehabilitation services are therefore accepting more de-conditioned patients increasing the requirement for nursing
support and care for patients who take longer to achieve rehabilitation goals and subsequently have a longer length of stay.
There are some programs operating to prevent further deconditioning in medical and surgical wards. An example is the Mobility Enhancement Team at Hornsby Hospital.

F19. Co-located rehabilitation services often lack control as to who is transferred to rehabilitation inpatient beds. Due to hospital pressures and bed capacity, medical outliers are placed in rehabilitation beds increasing the workload for rehabilitation nursing staff and blocking a potential rehabilitation bed.

F20. Patients with a longer length of stay who do not belong anywhere else generally may be transferred to the rehabilitation ward for the remaining length of stay and while waiting for alternate accommodation.

F21. The ability to transition patients from an acute care rehabilitation service back into the community with appropriate ongoing rehabilitation support is a challenge in many areas due to the lack of rehabilitation outpatient services. In reality this often increases the length of stay for patient in the inpatient ward beyond that required.

Effectiveness
Following admission a comprehensive multidisciplinary assessment was undertaken in all rehabilitation services and used as the basis for care planning, goal setting and therapy. Most staff indicated that there was minimal or no duplication in the assessment process and this was supported by good team communication and sharing of roles.

Each of the rehabilitation units visited expressed support for the principle of a rehabilitation service leader which was often the Rehabilitation Physician or Geriatrician. However, it was felt that the culture and communication fostered by having a leader was much more important than who the leader was.

Traditional nursing models and the general levels of nursing staff appeared to be an issue for many sites with nursing staff often too busy to promote enablement or allow involvement in therapy.

Information and communication at the point of handover from the acute sector was generally felt to be poor with minimal medical record / paperwork sharing and ambiguity related to medications, diet, swallowing status and ongoing management plans.

Across all ten sites visited, transfer of care planning commenced on admission and most services defined an estimated date of transfer of care at the time of the first case conference. Case conferences were held at all sites for all inpatients at least weekly. Case conferencing for day hospital and outpatients was not as structured and varied according to the site.

The findings associated with effectiveness highlighted across the ten sites, include:

F22. Rehabilitation services provided effective multidisciplinary care across continuum of care from assessment to case conferencing and transfer of care planning. Team collaboration and communication was strong with specific strategies implemented to enhance patient centric care.

F23. A number of health professionals indicated that they would like to provide more therapeutic interventions, however this was not seen to be possible within the current structures (for example, workforce availability or space within the unit). Patient therapy on the ward is limited by the availability of allied health staff and the workload of the nursing staff who are often caring for complex patient with multiple needs.

F24. The FIM (Functional Independence Measure) is the current tool used to measure rehabilitation progress on admission and transfer of care. Concerns were raised related to the use of this tool with elderly patients and the ability to approximate a length of stay due to the complex nature of their health condition and the length of time required to improve.

F25. A continual challenge noted across all services is the absence of or poor quality of clinical handover from acute wards and to community services. There is no standardised process in place for referral or clinical handover and frequently communication about patients is difficult.

F26. Currently rehabilitation services are reporting data to NSW Health however these data are not reported back to the services.

F27. NSW Health performance management key performance indicators focus on the length of stay which is not always an appropriate measure of the service.

Consumer participation
Several sites visited have implemented a case-coordinator role with a single individual identified as the first point of contact for coordinating care, communicating with family and external services.

Family meetings were a common feature of rehabilitation services although these were structured in a number of ways. Examples of family involvement in daily therapy and goal setting were also reported where families and patients were both willing and able. However, the management of expectations of patients, families and carers of what rehabilitation can achieve is a challenge.
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The findings associated with consumer participation highlighted across the ten sites, include:

F28. Patient centric care was enhanced through the use of strategies such as care coordinators, family case conferences and collaborative goal setting. Family involvement in therapy was encouraged where patient and family interest was present.

F29. The management of expectations of patients, families and carers of what rehabilitation can achieve is a challenge in circumstances where people expect that rehabilitation equals recovery. Additionally managing expectations associated with transfer of care timing and requirements for ongoing care and rehabilitation may be difficult particularly where a patient is unable to be transferred back to their original accommodation. Trial rehabilitation stays, trial and family meetings are some of the mechanisms used to manage these expectations. Family and carer expectations were only sometimes discussed in the acute setting prior to transfer to the rehabilitation unit.

F30. Rehabilitation services are based on an enablement philosophy where therapy occurs at every point of contact with the patient. Continuous encouragement of patients to participate in this model, get dressed in the morning and strive towards functional improvement can be challenging.

Next steps: Design phase

The key findings presented in this report will inform the Design phase of the project. Key considerations underpinning the Design phase will be the agreement of a range of definitions that will assist to determine solutions and model/s of care from an operational perspective. Similarly the future context of the health system and specifically rehabilitation services will be considered in relation to local area networks, activity based funding, e-health and performance management.

The identified good practices and key findings as identified in this report, will be grouped into those that:

- will inform the development of the models of care
- are operational processes or practices that will impact on the later execution of the models of care and may require further validation or improvement prior to this stage.

Taken together the key findings, definitions and future context will support the development of a framework for new models of care. This framework will include:

- A statement on the strategic purpose and role of rehabilitation services within NSW Health
- Specification of evidence-based principles spanning structure, process, people, technology and change management to be used in the detailed design of preferred models of care.
- A number of high level options for new models of care co-ordinated across a spectrum of settings detailing the patient journey, high level roles and accountabilities, and definitional characteristics relating to eligibility and access.

We will continue to work closely with NSW Health, the Rehabilitation Redesign Working Group and industry stakeholders (as appropriate) to develop new and innovative models of rehabilitation care for NSW.