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Australasian Faculty of
Rehabilitation Medicine

The Royal Australasian College of Physicians

**Rehabilitation medicine physicians
delivering integrated care in the community**

***Early Supported Discharge programs in stroke
rehabilitation: an example of integrated care***

March 2018

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Glossary of Terms

Terms	Definitions
Acute care	Acute care is care provided in the hospital and by emergency services.
Ambulatory care	Ambulatory care is defined as care provided to patients who are not residing in the hospital during their treatment. It is provided in a range of settings including outpatient clinics, day hospitals, community centres, residential care facilities and domestic and community settings.
Early Supported Discharge services	ESD services involve an early discharge and seamless transfer from the acute care setting with ongoing rehabilitation provided in the home by an interdisciplinary team of health professionals, during a period when the patient would historically be in an inpatient stroke rehabilitation unit.
Integrated care	Integrated care involves collaboration and coordination between providers and services across primary, secondary and tertiary care settings. Integrated care extends beyond a patient's regular medical home or single provider, and into the surrounding medical neighbourhood.
Interdisciplinary	<p>Professionals in interdisciplinary teams meet regularly in order to discuss and collaboratively set treatment goals for the patients and jointly carry out the treatment plans. They are ideally on the same hierarchical level and there is a high degree of communication and cooperation among the team members. The outcome of this model is that the professionals develop skills across different disciplines. The interdisciplinary team model is considered to have a higher quality of collaboration and team performance but there is a lack of research to prove this assumption.¹</p> <p>N.B. In the context of rehabilitation, interdisciplinary is the preferred term as it better encompasses the nature of teamwork inherent in the rehabilitation process. The term multidisciplinary (see below) has been retained in some instances in this document where directly quoting from a referenced paper.</p>
Multidisciplinary	A multidisciplinary team approach is discipline oriented, with all professionals working parallel and with clear role definitions, specified tasks and hierarchical lines of authority. The level of professional autonomy is high, with members creating their own individual goals and treatment plans for the patient. As a result, there is little overlap between the team members. ²

Patient-centred care	“Patient-centred care is health care that is respectful of, and responsive to, the preferences, needs and values of patients and consumers. The widely accepted dimensions of patient-centred care are respect, emotional support, physical comfort, information and communication, continuity and transition, care coordination, involvement of family and carers, and access to care.” ³
Primary care	Primary care is “usually the first and <i>primary</i> point of health care delivered in, and to people living in their communities – outside of hospitals. Primary care includes a range of services provided by health professionals such as general practitioners, practice nurses, dietitians, psychologists, physiotherapists, pharmacists and community health workers.” ⁴
Rehabilitation medicine physician	Rehabilitation Medicine Physicians are Fellows of the Australasian Faculty of Rehabilitation Medicine. They diagnose and assess a person’s function associated with injury, illness or chronic conditions, to maximise their independence and improve and maintain quality of life; provide specialist knowledge and expertise in the prevention, assessment, management and medical supervision of a person with a disability; evaluate medical, social, emotional, work and recreational aspects of function; work with children and adults using an evidence-based collaborative approach with other disciplines, having a unique overview of the skills and expertise of other health professionals, to develop a patient-centred, individualised treatment plan in a range of settings including home, public and private hospitals, and community rehabilitation centres and clinics. ⁵
Telehealth	Telehealth in the context of this paper is defined as the use of videoconferencing technologies to conduct a medical consultation where audio and visual information is exchanged in real time. Telehealth can be conducted between a specialist and patient in the presence of their general practitioner or other health worker, or can be conducted with no medical support at the patient end. ⁶

Introduction

The Royal Australasian College of Physicians (RACP) trains and represents over 23,000 medical specialists and trainee specialists from 33 different specialties, across Australia and New Zealand. We strongly believe that evidence-based policy discussions about the health systems that Australia and New Zealand need for the decades ahead, to provide quality, accessible, efficient and high value healthcare that is centred on patient needs, are essential given our ageing populations and the rising costs of healthcare. Central to these discussions must be the need to facilitate and support better integration of care across the health sector.

The RACP is working to highlight the crucial contributions specialist physicians can make to the delivery of integrated care, often in community-based settings, through partnerships and collaborations across the health system and beyond. This paper forms part of this broader integrated care work being undertaken by the College.

The paper does not aim to present a detailed practical handbook for physicians interested in integrated care. Its purpose is to support the RACP and physicians' efforts to advocate for specialist physicians' involvement in the design, implementation and delivery of integrated care models, in collaboration with general practitioners and other primary care professionals, for the benefit of all patients and families.

This paper focuses specifically on one physician specialty group - rehabilitation medicine physicians. It uses Early Supported Discharge for stroke rehabilitation as a detailed example of the contribution they can make to the delivery of high quality integrated care in the community. Although this paper focuses on adult rehabilitation medicine services, the authors acknowledge that the principles of integrated care and community rehabilitation espoused in the paper are equally as important and relevant for paediatric rehabilitation medicine services.

Integrated care for physicians

The RACP considers integrated care to involve collaboration and coordination between providers and services across primary, secondary and tertiary care settings. Integrated care extends beyond a patient's regular medical home or single provider, and into the surrounding medical neighbourhood and is inclusive of specialists including physicians, hospitals, general practitioners, allied health and nursing providers and Maori Health and Aboriginal Health Workers. Integrated care also extends beyond the patient and back into the community via their own extended family and networks.

To be effective, the RACP proposed that integrated care systems need to be underpinned by the following core principles: ⁷

1. Designed for patient-centred care
2. Focused on quality and safety
3. Provides for measurable outcomes and supports regular monitoring, evaluation and continual quality improvement
4. Allows for flexibility and local implementation

5. Promotes a cross-sector, cross-profession approach, respecting the diversity of health care providers
6. Incorporates systemic supports for clear patient pathways between specialist, primary care, and allied health professionals
7. Recognises the importance of patient experience.
8. Supports primary care as the main portal for a community's access to health care.

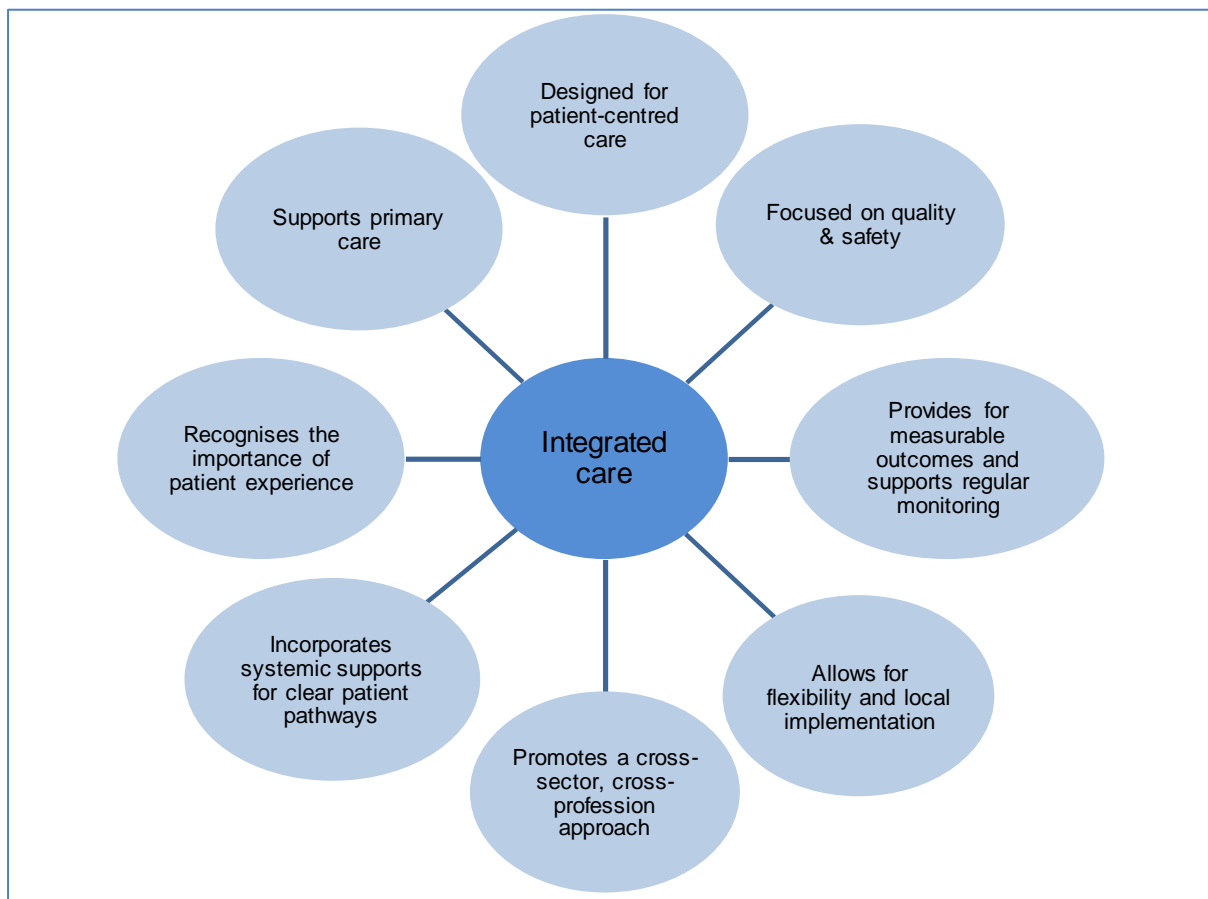


Figure 1 Core principles underpinning integrated care⁸

A strong primary healthcare sector is fundamental to the delivery of patient-centred integrated care. For most patients most of the time, primary healthcare in the community is the most appropriate setting for the provision of healthcare. The main community healthcare providers and coordinators are general practitioners as well as Maori Health Providers in New Zealand and, in Australia the Aboriginal community controlled primary care sector for Aboriginal and Torres Strait Islander people. They are critical to the success of integrated care. It is therefore imperative that further integration of specialist care within primary practice settings is undertaken in partnership with primary care providers.

The RACP not only proposed key principles underpinning integrated care but is also promoting increased physician participation in integrated care models. Two specific approaches or ‘pillars’ to

specialist involvement have been proposed as outlined in Figure 2 below. First, supporting specialists to undertake their role in informing, planning and contributing to care for patients with chronic, complex and multiple healthcare needs; and secondly, supporting specialists to work in community-based ambulatory settings – whether physically or virtually.⁹ More specifically, physicians specialising in generalist disciplines, such as geriatricians, rehabilitation medicine physicians, general medicine physicians and paediatricians, have particular training and expertise in the longitudinal care of patients with multiple and complex conditions. They play a critical role where there are complex health issues at play, psychosocial problems, and difficulties with determining and effectively planning care in the face of conflicting health priorities.

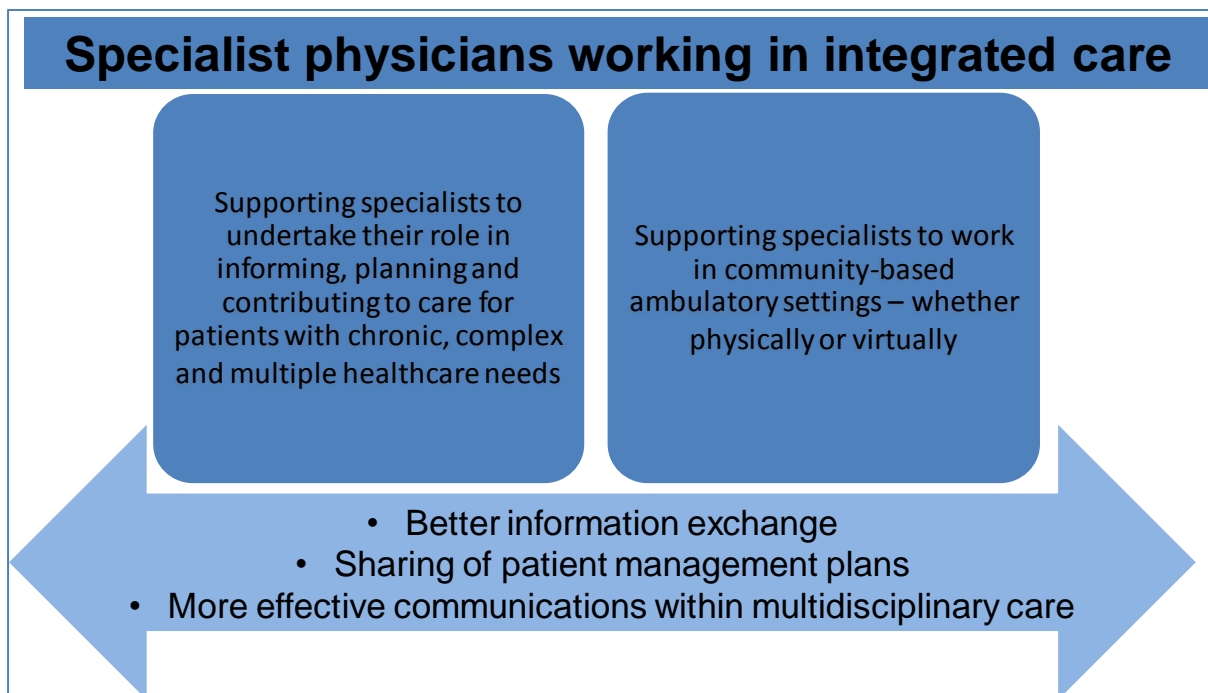


Figure 2 The pillars of integrated care¹⁰

Both of these ‘pillars’ are supported by better information exchange, sharing of patient management plans and more effective communications within multidisciplinary teams. For example, case conference meeting involving the rehabilitation medicine physician, GP, interdisciplinary team and other primary health care providers.

For more information about the design, implementation and delivery of integrated care models including funding and payment models, partnership with consumers in healthcare decision-making, eHealth, use of multidisciplinary teams, governance and management, please refer to the RACP Integrated Care paper.¹¹

Rehabilitation medicine and integrated care

Rehabilitation medicine is that branch of medicine that focusses on 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 the improvement of function. A rehabilitation medicine service aims to assist people with loss of function or ability due to injury or disease to attain the highest possible level of independence (physically, psychologically, socially and economically) following that incident or illness. This is achieved through a combined and co-ordinated use of rehabilitation medicine physician, nursing and allied health professional skills. The process involves individual assessment, treatment, regular review, discharge planning, community integration and follow-up of people who are referred to that service.¹² Fundamental to the delivery of rehabilitation services, rehabilitation medicine physicians provide leadership and contribute their medical and rehabilitation expertise to the rehabilitation team.

Underpinning rehabilitation services are guiding principles that include: leadership, equitable access, interdisciplinary care teams, care coordination, patient-centred care, evidence-based care, appropriate care settings and clinical process and outcomes.¹³

While traditionally many rehabilitation medicine services have been provided in the inpatient hospital environment, it is recognised that there should be a far greater emphasis on ambulatory models of care, both in disease management and also in the provision of rehabilitation after people have suffered sudden or progressive onset of disabling conditions as a result of illness, injury or the effects of chronic disease. Not only are ambulatory models of care likely in many cases to be more cost effective than hospital-based care, they are often more convenient, contextually appropriate and preferred by the person receiving care.¹⁴ In ambulatory settings rehabilitation medicine physicians work collaboratively with general practitioners who are responsible for the primary medical care of the patient, and other health professionals in the community setting. Effective, efficient and timely communication between the ambulatory rehabilitation service, the general practitioner, relevant hospital departments and community-based specialists is mandatory to prevent sub-optimal outcomes.¹⁵

Development of rehabilitation medicine services in ambulatory settings will require effective, integrated care models. For rehabilitation medicine services in the community effective integrated care is likely to require modifications and enhancements to existing models of service including:

- (i) greater emphasis on designing the ambulatory services around patient-centred care principles including provision of comprehensive services as close to the patient's home as possible.
- (ii) ensuring regular review by the rehabilitation medicine physician throughout the ambulatory program and on an ongoing basis to address the longer-term consequences of the disability or chronic disease as necessary.
- (iii) increased attention to secondary and tertiary preventative efforts that minimise the risk of disease relapse, progression of the impairment or disability and development of complications and hence, maintain quality of life.
- (iv) closer collaboration including joint person-centred goal planning and case conferencing and communication with general practitioners and other primary care services, more formalised and planned hospital discharge processes, handover of care, shared care and follow-up.
- (v) improved focus on quality and safety and outcome measurement in ambulatory services and

- (vi) promotion of flexibility in service provision to facilitate varied implementation of the ambulatory rehabilitation service at a local level to meet the specific needs of the patients and their primary care providers.

Rehabilitation medicine physicians are uniquely placed to support and advance these integrated care models for people with acute, chronic or potential disability due to their knowledge and expertise in relevant areas including: the management of people with chronic and complex conditions and disability; the biopsychosocial model of care and cultural understandings of health; person/patient-centred models of care; interdisciplinary team leadership; and management, co-ordination and problem-solving in cross-sectoral care processes; as well as their knowledge of clinical practice in community settings.

Early Supported Discharge (ESD) programs in stroke rehabilitation: An example of integrated care in the community

Early Support Discharge (ESD) for stroke rehabilitation offers a good example of the important role rehabilitation medicine physicians play in delivering quality integrated care to patients in the community. This area of rehabilitation was chosen due to the strong evidence-base to support its effectiveness in terms of health outcomes and patient satisfaction, as well as its potential to deliver reduced costs to the health system.

Additional examples and further information about other areas of rehabilitation medicine where this integrated interdisciplinary model of care has the potential to deliver improved patient outcomes and efficiencies are included in the section titled *Other integrated community-based rehabilitation models of care*.

Stroke and stroke rehabilitation

Stroke is one of the leading cause of death in New Zealand¹⁶ and Australia¹⁷ and a leading cause of adult disability in both countries^{18,19} More people are surviving stroke and are aging with the associated physical, cognitive and functional limitations.²⁰ This puts increasing pressure on the health system to deliver stroke care and support. In New Zealand, the overall incidence of stroke is decreasing four times more slowly than in comparable countries while the incidence of stroke in young people is increasing^{21,22} In order to provide sustainable healthcare, systems must address the persistent effects of stroke through effective and efficient stroke rehabilitation care.

Stroke was estimated to have an indirect and direct financial cost in Australia of AUD\$5 billion in 2012²³ and direct costs for New Zealand of approximately NZD\$450 million in 2009.²⁴ Improving outcomes through stroke rehabilitation can reduce the cost burden of stroke.

Data from the Australian National Stroke Audit Acute Services 2017 shows that only 59% of patients with stroke received an assessment for rehabilitation, and of these patients only 46% had a referral made for ongoing rehabilitation, even though three-quarters (75%) of those who had an assessment for rehabilitation had an identified need for ongoing rehabilitation.²⁵ This is significantly less than the recommended goal of every patient with stroke being assessed for rehabilitation.²⁶ In New Zealand approximately 30% of all patients with acute stroke receive inpatient rehabilitation and a further

unknown proportion of patients receive some type of ongoing rehabilitation in the community.²⁷ In addition disparities exist within the level of care provided, with only 20 %²⁸ of New Zealand stroke rehabilitation services under the leadership of rehabilitation medicine physicians.

Rehabilitation services are currently provided to stroke survivors across a range of care settings. These settings, as described in the Models of Stroke Rehabilitation diagram provided in the Rehabilitation Stroke Services Framework 2013 (Australia)²⁹ include inpatient units, day hospitals, outpatient clinics, community centres, home-based services and virtual clinics via telehealth. Access to these services depends both on their availability in a given area and on their suitability to individual patient needs.

All stroke survivors who qualify for entry to a rehabilitation pathway can benefit from stroke rehabilitation commencing as soon as practicable after stroke.^{30, 31} The Clinical Guidelines for Stroke Management recommend that every patient with stroke should have their rehabilitation needs assessed within 24–48 hours of admission to the stroke unit by members of the interdisciplinary team; that any patient with stroke with identified rehabilitation needs should be referred to a rehabilitation service, and that rehabilitation service providers should document whether a patient with stroke has rehabilitation needs and whether appropriate rehabilitation services are available to meet these needs.³² Rehabilitation may be initiated in acute and post-acute settings.³³ Interdisciplinary care is identified as an essential element of stroke rehabilitation.³⁴ Specialist stroke expertise in stroke rehabilitation services is also important and has been shown, when compared to general rehabilitation services to reduce the risk of poor outcomes, such as death or dependency.³⁵ With established expertise in interdisciplinary care planning and delivery, rehabilitation medicine physicians play a key role in directing and enhancing coordinated complex care for stroke rehabilitation across the care continuum.

Evidence for Early Supported Discharge (ESD) in stroke rehabilitation

ESD services involve an early discharge and seamless transfer from the acute care setting with ongoing rehabilitation provided in the home, during a period when the patient would historically be in an inpatient stroke rehabilitation unit. ESD, when satisfactorily resourced, can allow patients with stroke to return home when they are medically stable and reduce length of hospital stay and also reduce long term dependency.³⁶

The Stroke Foundation's (Australia) Rehabilitation Stroke Services Framework outlines five essential elements of an ESD service for stroke rehabilitation:³⁷

1. Delivery by a stroke specific interdisciplinary team
2. Offering coordinated and planned discharge from hospital and continued rehabilitation when patients are settled at home
3. Targeting a subset of the stroke population (i.e. patients with mild to moderate stroke severity)
4. Fostering strong links between the acute service and the ESD team, with both hospital staff and ESD team members identifying eligible patients with stroke

5. Measuring the effectiveness of the service using standardised assessments to monitor stroke severity, dependency, activities of daily living and satisfaction as well as the impact of the ESD service on length of stay and hospital readmission rates.

The effective delivery of ESD services for stroke rehabilitation requires an early eligibility assessment of patients with stroke in hospital, co-ordinated discharge home and post-discharge support from an interdisciplinary team.³⁸ The support provided by ESD services in the early post-discharge period is particularly important given that stroke survivors and their families and carers consistently report this time as difficult to manage successfully.³⁹

A description of the characteristics of effective ESD for stroke rehabilitation including team composition, principles and intervention strategies for its delivery is included as Appendix A. This information is based on the Stroke Foundation (Australia)'s Rehabilitation Stroke Services Framework 2013.⁴⁰

Rehabilitation medicine physicians have crucial responsibilities in the delivery of rehabilitation services, including ESD for stroke, via their multi-dimensional roles as doctors, advisors, educators and managers. Their role includes: medical and rehabilitation management of illness and disability; prevention and health promotion; prognostication, measurement and benchmarking of clinical outcomes; high level communication and advocacy for patient's rights and health resources; education (of peers and trainees, other health professionals and patients and their families and networks) and research; co-ordination and leadership of the interdisciplinary team with consultation and liaison with medical and other colleagues; finding solutions for complex problems in individuals and organisations; and management of rehabilitation programs including eligibility, goal setting, program length and quality.

The prevailing evidence shows that ESD services are on the whole effective. The Stroke Foundation's (Australia) recently released Clinical Guidelines for Stroke Management rated ESD services for stroke rehabilitation as a strong recommendation⁴¹ having reviewed the latest scientific literature using the GRADE methodology (Grading of Recommendations, Assessment, Development and Evaluation). The evidence to date suggests ESD services are cost effective;⁴² systematic reviews of patients with stroke being managed using integrated care pathways such as ESD in the home show that this care is cost effective, reduces hospital stay, and provides for comparable or better patient outcomes.^{43, 44} Appropriately resourced and targeted ESD services have demonstrated they can reduce patients' long term dependency and admission to institutional care, reduce the length of inpatient stay and increase the likelihood of patients being independent and living at home in the longer term.^{45, 46, 47, 48, 49}

Findings from a meta-analysis have also suggested that ESD services also significantly improve inpatient rehabilitation flows with an average reduction in length of stay of eight days.⁵⁰

In a critical review of ESD services, patients reported higher level of satisfaction with ESD services than with conventional care and there was a trend towards better function in activities of daily living amongst ESD patients.⁵¹ Findings suggest that long term global function improvement including

physical performance outcomes (such as walking speed, motor recovery, and balance scores) improved at a greater rate for those patients receiving ESD.

Unfortunately, despite strong evidence that ESD services improve health outcomes for patients with stroke and can reduce the length of inpatient stay, at present, not all who may benefit from ESD services are assessed for or offered the stroke rehabilitation that they need. The Australian National Stroke Audit Acute Services 2017 showed that only 11% of respondent hospitals (N=127) reported access to stroke specialist ESD services,⁵² and the Australian National Stroke Audit Rehabilitation Services 2016 showed that only 4% of patients were referred to ESD services.⁵³

Enablers of ESD in stroke rehabilitation

For ESD programs in stroke rehabilitation to be maximally beneficial, the key enablers of workforce, eHealth, infrastructure and funding must be considered.

The AFRM has published Standards documents for both Inpatient Adult Rehabilitation Services⁵⁴ and Ambulatory Rehabilitation Services.⁵⁵ Staffing levels and mix for ESD programs in stroke rehabilitation should be consistent with these Standards. The Stroke Foundation (Australia) has, making reference to the AFRM Standards, recommended a specific staffing mix (see Appendix A) and recommends that there should be a full range of team members (medical, nursing, allied health and support staff) with an appropriate skill base and training to provide comprehensive, contemporary programs of care to address the impairments, activity limitations and participation restrictions⁵⁶ present in the patients admitted to the rehabilitation service. However, the Stroke Foundation (Australia) also points out that while this is a useful starting point, the workforce requirements should be based on the provision of evidence-based therapy (rather than simple staff numbers).⁵⁷ Interdisciplinary team care is becoming increasingly important and the team requires processes and tools to be in place that support interdisciplinary communication, referral, admission, assessment, care delivery and transfer of care processes. In particular, mechanisms must be in place to ensure that individuals receiving ESD services are regularly reviewed as to their progress in achieving rehabilitation outcomes, with opportunities being available to adjust the program's intensity or location, to achieve the best possible functional outcomes.

The use of tele-rehabilitation as an emerging service model linking specialist staff to other centres can assist to overcome geographic barriers. A number of innovative tele-rehabilitation research projects demonstrate that eHealth rehabilitation assessment, speech pathology, and measurement of upper limb range of motion can be achieved by employing an appropriate eHealth platform.^{58, 59, 60, 61} Where possible, eHealth should be considered as an enabler of ESD services for stroke.

Appropriate infrastructure and funding affect the level of access to ESD services. Both facilities and equipment need to be adequate and appropriate for the rehabilitation needs of the patients.

Integrated care and ESD in stroke rehabilitation

The Stroke Foundation (Australia) has developed essential principles and elements of stroke rehabilitation services (including ESD services)⁶² which align with the RACP's principles of integrated care outlined in the section titled *Integrated care for physicians*.

The principles and elements include:

- a) every stroke survivor has the right to choose their goals, activities and priorities and rehabilitation should be client centred (aligned to the RACP key principle *designed for patient-centred care*);
- b) routine use of evidence-based guidelines to inform evidence-based therapy and systems that support quality improvement (aligned to *focus on quality and safety*);
- c) standardised and early assessment for neurorehabilitation (aligned to *provide for measurable outcomes*);
- d) the model of care should be driven by client preference and level of need; rehabilitation should be offered in a culturally appropriate environment (aligned to *provide for flexibility and local implementation*; *designed for patient-centred care* and *recognises the importance of the patient experience*)
- e) and provide effective links with acute stroke services providers, inpatient rehabilitation, ESD interdisciplinary team, general practitioners, primary healthcare team, community rehabilitation providers, community services and stroke support groups (aligned *with promote a cross sectoral approach* and *supports primary care as the main portal for a community's access to health care*).

The Stroke Foundation (Australia) holds that the implementation of these principles and of essential activities for rehabilitation services enables a safe transition between hospital and community. Improved collaboration across health sectors and between healthcare providers, including GPs and other primary care providers – particularly in the coordination of services for people with high and complex needs – has been shown to: reduce the rate of preventable hospital admissions; improve health and wellbeing during transitions of care; improve the interface between hospital and community providers; and provide additional support to caregivers.^{63, 64, 65, 66}

In summary, there is significant alignment between the general principles of integrated care and the specific principles underpinning ESD services for stroke rehabilitation. ESD services offer an opportunity to develop coordinated and integrated rehabilitation care through incorporating discharge planning with strong linkages across the health system and in particular, linking in early and throughout a care episode with primary care and community support services. Rehabilitation medicine physician involvement promotes the successful delivery of an ESD service. See Figure 3 below.

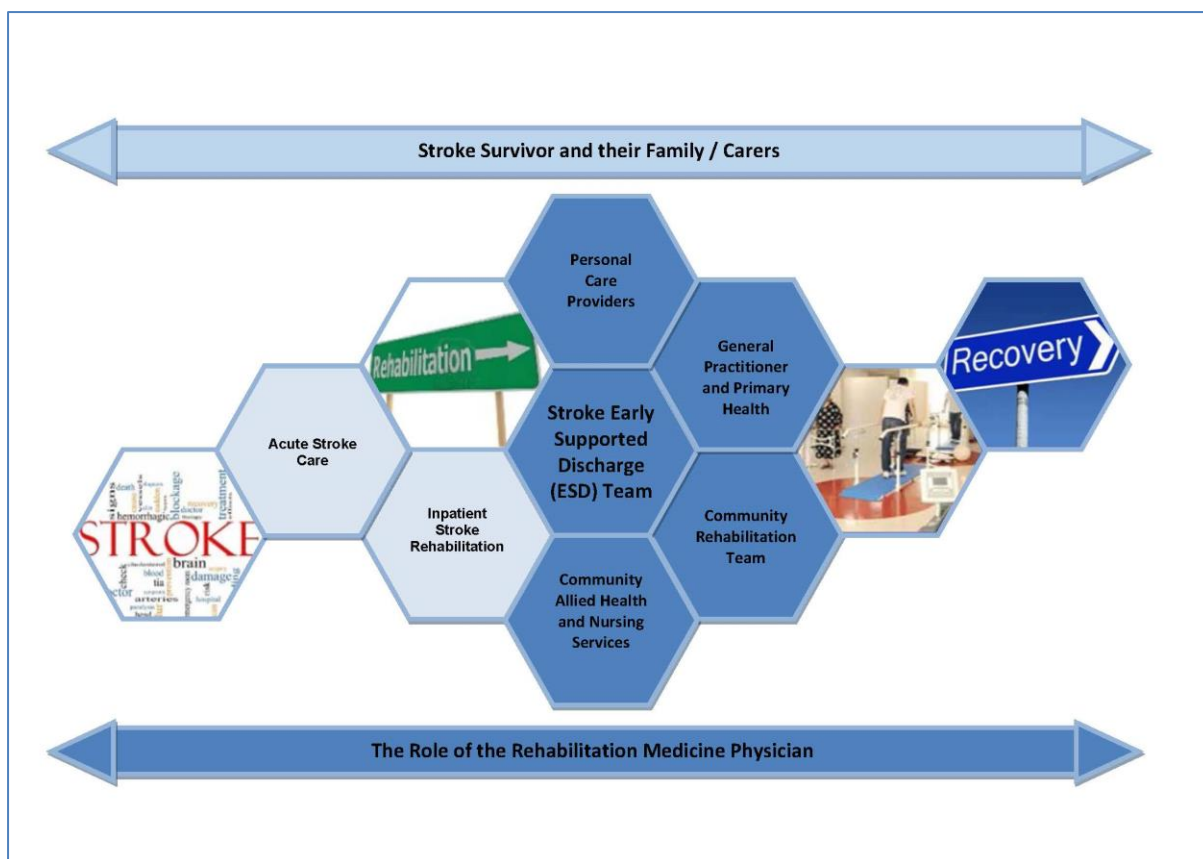


Figure 3: Integrated care model of early supported discharge (ESD) for stroke and the role of rehabilitation medicine physician.

Other integrated community-based rehabilitation models of care

Whilst we have chosen to focus this paper on ESD for stroke rehabilitation, there are a wide variety of community-based rehabilitation medicine services currently being delivered effectively via integrated, interdisciplinary healthcare teams. A key part of these integrated community-based rehabilitation models of care involves sharing of patient planning and management plans amongst the health professionals involved in the care of patients as well as information sharing regarding patients' progress across the continuum of care.

The need for enhanced ambulatory rehabilitation services with rehabilitation medicine physician clinical leadership and involvement is now widely accepted, and documented, in different rehabilitation service plans, models of care and strategy documents in various Australian states and New Zealand.^{67, 68, 69}

A range of ambulatory rehabilitation services with rehabilitation medicine physician involvement are already well established in community settings in most parts of Australia and New Zealand in super-specialty areas of rehabilitation medicine, such as in rehabilitation of spinal cord and acquired brain injury. Service types include interdisciplinary outpatient clinics, supported transitional living and early discharge rehabilitation programs and interdisciplinary outreach teams and clinics. The textboxes in this section provide a selection of current examples of such services.

Spinal cord injury

The **NSW Spinal Outreach Service**⁷⁰ provides annual spinal interdisciplinary clinics to NSW regional centres in addition to transitional community support in metropolitan Sydney. The team includes: rehabilitation medicine physicians and a registrar, a state manager, a physiotherapist, an occupational therapist, a nurse, a social worker and rural spinal coordinators. General practitioners are provided with a comprehensive assessment and management recommendations. These recommendations may include the involvement of local rehabilitation medicine physicians and/or services, community health services and equipment providers where appropriate.

The **Queensland Spinal Cord Injuries Service** established a dedicated rehabilitation medicine registrar to work with its inter-disciplinary community rehabilitation programs (the Transitional Rehabilitation Program and the Spinal Outreach Team) a number of years ago. The aim of this new position is to, not only enhance existing rehabilitation medicine physician involvement reaching out from the Spinal Injuries Unit but also to improve the communication handover and liaison with the patient's general practitioner.⁷¹ During Transitional Rehabilitation Programs, the QSCIS Community Registrar acts as a key contact point with the client's new or existing GP, providing support, education and consultancy as required regarding issues specific to the community management of individuals with new spinal cord injuries. Following on from the Transitional Rehabilitation Program, the Spinal Outreach Team (SPOT) provides a lifelong outreach service to people with spinal cord injury and the service providers they work with. Reducing the impact of secondary conditions of spinal cord injury is an important objective for the service and the community registrar along with other members SPOTs interdisciplinary team support GPs and other health and disability service providers through consultation, education and advice to problem solve issues

The **South Australian Spinal Cord Injury Service (SASCIS)** is a state-wide service providing specialist rehabilitation services for South Australia. SASCIS holds interdisciplinary outreach clinics in Mt Gambier and Whyalla twice a year, attended by a rehabilitation medicine physician, a spinal nurse and a spinal therapist. SASCIS rehabilitation medicine physicians also provide regular outreach clinics to Alice Springs, Darwin and East Arnhem Land.

The **Auckland Spinal Rehabilitation Unit (ASRU)** and the **Burwood Spinal Unit (BSU)** provide interdisciplinary team outreach services throughout the year in the North and South Islands of New Zealand. Teams include a rehabilitation medicine physician, a spinal specialist nurse, a physiotherapist and an occupational therapist. A letter drafted by the interdisciplinary team (IDT) goes to the patient's general practitioner and to their Accident Compensation Corporation (ACC) Case manager for the individual patient so the ACC is aware of the recommendations and associated funding required. Local physiotherapists (and occupational therapists on occasion) attend these clinics along with the individual patients they work with in the community. This is a valuable opportunity for collaboration and to provide further upskilling of local allied health staff in specialist spinal cord injury issues. For those patients who are on bed rest for pressure ulcers, the IDT does a home visit which gives a valuable insight into the situation at home and enables joint assessment with local district nurses and mutually agreed recommendations.

Brain injury

The **NSW Brain Injury Rehabilitation Program (BIRP)**⁷² is a network of 14 metropolitan and rural inpatient, transitional and community specialist rehabilitation services for children, young people and adults with disability following a severe traumatic brain injury.

The **South West Brain Injury Rehabilitation Service (SWBIRS)**⁷³ is based in Albury and provides an outreach service to the district as well as comprehensive assessments, rehabilitation programs and support to children and adults who have sustained a brain injury. Programs include a residential program in the independent living unit, adult outreach and paediatric outreach.

Rehabilitation medicine physicians are also often closely involved in ambulatory persistent pain management services which work closely with general practitioners and primary care services to integrate care for people with persistent pain.

Rehabilitation in the Home (RITH) and other community rehabilitation service models are becoming increasingly common in urban and rural and remote areas of Australia and New Zealand. Models vary in different regions but generally involve an intensive, interdisciplinary rehabilitation program provided for people whose rehabilitation goals relate to home and community living. Rehabilitation medicine physician involvement and close liaison with the general practitioner and primary care organisations are key to many of these models.^{74, 75}

Stroke

The **Counties Manukau Health Community Stroke Rehabilitation service (CSR)**,⁷⁶ operating from Middlemore Hospital, South Auckland, provides client and whanau-centred, goal-focused rehabilitation across the spectrum of physical function, activity and social participation for people recovering from stroke. The service covers Counties Manukau Health catchment area excluding Franklin/Pukekohe/Otahuhu.

The team includes a section head, social worker, physiotherapist, speech language therapist, dietitian, occupational therapist, rehabilitation medicine physician, nurse and rehabilitation assistants and administration support. Rehabilitation takes place in the most appropriate location, which may include home, community gyms, swimming pools, shops, the workplace and/or other areas where people would like to access the service. The CSR liaises closely with other relevant community services which help with stroke rehabilitation including general practitioners, practice nurses, district nurses, cultural support agencies, the Stroke Foundation of New Zealand and other rehabilitation providers.

General rehabilitation

The Murrumbidgee Local Health District outreach rehabilitation service provides both inpatient and ambulatory care in NSW. The Wagga Wagga Rural Referral Hospital (WRRH) is the hub with Temora, Tumut and Narrandera district hospitals being the outreach spokes. Medical care is provided by the patient's usual general practitioner in the outreach hospital and nursing care is provided by existing nursing staff. The outreach team consists of a rehabilitation medicine physician, coordinator, physiotherapist and occupational therapist based at the WRRH hub and an allied health assistant at each outreach hospital. Telehealth is utilised for day-to-day videoconferencing for allied health assistant supervision, case conference meetings, patient education/therapy and rehabilitation medicine physician-patient consultations. The allied health team visit the outreach sites weekly and the rehabilitation medicine physician consults quarterly.

The rehabilitation medicine physician liaises with the general practitioner at the commencement of an inpatient outreach program and during the program as required. Essentially, the benefit of this service is the provision of a rehabilitation program for people living in rural communities closer to home utilising the combined expertise of existing local services and general practitioners and the specialist community rehabilitation team. This service model exemplifies the role of rehabilitation medicine physicians in the delivery of integrated care for people living in rural and regional communities.

Other areas of rehabilitation including spasticity management, amputee rehabilitation and prosthetic clinics, rehabilitation programs for older persons including those for falls prevention, frailty, reablement and restorative care also include service provision by rehabilitation medicine physicians in ambulatory rehabilitation services. The textbox below provides an example of a falls prevention and rehabilitation program.

Falls prevention and rehabilitation

The Ambulatory Care Department at Fairfield Hospital, NSW provides an interdisciplinary Falls Prevention Clinic including the "Able and Stable Class" program; an intensive, interdisciplinary rehabilitation group program (one day a week for 10 weeks). The team includes two rehabilitation medicine physicians who perform initial assessment and ongoing specialist review as required, as well as a physiotherapist, an occupational therapist, and a social worker. Interdisciplinary case conferencing occurs weekly for all patients.

There are no age limits for participation in the program. Some people are younger and have chronic disabilities arising from impairments such as spinal cord injury, spina bifida, cerebral palsy or multiple sclerosis, whilst others are older with chronic and complex conditions including peripheral neuropathy, Parkinson's Disease and dementia. Referral to other specialties including geriatric medicine, neurology or psychiatry may be required. Close involvement of the general practitioner is essential for monitoring of increase in occurrence or risk of falls, medication review and titration, and ongoing general review.

Although there are already many examples of rehabilitation medicine physicians practising integrated care in community rehabilitation services, there is no doubt that these services will continue to develop and expand in the near future.

Conclusions

While it is widely accepted that the health systems in Australia and New Zealand deliver good health outcomes, including rehabilitation outcomes, it is acknowledged that both systems suffer from fragmentation of care delivery, inadequate co-ordination across health sectors and insufficient patient focus. Reform of the health system is essential to improve care co-ordination across sectors, to ensure that the overall healthcare of patients is fully considered and that patients are informed and engaged partners in decision-making about their healthcare.

This paper forms part of the larger RACP Integrated Care work which emphasises both the importance of further developing and expanding integrated care models in the community and articulates the vital role specialist physicians play in integrated care. The two 'pillars' to specialist involvement in integrated care models are, as outlined in the introduction: 1) supporting specialists to work more in community-based settings; and 2) understanding and promoting the critical role physicians play in coordinating care for patients with multiple co-morbidities or complex care needs. The discussions around better integrated care – including those discussions and proposals driven by the RACP and their members – highlight that many physicians, including rehabilitation medicine physicians, have particular training and expertise in the longitudinal care of patients with multiple and complex conditions. It is essential that this expertise is fully engaged and appropriately utilised if we are to achieve a more integrated, effective, sustainable and patient-centred healthcare system.

This paper has examined the ESD model for stroke rehabilitation as an example of the rehabilitation medicine physician's knowledge and expertise in the delivery of high quality, integrated care models in community rehabilitation settings. ESD models for stroke have a strong evidence base and their essential elements and principles align closely with those of integrated care.

This paper also identifies other current examples of integrated, interdisciplinary models of rehabilitation medicine services in ambulatory and community rehabilitation settings, that are providing high quality, expert and patient-centred care for people with a wide variety of disability and chronic conditions. The RACP encourages and supports further development of the role of rehabilitation medicine physicians and other specialist physicians in models of community integrated care.

As non-inpatient models of sub-acute care continue to expand in the future, it is expected that rehabilitation medicine physicians will continue to develop and enhance their essential knowledge and skills in integrated care and apply those skills to an increasing range of community rehabilitation services and systems.

Appendix

Rehabilitation Stroke Services Framework Description of ESD Services

The information in this Appendix is reproduced from the Stroke Foundation, Rehabilitation Stroke Services Framework 2013 with authorisation from the Stroke Foundation.⁷⁷

Characteristics of ESD services

- a) Stroke specific and interdisciplinary team
- b) Offer coordinated and planned discharge from hospital and continued rehabilitation when patients are settled at home
- c) Target a subset of the stroke population i.e. those of mild to moderate stroke severity
- d) Have strong links between the acute service and the ESD team, with both hospital staff and ESD team members identifying people.
- e) Measure effectiveness using standardized assessments to monitor stroke severity, dependency, activities of daily living and satisfaction as well as the impact of the ESD service on length of stay and readmission rates.

Team Composition for Implementation of Early Supported Discharge Services

1. Members of the early supported discharge team should have specialist knowledge in stroke care
2. An early supported discharge team should be interdisciplinary and typically include:
 - Physiotherapist
 - Occupational therapist
 - Nurse
 - Speech Pathologist
 - Rehabilitation Physician
 - Social worker
 - Administrative Support Person
3. A representative guide for the composition of an early supported discharge team (for a 100-patient-per-year caseload) is:
 - 1.0 Physiotherapist
 - 1.0 Occupational Therapist
 - 0.4 Speech Pathologist
 - 0–0.5 Social Worker
 - 0–1.2 Nurse
 - 0.1 Rehabilitation Physician

Principles of the Early Supported Discharge Service Team should include:

1. The main role is to ensure early discharge from hospital to home
2. Located on the hospital campus

3. Organised by a team coordinator
4. Should plan and coordinate both discharge from hospital and provide goal specific rehabilitation and support in the community
5. A team member should be assigned as Key Worker for each patient
6. The team should meet weekly for case conferences
7. On completion of ESD the team should refer the patient to community based rehabilitation teams for longer term goals

Intervention strategy for Implementation of Early Supported Discharge Services

Source: Stroke Foundation, Clinical Guidelines for Stroke Management 2017. Melbourne, Australia.

1. Eligibility decisions for early supported discharge should be based on whether the patient is able to live safely back at home
2. Eligibility decisions for early supported discharge should be based, in part on practicality (whether the patient is living within the local area)
3. Hospital staff should identify patients for early supported discharge
4. Early supported discharge team staff should identify patients for early supported discharge
5. Eligibility decisions for early supported discharge should be based in part on the patient's level of disability (e.g., Barthel score)
6. Specific eligibility criteria for early supported discharge should be followed
7. Eligibility decisions for early supported discharge should be based on the patient's medical stability
8. The length of intervention offered by an early supported discharge team should be based on the existence and type of other community-based stroke services operating in the area
9. Most patients eligible for early supported discharge would have a Barthel score of between 10/20 and 17/20
10. Patients eligible for early supported discharge would be able to transfer safely from bed to chair (i.e., can transfer safely with one able carer, or independently if living alone).

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