TAKE ACTION FOR STROKE REHABILITATION 2020

Recovery after stroke can be a challenging and stressful journey. Rehabilitation services need to be tailored to the needs of the individual and their whānau. This Action Plan for Stroke Rehabilitation sets out high level practice recommendations and priorities for action by DHB stroke services, stroke teams and community stroke support organisations to improve outcomes and enhance the lives of New Zealanders recovering from stroke and the people who care for them. High quality rehabilitation should be available and accessible to all who need it.

National Stroke Network – Rehabilitation Working Group

NATIONAL STROKE NETWORK

December 2020

A Plan for Stroke Rehabilitation & Recovery in New Zealand – 2020

Introduction

Stroke is a largely preventable condition that affects approximately 9000 New Zealanders with new events every year. At any one time, an estimated 60,000 people are living with the effects of stroke. It is a major cause of adult disability and despite improvements in stroke services, many have disabilities and are in need of significant daily support.

Following an acute stroke, approximately 20% of people transition from hospital to institutional care. A further 30% will go home but have ongoing variable dependency for activities of daily living. There will be associated costs of ongoing rehabilitation needs, unemployment and significant carer burden that impact the lives of stroke survivors and their families.[1]

Rehabilitation is a holistic process that should begin on the first day after stroke with the aim of maximising the participation of the person with stroke in the community (Australian Clinical Guidelines for Stroke Management 2017).[2] Rehabilitation is a personal journey of reconstruction or transformation of the self (Pryor & Dean, 2012).[3] New Zealand stroke rehabilitation services have long struggled with gaps in provision including a lack of service consistency, quality and timeliness. The experience for patients, families and whānau coping with the impact of stroke has been one of variable access to services, delays or inadequate availability when receiving rehabilitation treatments (especially in the community), and difficult transitions from hospital to home. When consumers are asked about their experiences of stroke care they commonly describe their acute stroke unit care positively but express a sense of abandonment, frustration and poor resourcing for therapy and support on returning to the community.

In 2018 the National Stroke Network (NSN), supported by a contract between the Stroke Foundation NZ and the Ministry of Health, commissioned a strategy to provide a roadmap for improvements in the access, consistency and quality of stroke rehabilitation across New Zealand.

A Strategy for Stroke Rehabilitation[4] in New Zealand sets out recommendations for the provision of best practice for stroke patients to guide DHBs and the Ministry of Health. This plan supports the strategy with recommendations and actions for the sector to address the varied and complex issues faced by people with stroke in rehabilitation and recovery as they return to their community. The intended audience for this plan is DHB stroke service planners, funders and managers, stroke health professionals in hospital and community settings and consumer organisations.

Objectives in developing the plan

a. To hear from and understand what matters to people with stroke and their families / whānau during stroke rehabilitation and recovery, and ensure they are partners in the process.
b. Using existing data and information, understand what is provided and identify the most significant gaps to address in stroke rehabilitation.
c. To agree a set of essential principles for stroke rehabilitation appropriate to the New Zealand setting.
d. To develop an action plan based on the recommendations outlined in the Stroke Rehabilitation Strategy[4] including a roadmap and resources required to address the priority issues and improve outcomes.

Our vision is that all New Zealanders who experience a stroke receive

timely, person-centred, evidence based and culturally responsive stroke rehabilitation services

which help them achieve the best possible recovery and live well in their community.

Stroke Rehabilitation Principles – statements of intent

Person Centred Care – *patients and their whānau are at the centre of what we do*

- The rehabilitation model of care should promote, support and enable people with stroke and their family/whānau to live a meaningful life.
- People with stroke have the right to choose their own goals and priorities for rehabilitation.
- Health professionals should work in equal partnership with people with stroke and their families/whānau based on a shared understanding of their goals, priorities and expectations.
- Rehabilitation (services/teams/programmes) should adopt a holistic approach that addresses people's physical, psycho-social, cultural and vocational needs.

Equitable Access – *outcomes should be equitable across and between patient groups*

- All people with stroke may benefit from rehabilitation[1] and therefore it should be made available to them unless they meet standardised and agreed exception criteria.
- All people with stroke should receive equitable access to rehabilitation which is provided in culturally appropriate and safe services
- Access to specialised services (e.g., return to work, driving assessment) should be available at any time along the rehabilitation pathway.

Evidence Based Care

- Stroke care should be evidence based. Services should be implementing evidence and best practice to support safe and effective care.
- Evidence based practice is supported through regular professional development, teaching, research and quality assurance activities.
- Consistent measurement processes across rehabilitation services are in place to monitor and demonstrate equitable patient outcomes that contribute to enhanced functional independence and wellbeing (NSW Good practice principles).

Seamless Continuum of Care

- Care is planned, communicated and coordinated between the interdisciplinary team (IDT), other care providers and people with stroke and their families/whānau across the care pathway to ensure smooth transitions at every point.
- Rehabilitation should be provided by a specialised interdisciplinary team of health professionals throughout the care continuum.

Equity and Access

People of Maori and Pacific origin experience stroke events 10-15 years younger than New Zealand Europeans, they have a higher mortality and worse outcomes. The outcome gap appears to increase over time from the stroke event. We also know that people who live in rural and provincial regions in Aotearoa appear to have worse outcomes and are less likely to receive appropriate standards of care than their urban counterparts.

Rehabilitation is an important part of the stroke recovery journey. We must ensure that Maori, Pacific people and those living outside our main centres receive services that close the known outcome gaps.

It is expected that implementation of all parts of this plan will emphasise the importance of care delivery and measurement to support equitable outcomes after stroke.

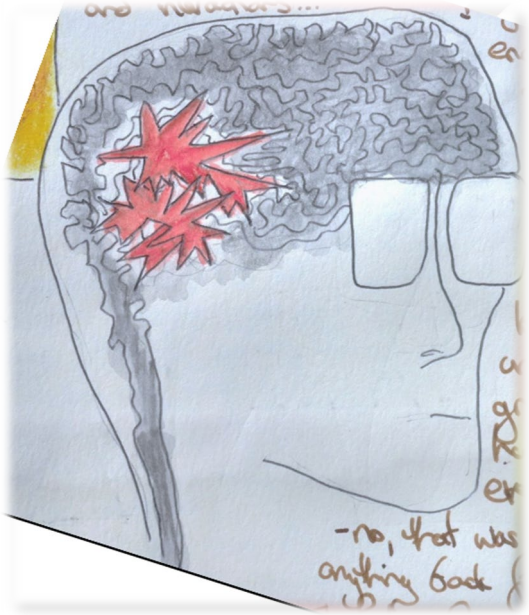
Key Focus Areas:

There are four areas of focus in this document. Each is divided into actions with measures to achieve improved rehabilitation outcomes:

1) Access to Rehabilitation Services that support equitable outcomes
2) Addressing gaps in Rehabilitation support (psychosocial needs, driving, return to work)
3) Transitions across the stroke care pathway
4) Person and Whānau centred care

Almost 3 years on, I look back and reflect on the worst thing about my stroke. It was the helplessness. I had been shocked by the profound distress, hopelessness, embarrassment—even shame—and by its existential impact, threatening my very sense of being. Patients need affirming care that goes beyond goal attainment. Carers need to preserve patient dignity, cultivate compassionate motivation, and understand what the person actually experiences. Without this care, helplessness could so easily have robbed me of my sense of self and of purpose, a necessary foundation for rehabilitation and integral to having a life worth living.

Udo Kischka
Stroke: the doctor as patient.[8]



A drawing by A Webster who kept a journal documenting his progress and how he felt following a stroke.

Focus Area	Goals		Actions to implement	Who	Desired Quality Outcomes	Resources / Enablers
Focus Area 1: Access to Stroke Rehabilitation services that support equitable outcomes	1.1 **Rehabilitation Assessment for all people with acute stroke** All patients with acute stroke are considered for rehabilitation. Rehabilitation needs are assessed and met in a timely way and in a manner that suits the individual's cultural and social situation.	1.1.1	Demonstrate clear processes, protocols and pathways so that all patients with acute stroke are considered for rehabilitation using a comprehensive assessment process **within 48 hours of acute admission to determine the most appropriate rehabilitation setting and the degree and nature of the rehabilitation.** (KPI 2)*	DHB stroke services / teams	People with stroke who require rehabilitation receive it in either an inpatient or community setting. 80% of people with stroke assessed as requiring inpatient rehabilitation are transferred to the inpatient rehabilitation setting within 7 calendar days of acute admission. (MOH indicator 3, KPI 3)*	Recommend use of Australian Stroke Coalition Assessment for Rehabilitation Pathway and Decision Making Tool or an otherwise agreed tool. https://app.magicapp.org/#/guideline/QnoKGn/section/Ed80zE
	1.2 **Access to In-Patient Rehabilitation** People with stroke who require rehabilitation and cannot manage in the community, have access to equitable, timely, flexible and culturally responsive inpatient rehabilitation services. Inpatient services meet recommended NZ Organised Stroke Rehabilitation Service Specifications.	1.2.1	Individual DHB services evaluate their inpatient stroke rehabilitation service provision against NSN minimum service specifications. An action plan exists to address identified gaps.	DHB stroke services / teams	Gaps in minimum services are addressed with a timeline for service improvement. Inpatient rehabilitation meets minimum service specifications including a specialist interdisciplinary team. *(*KPI 1*)**	NZ Organised Stroke Rehabilitation Service Specifications: https://strokenetwork.org.nz/Service-Specifications-for-DHBs
		1.2.2	Organise rehabilitation teams and resource capacity to ensure therapy provision meets the guideline recommendations for therapy intensity. (KPI 5 & 6)*	DHB stroke services / teams	Stroke services meet Australian 2017 Guideline recommendations for therapy type and intensity in rehabilitation settings. Therapy should be provided in line with current Australian /NZ Stroke Clinical Guideline recommendations for therapy provision and intensity. *(KPI 5 & 6)**	Organise rehabilitation teams so that each patient has an individualised nursing and allied health programme of sufficient intensity to achieve their rehabilitation goals. **Guideline Recommendation**: https://app.magicapp.org/#/guideline/Kj2R8j/section/j94ANE
		1.2.3	Inpatient rehabilitation teams should collect and report agreed outcome data to monitor service delivery and to influence service development (e.g. AROC or similar agreed measures).	Stroke rehab teams	Outcome data is reviewed locally, at Regional Networks and annual NSN Quality Meetings.	FIM trained staff Education re: AROC (or similar) including workshops / links
		1.2.4	All stroke rehabilitation services should have culturally appropriate support services and language appropriate information.	Stroke rehab teams	100% of Maori and Pacific stroke patients should be offered culturally appropriate support including language appropriate information.	Stroke Foundation NZ information brochures in Maori, Pacific languages https://www.stroke.org.nz/free-resources

	1.3 **Access to Community based Rehabilitation** People with stroke who require rehabilitation following discharge from hospital have access to equitable, timely, flexible and culturally responsive community rehabilitation services. Community services meet recommended NZ Organised Stroke Rehabilitation Service Specifications	1.3.1	All DHBs provide an organised and resourced community rehabilitation service. Individual DHB services evaluate their community stroke rehabilitation service provision against NSN minimum service specifications. An action plan exists to address identified gaps.	DHB stroke services	Gaps in minimum services are addressed with a timeline for service improvement. DHBs provide community rehabilitation services that meet identified standards as per Service Specifications.	NZ Organised Stroke Rehabilitation Service Specifications and Community FAQs:https://cdn-flightdec.userfirst.co.nz/uploads/sites/strokenetwork/files/Service_Specifications/Frequently_asked_questions_for_community_indicator_Oct2020update.pdf
		1.3.2	DHBs report quarterly to Ministry of Health to identify numbers of people with stroke who receive community rehabilitation, how timely it is and any identified issues.	DHB community stroke services / teams	60% of stroke patients referred for community rehabilitation are seen face to face by a member of the community rehabilitation team within 7 calendar days of hospital discharge (MOH indicator 4, KPI 14) (80% = KPI 15)*	NZ Organised Stroke Rehabilitation Stroke Specifications and Community FAQs https://strokenetwork.org.nz/Service-Specifications-for-DHBs
		1.3.3	All Community Stroke Teams should collect and report outcome data to influence service development (e.g. AROC ambulatory data for the AROC data collection subset – stroke or similar).	DHB community stroke teams	Community Rehabilitation outcomes data (e.g. ambulatory AROC data or similar) is collected and reviewed annually at NSN Quality Meetings and at regular intervals (6 / 12 months) by Regional Networks to monitor and compare progress / gaps.	CR teams participate in collection and are trained in use of AROC or similar (e.g. Canadian Occupational Performance Measure, Life Curve)
		1.3.4	All DHBs have processes to enable rehabilitation access for all communities (hard to reach and isolated rural/urban geographically) e.g. telehealth.	DHB IT services Community stroke teams	All DHBs have technical infrastructure to provide Telerehab services.	Infrastructure to provide telehealth at DHB level. Options for connecting patients to telehealth infrastructure are enabled. Staff are trained in use of telehealth
	1.4 **Early Supported Discharge (ESD)** Early supported discharge (ESD) services are available and offered to eligible people with stroke.	1.4.1	DHBs provide an Early Supported Discharge service for eligible patients. Individual DHB services evaluate their ESD service provision against NSN minimum service specifications. An action plan exists to address gaps.	DHB stroke services	All DHBs confirm alignment with ESD Service Specifications / definitions. A plan exists to meet minimum requirements for ESD.	NZ Organised Stroke Rehabilitation Service Specifications https://strokenetwork.org.nz/Service-Specifications-for-DHBs Refer Appendix for eligibility criteria.
		1.4.2	Demonstrate clear processes for managing expectations for patients / family/whānau about who, when visits will occur and what and for how long services will be in place.	DHB community stroke teams	Patient satisfaction surveys are monitored by stroke team as part of quality audit measures.	

Focus Area	Goals		Actions to implement	Who	Desired Quality Outcomes	Resources / Enablers
Focus Area 2: Addressing Gaps in Rehabilitation Support Services	2.1 **Psychosocial Support for People with Stroke** All patients with suspected psychosocial needs are screened and where needs are identified are offered appropriate timely interventions (**KPI 4**)*	2.1.1	Each stroke service has a documented process / protocol to ensure all patients are screened for psychosocial needs using a validated screening tool and / or psychosocial assessment. (*KPI 4*)	DHB stroke teams	Audit / survey indicates presence of a protocol. People with psychosocial needs receive timely intervention. Services and staff have resources/knowledge/ confidence to screen for psychosocial needs and initiate a plan for management.	Staff have training, access to resources and develop confidence in screening for psychosocial needs.
		2.1.2	A national approach (e.g. workgroup) to agree a 'model' for a flexible stepped care process for screening and interventions when working with stroke patients with psychosocial needs.	NSN Working Group	A national model is developed for use by DHB stroke teams.	Educational resources are collated for use by stroke teams, patients and family/whānau. Opportunities for professional development and ongoing education. Engagement with stakeholders at clinical and community level. Links to ongoing research.
		2.1.3	Specific resources are developed to support stroke teams aligned with the national model for stepped care.	NSN Working Group	A toolbox of resources is developed and made available for stroke teams Professional development is provided for stroke teams on recommended stepped care processes and supporting resources.	E.g. NSW spinal guidelines Aphasia CRE Centre resources
		2.1.4	People with ongoing psychosocial needs understand how to access appropriate expertise.	Primary Care community providers / SFNZ	Demonstrated processes for people to access psychosocial services following stroke. Processes are included in discharge planning and communicated to patient/GP. (KPI16)*	Stroke Foundation Psychosocial resources.
		2.1.5	Access to specialist psychology/psychiatry services is available for patients with specific needs. NB: Communication impaired have higher rates of psychological distress.	DHB Psychology support services	Clinical Psychology /Psychiatry specialist availability is accessible and timely for patients who require intervention (see NZ Organised Stroke Rehabilitation Service Specifications).	Access to a psychologist. Clear pathways and guidelines for referral. Interprofessional service provision for those with complex needs (e.g. aphasia, non-English speakers).

	2.2 **Driving after stroke or TIA is supported by clear advice, with access to assessment and rehabilitation where appropriate**	2.2.1	All stroke and TIA patients are screened for driving needs and given driving advice. (KPI 10)*	Medical practitioners DHB stroke teams / SFNZ	NZTA driving guidelines are followed. Driving information resources contain up-to-date advice for people with stroke. Nationally consistent Information and guidance for health professionals (medical practitioners, allied health) to inform needs for further assessment specific to stroke. Consider capture of driver status and screening as part of regional / national audit / register.	Practitioners follow NZTA Driving Guidelines for return to driving recommendations following stroke / TIA. https://www.nzta.govt.nz/resources/medical-aspects/2.html Stroke Foundation Driving Advice : https://www.stroke.org.nz/sites/default/files/inline-files/drive.pdf Pearson Drive Safe Drive Aware Score (DSDA) Driver off road assessment battery.
		2.2.2	All stroke patients who identify return to driving as a goal and are legally able to drive should have access to driving assessment via their DHB or a specialist service. (KPI 12)*	DHB stroke services Specialist driving services	An equitable regional or local DHB or approved contracted driving assessment service is available to all people with stroke who require it. Access to functional vision assessment is provided.	Occupational Therapy Driving Assessment DriveAble Cognitive assessment Tool (DCAT) DriveAble on road evaluation (DORE) Canterbury Model for driving assessment (funded) **Guideline recommendation**: https://app.magicapp.org/#/guideline/6nYJxE/section/Eg8zGj
		2.2.3	Advocacy on behalf of people with stroke to achieve equitable access and funding for driving assessment and vehicle modifications.	NSN / SFNZ	People with stroke have equitable access to driving assessment and assistance.	Resources listing contacts for providers of driving assessment and vehicle modifications that include how to access them and funding options.
		2.2.4	Engagement with NZTA to ensure that criteria for exemptions are fairly applied to driving following stroke/TIA.	NSN / SFNZ	NZ road users have confidence that drivers post stroke/TIA are safe. Health practitioners have up -to-date guidance and criteria concerning driving following stroke/TIA.	Engagement with NZTA
	2.3 Returning to Work after stroke is supported by specialist expertise and services that facilitate rehabilitation for people who	2.3.1	People who identify return to work as a goal are connected to early specialist expertise in vocational rehabilitation.	DHB Vocational Rehab Services / SFNZ & MSD	People employed at the time of stroke are supported to retain their employment or seek new employment via specialist vocational rehabilitation services.	NZ research (e.g. Regions Care, BAIL) **Guideline recommendations**: https://app.magicapp.org/#/guideline/6nYJxE/section/Eg8zGj

	require assistance to remain in employment			RTW services	A specialist return to work service is offered to those people for whom return to work is an identified goal. (KPI 11)	
		2.3.2	Explore opportunities to strengthen development of a nationally consistent approach for Return to Work service delivery for people with stroke.	NSN / DHB Vocational Rehab Services /SFNZ	Workshop/s for professionals and community providers of RTW services to strengthen and maintain specialist skills, workforce development and quality. Quality standards are identified to support consistent RTW services including skills, knowledge and competencies for RTW providers. Includes further development of plans to support nationally consistent services.	Specific RTW professional development and training opportunities identified – online and face-face. Vocational Rehabilitation Research
		2.3.4	Raise awareness and advocate with government engagement to highlight financial impacts of stroke on people in work.	SFNZ / NSN	Financial support for people unable to return to work following stroke is prioritised to address inequity and deprivation. Improved stakeholder engagement with disability groups on behalf of previously employed people with stroke who wish to return to work.	Highlight stories / case studies of issues for people returning to work following stroke. Potential scope to explore more cross-sector engagement between e.g. SFNZ, NZ Rehab Assoc, AFRM Rehab Specialists with focus on equity.

Focus Area	Goals		Actions to implement	Who	Desired Quality Outcomes	Resources / Enablers
Focus Area 3: Transitions across the stroke pathway	**3.1 Transitions of Care occur smoothly between services and providers in the journey from hospital to home for people with stroke and their families/whānau.** People with stroke and their families/whānau describe poor communication and uncertainty about what will happen next as unnecessarily difficult and often a barrier to their successful return to normal activities in their community.	3.1.1	Demonstrate processes for the management of transitions between services and providers within the hospital and community settings to ensure persons with stroke and their family/whānau understand what is in place for their ongoing care, why, when and where it will occur.	DHB stroke teams / Community stroke services	A documented transition of care plan is developed in collaboration with the patient and family/whānau. This is clearly communicated between services and to the patient and family. Improved strength in DHB resources (capacity and capability) to ensure transition of care plans enable service delivery to be equitable across different groups and geographical areas.	**Guideline recommendation**: https://app.magicapp.org/#/guideline/VLpK8j/section/nY3D2j Utilisation of telehealth technology Use of Whānau ora approach (see appendix) Ability to re-activate assistance or get more help Check with more than one member of the family and check more than once.
		3.1.2	Key aspects of care are communicated clearly with patient, family/whānau and between service providers in a timely, safe and effective manner.	DHB stroke services community services, and primary care providers	Important aspects of care are communicated between team members, stroke patients and their families/whānau and community service providers KPI16*– GP follow up is arranged.	Ongoing professional development in communication. Ensure communication is accessible and easy to understand for patients and whānau.
		3.1.3	Stroke education information and advice is provided so that it is tailored to the needs of patients, family and whānau, culturally appropriate, and supports healthy transition to the community. (KPI 9)*	DHB stroke teams / community stroke providers	People with stroke and their families/whānau can access information, education and ongoing training and support as they transition from hospital to life in the community.	**Guideline recommendation**: https://app.magicapp.org/#/guideline/VLpK8j/section/j9074E
		3.1.4	Stroke Foundation Referral: All people with stroke and their family / whānau should be offered referral to their local Stroke Foundation service An introduction and referral to the local Stroke Foundation CSA/FO should be initiated as part of care transitions to ensure early and ongoing support and connection with local services, supports and networks. (KPI 9)*	DHB stroke teams	All people with stroke have the opportunity to access the CSA / Field Officer services. This may be part of an agreed shared care plan.	

	3.2 **Carer Training and support is sufficient to minimise carer stress and maximise safety for both patient and carer**	3.2.1	Carers are offered specific and tailored training before the person with stroke is discharged home.	DHB stroke teams / community stroke teams/SFNZ	Carers of people with stroke are adequately trained prior to discharge, supported in the transition to home and have clear information about where and who to seek assistance from.	Contact details of community support services (e.g. SF CSA / FO) Contacts and expected appointment times of visiting health professionals / community providers. **Guideline Recommendation**: https://app.magicapp.org/#/guideline/VLpK8j/section/j9074E
	3.3 **Follow up and further review is clarified and available to the person with stroke and their family / whānau to meet ongoing rehabilitation needs**	3.3.1	Discharge planning for patients with stroke includes follow up arrangements with primary and secondary providers as appropriate.	DHB Inpatient stroke team and / or community stroke team	All people with stroke discharged from the hospital setting to the community are followed up by their GP within 3 months of discharge for stroke related disability and optimisation of secondary prevention (KPI 16)* All people with stroke discharged to the community are offered specialist review (geriatrician, neurologist, rehab physicians, nurse specialist or allied health specialist) within 3 months of discharge (KPI 17)*	Links to cultural health providers where appropriate>

Focus Area	Goals		Actions to implement	Who	Desired Quality Outcomes	Resources / Enablers
Focus Area 4: Person / whānau centred care	**4.1 Patient centred goal setting is a fundamental principle of stroke rehabilitation that is present throughout the stroke pathway** Goal planning is a therapeutic process that includes goal-setting and supports goal-directed behaviour	4.1.1	Goal planning processes are centred on areas of life that are personally meaningful to the patient.	DHB stroke teams	Goals consider both short term and long term areas of importance to patients.	Education Take Charge After Stroke (TACAS) Programmes Bridges Programmes
		4.1.2	There is a clear line of sight between short term rehabilitation goals and tasks of rehabilitation and the areas of life that have value and meaning for the patient.	DHB stroke teams	Patient goals and activities, and progress towards goals, are reviewed on a regular basis.	
		4.1.3	In conjunction with patients and family/whānau, staff develop action plans to support progress towards goals.	DHB stroke teams	Action plans are collaboratively developed between patients/family and staff for each goal.	
	4.2 **Self-management strategies and supports are provided to help people with stroke to live well in the community and engage in meaningful, purposeful activities**	4.2.1	Self-management strategies and supports are routinely integrated into all aspects of rehabilitation plans and practice beginning in acute care settings.	DHB stroke teams	At discharge patients /family / whānau have confidence and resources to manage well in the community. Social and community participation is addressed within rehabilitation programmes. Outcomes measures capture people's well-being such as quality of life and community integration.	E.g. Take Charge (TACAS) and Bridges Programmes
		4.2.2	Clinicians and rehabilitation processes work to build capability and confidence for self-management for both patient and family/whānau.	DHB stroke teams / SFNZ	At discharge, patient and family/whānau have confidence and resources to manage well in the community. Patients and family/whānau report their needs and concerns have been heard, and that information is clearly communicated and understood. Patients and family / whānau understand who and where to seek advice and ongoing help from.	Connections to local / regional and national support groups.

		4.2.3	Staff receive training in evidence-based approaches to self-management support.	DHB / NSN / Stroke educator	Staff routinely incorporate evidence-based approaches to self-management in rehabilitation settings.	Educational activities are provided to facilitate expertise in Self-management.
		4.2.4	Services evaluate how the current service environment can enable and facilitate or hinder patient self-management.	DHB stroke teams / NSN	The service environment and culture support patients to build confidence and insight into their abilities.	An appraisal tool for service evaluation (to be developed).

A drawing by A Webster

Terms and Definitions:

Consumer Engagement: The perspective and experience of people with stroke, their carer's and family/whānau were important in the development of this document. The National Stroke Network Working Group wishes to thank those participants of focus groups in Northland, Auckland, Wellington and Christchurch for sharing their experiences.

Person centred care: Respect for and integration of individual differences when delivering patient care [6] with the critical characteristics being:

- Understanding the patient as a unique person presenting with individual characteristics, needs, values, beliefs, and preferences
- Responding flexibly to patients' individual needs and preferences by selecting and delivering interventions that are mindful of, and responsive to, the patients' needs and preferences [7].

Goal planning: Goal planning is a therapeutic process that includes goal setting and supports goal-directed behaviour.

References

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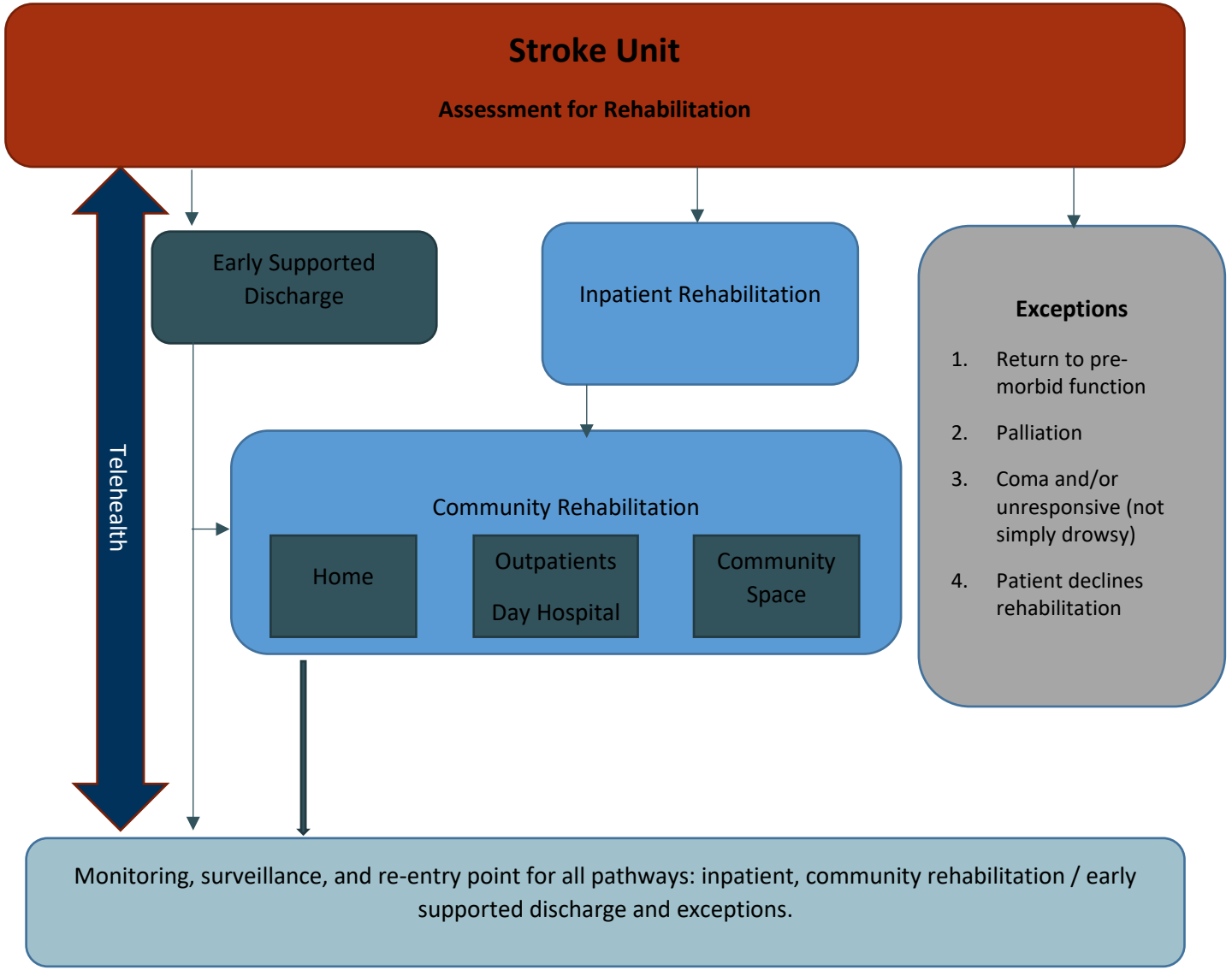
7. Souraya et al., 2006, p.118)
8. www.thelancet.com Published **Online:** October 28, 2019 https://doi.org/10.1016/ S0140-6736(19)32642-X

Appendix documents

1. Transitions Diagram - https://cdn-flightdec.userfirst.co.nz/uploads/sites/strokenetwork/files/rehabilitation_resources/Transition_Document_FINAL.pdf
2. Australian Model of Care Diagram (Figure 1 - adapted)
3. National Stroke Network Stroke Service Specifications – https://cdn-flightdec.userfirst.co.nz/uploads/sites/strokenetwork/files/Service_Specifications/NZ_Organised_Stroke_Rehabilitation_Service_Specifications_-Revision_2020_FINAL.pdf
4. National Stroke Network Community FAQs :https://cdn-flightdec.userfirst.co.nz/uploads/sites/strokenetwork/files/Service_Specifications/Frequently_asked_questions_for_community_indicator_Oct2020update.pdf
5. Ministry of Health indicators for stroke 2020: https://strokenetwork.org.nz/Ministry-of-Health-Indicators-for-stroke

6. Figure 1: Adapted from the Australian Model of Care



*Supplementary Table from 'A Strategy for Stroke Rehabilitation'

Quality Domain	Basic Stroke Rehabilitation Service KPI (1,2,3,4,5,9,10,14 & 16)	Advanced Stroke Rehabilitation Service KPI (1,2,3,4,6,9,10,11,13,14,15,16 & 17)	Centre of Stroke Rehabilitation Excellence KPI (1,2,3,4,6,7,8,9,10,11,12,13,14,15,& 17)
1. Inpatient rehabilitation	KPI 1: Inpatient rehabilitation provided by a specialist interdisciplinary team		
	KPI 2: All patients should be considered for rehabilitation unless the patient has returned to premorbid function, death is imminent, coma / unresponsiveness or patient declines rehabilitation. Assessment for rehabilitation should use a comprehensive assessment process to determine the most appropriate rehabilitation setting and the degree and nature of the rehabilitation.		
	KPI 3: 80% of patients admitted with acute stroke who are transferred to inpatient rehabilitation services are transferred within 7 days of acute admission. (*Ministry of Health indicator*)		
	KPI 4: All patients screened for psychological needs, treatment plans implemented for those with unmet needs		
	KPI 5: 80% of patients receive a minimum of one hour of physical therapy (PT/OT) and 45 minutes of every other required therapy per working day	KPI 6: 80% of patients receive a minimum of 3 hours of therapy (PT/OT) and 45 minutes of aphasia therapy (where indicated) each working day	
			KPI 7: 80% of patients receive 45 minutes of required therapy each weekend
			KPI 8: All patients identified to be in need of psychological support are offered appropriate interventions including review by a psychologist where indicated.
2. Provision of information, education, advice, and support	KPI 9: All stroke patients/whanau are offered information, education, advice, and support during their inpatient stay and following discharge back into the community		
	KPI 10: All stroke patients are screened for driving needs, and have access to driving assessments where return to driving has been identified as a goal and is legally appropriate		
		KPI 11: All stroke patients are offered a specialist Return to Work service where this has been identified as a goal	
			KPI 12: All patients with identified driving needs (legally able) are offered driving assessments through the DHB or another specialist service
3. Seamless transfer into community: Early Supported Discharge		KPI 13: 60% of patients who are eligible for an ESD service are offered rehabilitation by an ESD service with home support starting within 24 hours of discharge, and rehabilitation commencing within three days	
4. Seamless transfer into community: Early community follow-up	KPI 14: 60% of patients referred for community rehabilitation are seen face to face by a member of the community rehabilitation team within 7 calendar days of hospital discharge (*Ministry of Health indicator*)		
		KPI 15: 80% of patients transferred for community rehabilitation are seen face to face by a member of the community rehabilitation team within 7 calendar days of hospital discharge	
5. Follow up and later rehabilitation	KPI 16: All patients discharged to the community are reviewed by their GP within 3 months of discharge for stroke related disability and optimisation of secondary prevention	KPI 17: All patients discharged to the community are offered specialist review (geriatrician, neurologist or rehabilitation physician, stroke nurse specialist or allied health specialist) within three months of discharge	