NATIONAL ONE-REHABILITATION FRAMEWORK

FIRST EDITION
SEPTEMBER 2019

This version of the Framework is accurate as of September 2019, and applies only to pilot projects under the One-Rehabilitation Framework. These projects will only commence upon approval by the Ministry of Health.

The National One-Rehabilitation Framework is based on best available knowledge and will be updated regularly.

For queries, please contact **MOH_INFO@moh.gov.sg**.

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Foreword by Director of Medical Services

Rehabilitation is a set of interventions designed to optimise function and reduce disability in individuals with health conditions, in interaction with their environments (World Health Organisation, 2019). Rehabilitation professionals and administrators are indispensable in helping people return to meaningful function after debilitating illnesses. With a rapidly ageing population, demand for rehabilitation services will grow and doing more of the same may not be sustainable, and may result in inequitable access to care.

I am heartened by the dedication and commitment of my rehabilitation colleagues[1] across sectors ranging from social and community sectors, acute hospitals, community hospitals and polyclinics who have come together to envision and develop a National One-Rehabilitation Framework ("One-Rehab") that aims to form the cornerstone of a people-centred, sustainable and value-driven rehabilitation system. This framework seeks to transform the way we practise in a few ways;

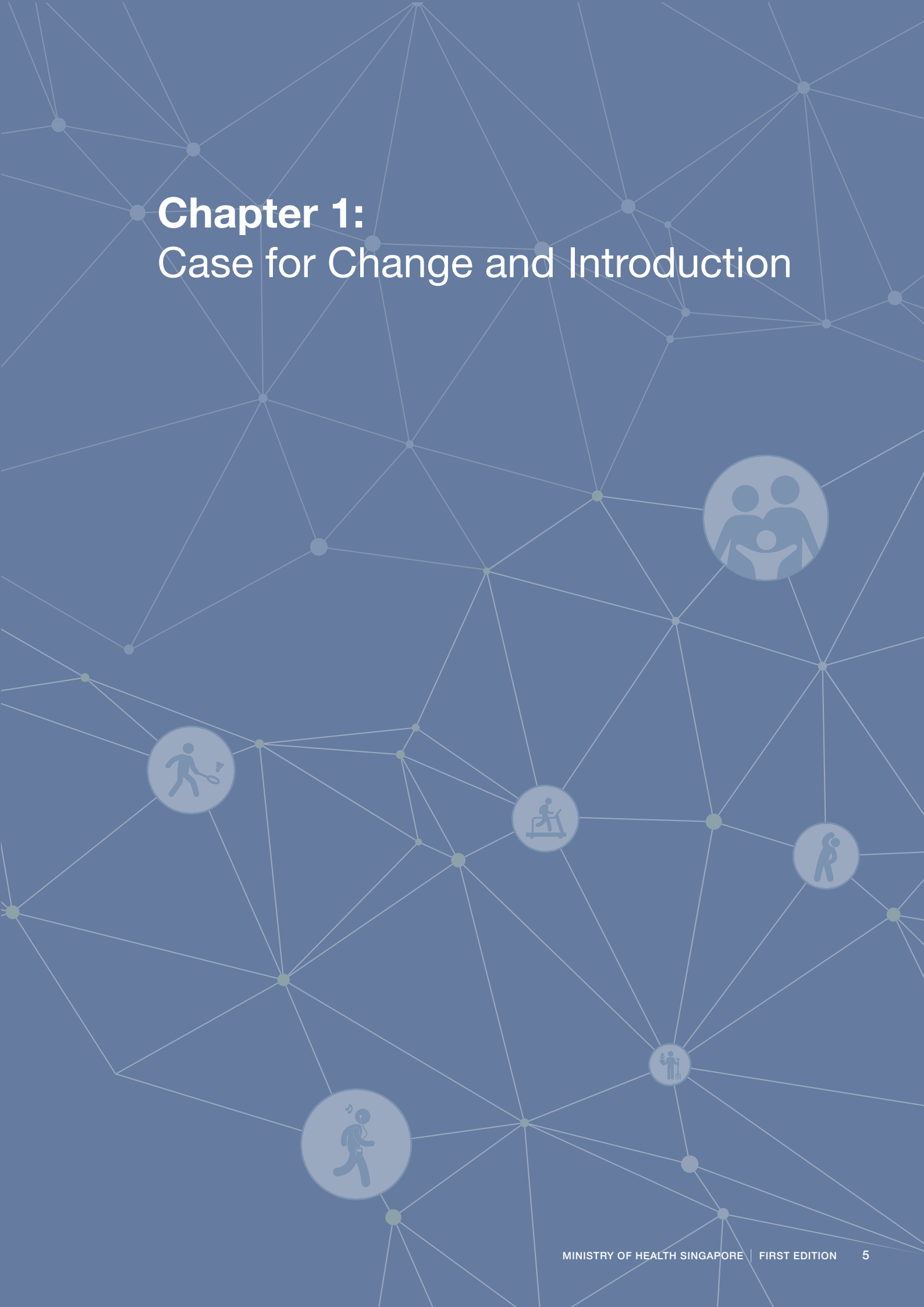
First, a common national framework with harmonised self-reported outcomes and clinical outcome measures achieved through shared care planning with patients or clients, as well as their loved ones should facilitate re-integration to the community and lead to better rehabilitation care. Second, adopting a common coding system and rehabilitation needs classification to guide rehabilitation journeys aims to ensure that everyone who needs rehabilitation receives the most appropriate care based on their care needs. Third, a national framework will provide a foundation for us to be bolder in innovating, transforming the way allied health professionals practise today (e.g. collaborative practice) and be nimble in testing different models of care for success, adapting lessons from other countries and applying them to our local system.

A journey of a thousand miles begins with a single step, I invite you to work together in realising the aspirations of the rehabilitation team for our people.

A/PROF BENJAMIN ONG
Director of Medical Services
Ministry of Health

[1] See Acknowledgements section for rehabilitation colleagues involved in the formation of the One-Rehabilitation framework.

Chapter 1:
Case for Change and Introduction



Case for Change: Why is the National One-Rehab Framework needed?

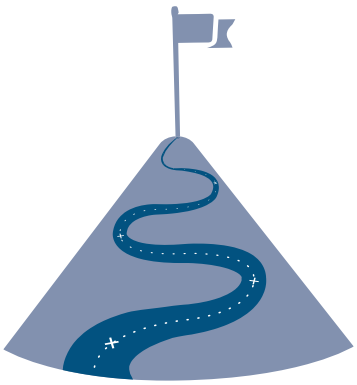
Demand for rehabilitation services is growing due to Singapore's aging population and rise in chronic conditions. To cater to this demand, we need appropriate community receptacles to enable patients/clients to receive care closer to home. Furthermore, to provide better rehabilitation care, we need to address current gaps in clinical protocols, improve the way we assess patient/clients' needs, structure care delivery and measure outcomes. To strengthen our rehabilitation system and provide the most appropriate care for patients/clients, MOH worked with rehabilitation care experts to address three keys aspects through One-Rehab.

1. To harmonise varied practice and enable better patient/client transitions

Today, there is no harmonised way to plan for rehabilitation care and track clinical outcomes. For patients/clients to receive care that is consistent and of value to them, we need to harmonise how different rehabilitation needs are assessed and how patients/clients are triaged to different settings, taking into account their rehabilitation goals and prognosis. A consistent set of core clinical outcomes including self-reported measures need to be developed by clinicians and collected. This creates a common language amongst healthcare professionals and improves communications regarding care transitions. Ideally, this would be supported with a common IT platform to capture all outcomes for care continuity and sharing of best practices.

2. To increase accessibility and sustainability

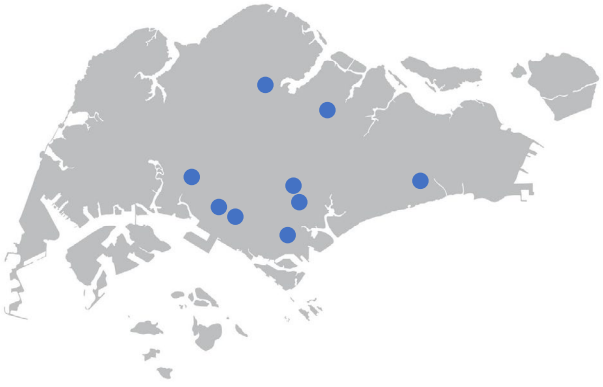
Healthcare services have traditionally centred around acute hospitals in Singapore. This is difficult to sustain in the face of growing demand for rehabilitation and could result in longer waiting times. For a more sustainable rehabilitation system and better access to services, we need to develop and scale the appropriate capabilities in the community (Diagram 1).



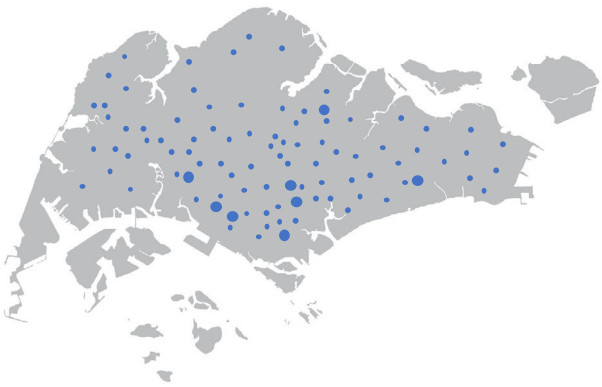
3. To support innovative models of care

A "model of care" broadly refers to the way care services are delivered. Rehabilitation models of care should be continuously reviewed to meet the needs of the patient/client and their caregivers. Although technology and hardware remain important enablers, new models of care are essential to encourage patients/clients to make active decisions in their care, support families and caregivers, drive collaborative practices, skills-sharing between professionals, delegation of roles and targeted training of the workforce. Decision-making in developing these models of care must be guided by key principles which serve to provide quality, safe and accessible care to our patients/clients (See Page 42).

Diagram 1: Acute-centric and Community-anchored Care (Not to scale)



Acute-centric care



Community-anchored care

Introduction to the One-Rehab Framework

Patients/Clients today receive rehabilitation in many settings such as Intensive Care Units (ICUs), General Wards, Community Hospitals, Polyclinics, Day Rehabilitation Centres and their own homes. This is provided by rehabilitation healthcare professionals i.e. rehabilitation physicians, allied health professionals and rehabilitation nurses. In view of the Case for Change explained above, One-Rehab focuses on developing a common understanding of rehabilitation pathways for selected rehabilitation conditions across settings, siting rehabilitation services appropriately and **facilitating these transitions** via organised processes and pathways. It will **focus on pathways where the primary care activity is rehabilitation.**

The pathways in this framework exclude activities in emergency departments (EDs) or acute inpatient medical care, where the patient/client may benefit from early rehabilitation although the care goal focuses on stabilisation of the medical condition(s) through a multidisciplinary team (Diagram 2, Page 9). Rehabilitation provided under these circumstances is crucial and should continue to be provided by the respective professionals. While innovative models of care can still be considered in these settings, they will not be specifically addressed in this framework.

All rehabilitation healthcare professionals and administrators will use the framework to organise the most appropriate rehabilitation care for their clients, improve outcomes and improve integration and collaboration between rehabilitation settings. The details of the Framework (e.g. concepts, pathways and outcome measures) will be **tested out through pilot projects.** Results of these projects and emerging trends in the rehabilitation landscape will be used to guide subsequent tranches of the Framework .

The harmonised processes and pathways described are not intended to replace the clinical judgement and expertise of care teams. Joint discussions on the goal(s) of rehabilitation will continue to guide the most appropriate patient/client-centred care in consideration of other factors such as age, comorbidities, prognosis, and psychosocial matters. Reasons for deviation from the framework are to be documented, and will be analysed with rehabilitation outcomes before the framework is fine-tuned and rolled out to more providers.

Who Should Use One-Rehab

All healthcare staff and administrators involved in rehabilitation should be aware of One-Rehab, although some key professions involved in the pilot projects are expected to use it more directly for a start. These include rehabilitation physicians, nurses, physiotherapists (PTs), occupational therapists (OTs), speech therapists (STs), medical social workers (MSWs), other allied health professionals (AHPs) and administrators.

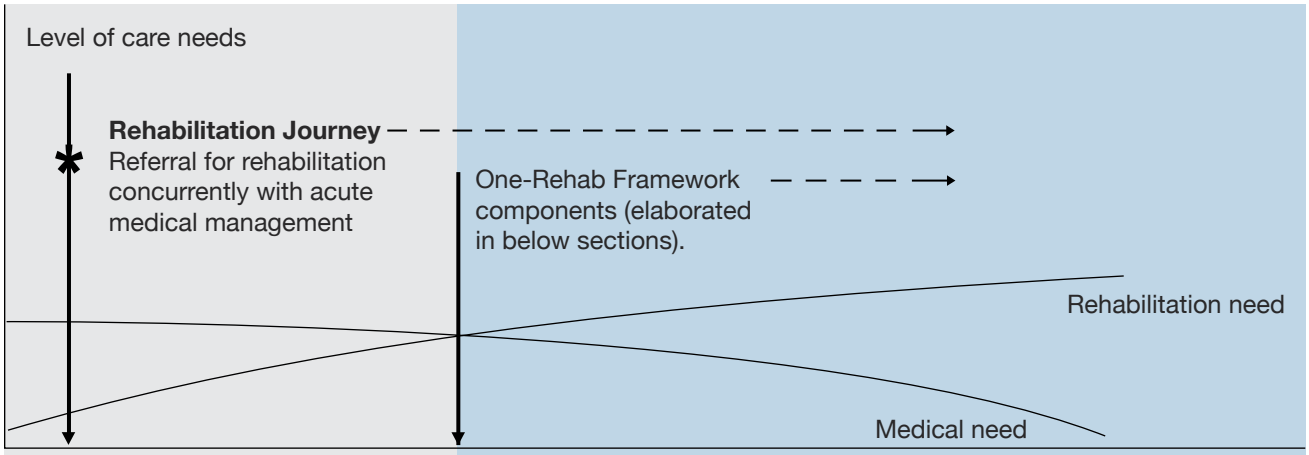
[2] Guiding parameters for development of One-Rehab pilot proposals will be released in due course.

Conditions Under the First Tranche of One-Rehab Framework

While the One-Rehab Framework will eventually cover all rehabilitation conditions, this first tranche launched in 2019 covers six common conditions:

- Amputation
- Hip Fracture
- Spinal Cord Injury
- Deconditioning
- Musculoskeletal Conditions
- Stroke

Diagram 2: Emergency or Acute Inpatient Medical Phase and Rehabilitation Phase



Emergency/Acute Inpatient Medical Phase (Diagnosis-Related Group or DRG)

Key Characteristics:

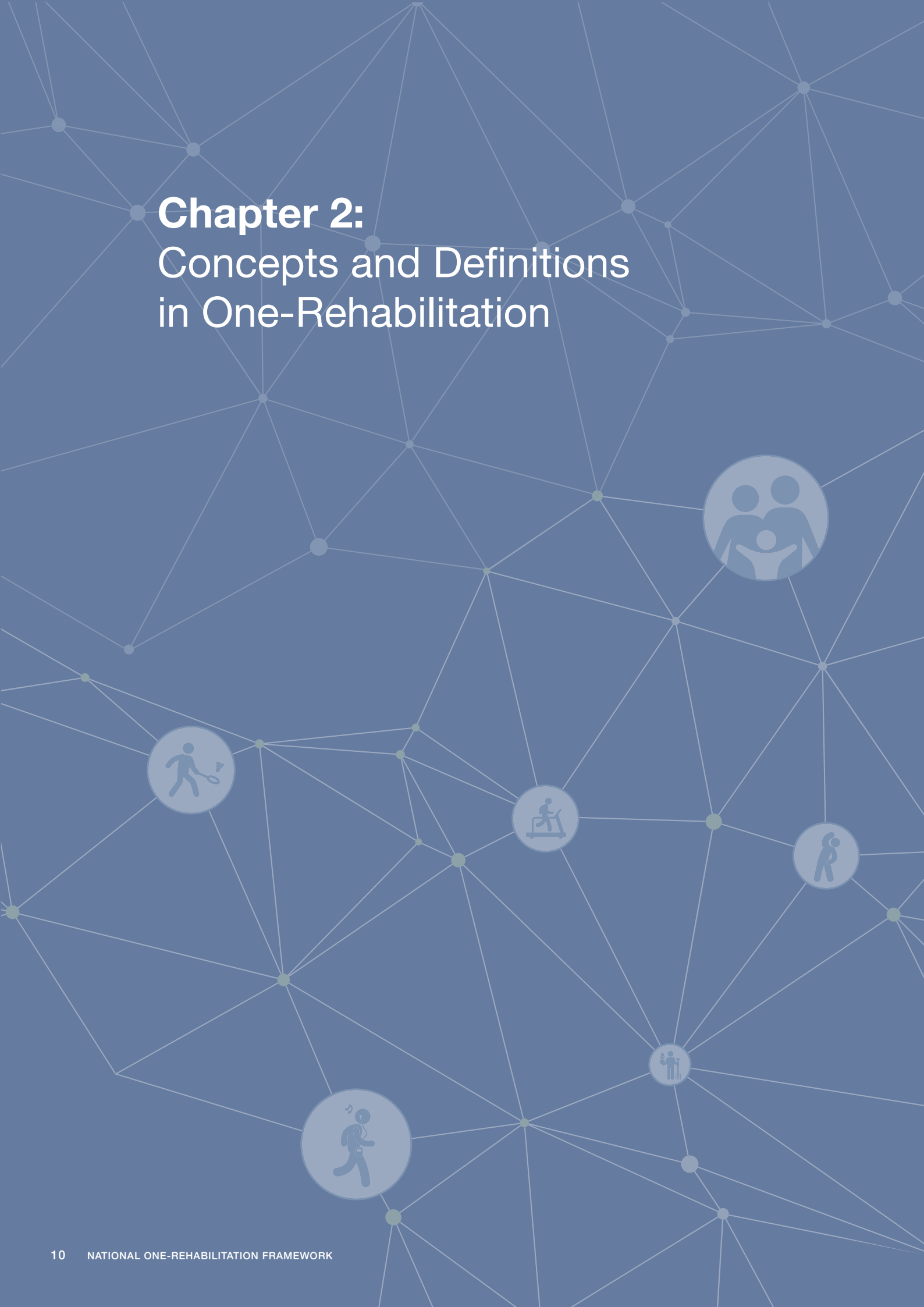
- Care need is mainly for medical issues.
- Emergency or acute inpatient medical care.
- Doctor overseeing the case is a non-rehabilitation physician specialist e.g neurologist.
- Care planning based on current practice.
- Rehabilitation may be provided in this phase to improve outcomes.

Rehabilitation Phase (Rehabilitation Diagnostic Group or RDG)

Key Characteristics:

- Care need is mainly for rehabilitation.
- Doctor overseeing the case is a rehabilitation physician specialist (acute hospitals) or family physician (community hospitals). Main professional overseeing the rehabilitation journey in the outpatient setting is the therapist.
- As per current state, inpatients may or may not be in a designated rehabilitation ward.
- Care planning based on One-Rehab needs classification and pathways, if appropriate. If not, current practice applies and reasons should be documented.

Chapter 2:
Concepts and Definitions in One-Rehabilitation



Core Components of One-Rehab Framework

The One-Rehab Framework is shown in Diagram 3 below. The core components underpinning it are as follows:

A Rehabilitation Diagnostic Groups (RDGs) categorise the various rehabilitation conditions.

B Rehabilitation Needs Classification stratifies the different levels of rehabilitation care needs (Tiers 3D, 3, 2D, 2 and 1).

C Harmonised clinical outcomes, including self-reported outcomes, are tracked in all settings for each care episode.

D An end-to-end patient/client care plan (i.e. One-Rehab Care Plan) is shared across rehabilitation providers throughout the patient/client's rehabilitation episode to support better care transition. It allows them to plan for care together with the patient/client, taking into account rehabilitation goals, prognosis and needs.

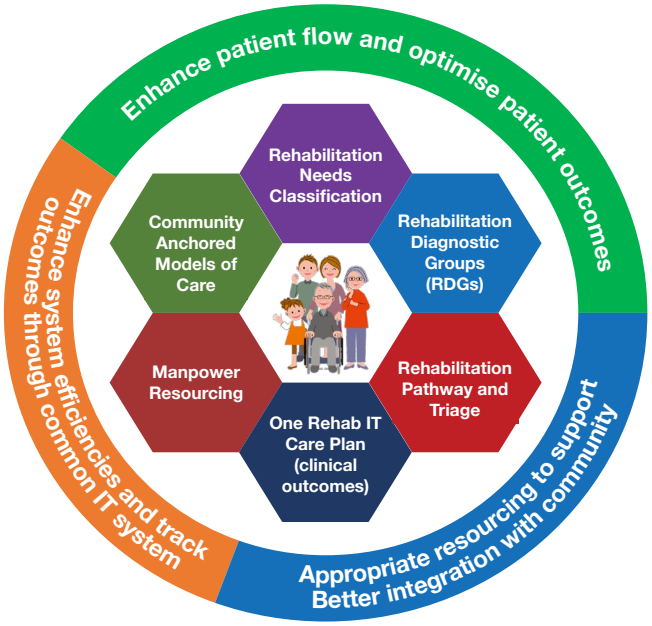
E Rehabilitation journeys or RDG pathways bring together all the above core components and describe how a patient/client's rehabilitation needs are envisaged to evolve over time. They begin when a patient/client's care needs become predominantly for rehabilitation and recommend the suitable levels of rehabilitation care needed. It considers the individual's RDG(s), rehabilitation care needs, and other factors including age, comorbidities and recovery potential.

Models of care refer to the ways in which rehabilitation services are delivered. They are developed using the One-Rehab Framework as a starting point.

Enablers such as appropriate resourcing, national training standards, audits and research will be developed based on data from the pilot projects and used to support the One-Rehab Framework.

Diagram 3: The National One-Rehab Framework

The One-Rehab Framework enables community-anchored models and integrates the entire patient/client journey



CHAPTER 2

A. Rehabilitation Diagnostic Groups (RDGs)

Rationale:

Current Diagnosis-Related Groups (DRGs) describe conditions mainly based on medical and nursing perspectives, and do not account adequately for rehabilitation needs. We need a system to better capture and distinguish between rehabilitation conditions and needs.

Key Points:

- RDGs describe the type of functional impairment requiring rehabilitation. They form the basis for RDG Pathways (see RDG Pathways).
- The Primary RDG should be the primary or precipitating reason why a patient/client requires rehabilitation i.e. the condition which the rehabilitation interventions target most of the time. Secondary RDG(s) are other conditions which contribute to the rehabilitation needs of the patient/client.
- Upon entry into the first rehabilitation setting, the patient/client should be assessed by the rehabilitation healthcare professionals who will then select the most appropriate RDG(s) based on their condition.

Further Details:

Table 1 lists RDGs for the six conditions identified for One-Rehab, while Annex A lists reference codes for other conditions beyond the six.

One-Rehab does not seem to cover other conditions or address preventative care. Why is this?

One-Rehab will be tested via pilot projects and scoped to six common rehabilitation conditions for a start. The Ministry of Health will monitor the rehabilitation landscape and expand the list of conditions in time to come. This includes conditions such as dementia and mental health. Meanwhile, for preventative care, clients in the community may benefit from active ageing programmes or community-based activities in achieving their care goals.

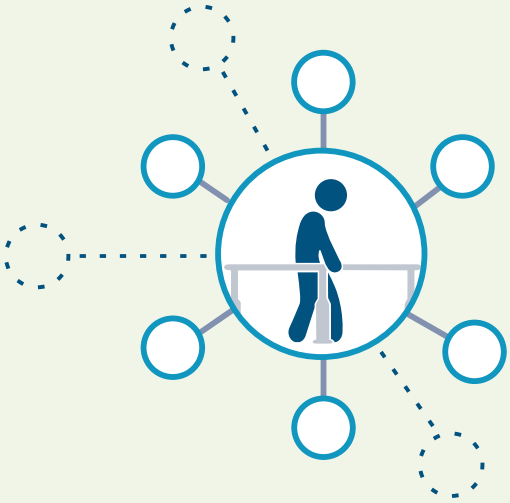


Table 1: Rehabilitation Diagnostic Groups for One-Rehab Conditions

Reference: Australasian Rehabilitation Outcomes Centre (AROC) impairment codes.

There are a total of 29 RDGs identified for the six One-Rehab conditions. These will be used to provide a basis for clinical management. See Annex A for reference codes which may be used for other conditions beyond these six.

1. STROKE

* Refers to all motor impairment due to stroke e.g. paresis, ataxia, dysphagia.

Haemorrhagic

1.11	Stroke with motor* impairment
1.12	Stroke with cognitive/ perceptual (including sensory)/ communication impairment
1.13	Stroke with motor* and cognitive/ perceptual (including sensory)/ communication impairment

Ischaemic

1.21	Stroke with motor* impairment
1.22	Stroke with cognitive/ perceptual (including sensory)/ communication impairment
1.23	Stroke with motor* and cognitive/ perceptual (including sensory)/ communication impairment

2. SPINAL CORD INJURY

Non-traumatic spinal cord dysfunction

2.11	Paraplegia
2.12	Tetraplegia

Traumatic spinal cord dysfunction

2.21	Paraplegia
2.22	Tetraplegia

Other spinal cord dysfunction

2.31	Other spinal cord dysfunction (Traumatic or non-traumatic)

3. HIP FRACTURE

3.11	Fracture of hip (#NOF), Operated
3.12	Fracture of hip (#IT), Operated
3.13	Fracture of hip, Non-operated

4. AMPUTATION

** Includes past lower limb amputations, if any.

Potential Prosthetic user in the home (K1)**

4.11	Unilateral BKA
4.12	Bilateral BKA / Unilateral AKA
4.13	Bilateral amputees with at least one AKA on one side
4.14	Poly amputee or Hip disarticulation and above

Potential Prosthetic user in the community (K2-3)**

4.21	Unilateral BKA
4.22	Bilateral BKA / Unilateral AKA
4.23	Bilateral amputees with at least one AKA on one side
4.24	Poly amputee or Hip disarticulation and above

5. MUSCULOSKELETAL (MSK) CONDITIONS

Surgical

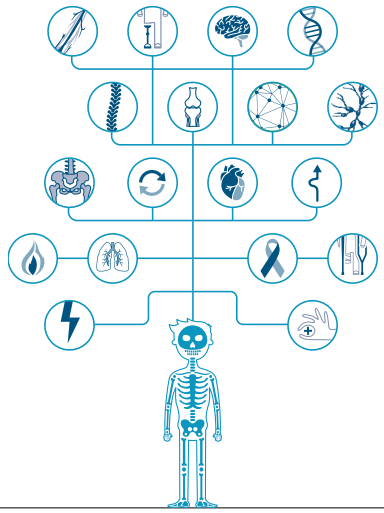
5.11	MSK Surgical (peripheral)
5.12	MSK Surgical (spinal)
5.13	Total Knee Replacement

Non-Surgical

5.21	MSK Non-Surgical

6. DECONDITIONING

6.1	(65 years and below) Deconditioning & functional decline post-surgical procedure and/or post ICU care due to e.g. sepsis, cellulitis.
6.2	(Above 65 years old) Falls at least once in the last 6 months with underlying symptoms (e.g. unsteadiness, dizziness) and requiring individualized rehabilitation care plan
6.3	(Above 65 years old) Frail based on any of the following criteria: (1) Clinical Frailty Scale >4; or Meets >3 criteria in the (2) FRAIL scale or (3) Fried's Frail Phenotype.



[3] The paediatrics population is excluded for the first tranche of One-Rehab implementation.

B. Rehabilitation Needs Classification

Rationale:

Rehabilitation care needs are currently defined and stratified differently depending on the individual professional or organisation. This contributes to varied care planning and resource allocation.

Key Points:

- Rehabilitation Needs Classification is used to classify the rehabilitation needs of a typical patient/client at a certain point along the rehabilitation phase.
- The classification is derived based on a combination of factors such as the need for daily rehabilitation, the type and complexity of rehabilitation services required, as well as the level of physician and/or nursing care needed.
- The multidisciplinary care team (if any) should discuss the patient/client's case holistically as per current practice, and achieve a consensus on patient/client's tier of rehabilitation care needs.

Further Details:

Table 2 shows the Rehabilitation Needs Classification.

Are providers who see patients/ clients with Tier 2 rehabilitation needs expected to employ therapists for services they do not currently have e.g. Speech Therapy?

Providers should consider addressing these gaps through partnership with other care providers. E.g. community rehabilitation providers should work with a health cluster to explore manpower deployment options. As a guiding principle, patients/clients should not need to return to Acute Hospitals for outpatient rehabilitation unless clinically indicated (see sections on How to Use One-Rehab and Models of Care).

Table 2: Rehabilitation Needs Classification

Note: Rehabilitation healthcare professionals who are unsure of how to classify their patient/client's needs should seek clarification from MOH at: MOH_INFO@moh.gov.sg.

REHABILITATION INTENSITY/FREQUENCY

REHABILITATION COMPLEXITY	DAILY REHABILITATION (D)	NON-DAILY REHABILITATION

TIER 3 NEEDS	• Medically complex[4] and low-volume conditions requiring intense rehabilitation. **3D**
	• All Spinal Cord Injury (SCI) and Traumatic Brain Injury (TBI) cases.
	• Likely requires:
	  • Daily rehabilitation specialist physician review; **AND/OR**
	  • Complex nursing care; **AND/OR**
	  • Four or more types of AHPs[5] to address key rehabilitation needs.
	• Care may be delivered at Acute Hospital inpatient rehabilitation units.
		• Medically complex, including all SCI and TBI cases; **AND** **3**
		• Low volume, complex conditions (such as burns, head and neck cancer, multiple trauma with Injury Severity Score of more than 15, soft tissue operations) requiring rehabilitation.
		• Likely requires regular specialist review.
		• Care may be delivered at Acute Hospital outpatient rehabilitation services.

TIER 2 NEEDS	• Generally, medically less complex than Tier 3D; more common conditions requiring rehabilitation. **2D**
	• These include all other conditions requiring daily rehabilitation but do not fall under Tier 3D.
	• Likely:
	  • Does **not** require daily specialist physician review;
	  • Does **not** require complex nursing care, but may still require nursing intervention from qualified nurse;
	  • Requires three or fewer types of AHPs[5] to address key rehabilitation needs.
	• Care may be delivered at Community Hospital inpatient rehabilitation.
		• Generally, medically less complex; more common conditions requiring rehabilitation. **2**
		• These include all other conditions requiring outpatient rehabilitation but do not fall under rehabilitation tiers 3 or 1.
		• Care for active rehabilitation may be delivered at Senior Care Centre, Active Ageing Hub, Day Rehabilitation Centre, Polyclinic, Home-based therapy etc.

TIER 1 NEEDS	Not applicable	• Applies when extension of rehabilitation at Tier 2 or 3 is required, **capped at 6 months**. Beyond which, re-certification is required by a relevant professional[6] to continue Tier 1 rehabilitation. **1** • For patient/clients whose functional recovery has plateaued but cannot independently participate in exercises and requires supervision for exercises before transitioning to long term care. • Maintenance care may be delivered at Senior Care Centre / Day Care Centre / Home-based therapy etc.

[4] The definitions of medically complex conditions and complex nursing care will be deferred to the healthcare professionals within the cluster and organisation.

[5] Includes physiotherapist, occupational therapist, speech therapist, dietitian, clinical psychologist, podiatrist etc. Number of therapists should not singly distinguish rehabilitation care needs of different tiers.

[6] Therapist with full AHPC registration; OR Advanced Practice Nurse registered with Singapore Nursing Board; OR Medical practitioner with conditional or full registration under Singapore Medical Council.

C. Rehabilitation Outcomes

Rationale:

Rehabilitation outcomes are indicators of rehabilitation efficacy and efficiency. They allow comparison of standards over time, across institutions and other countries. Patient/Client-reported measures also offer their perspectives of priorities and progress in rehabilitation and better inform therapy planning.

Key Points:

- Rehabilitation outcomes are included in the One-Rehab Care Plan (see One-Rehab Care Plan). They are assessed upon the patient/client's admission and discharge at all rehabilitation settings:
  - Core rehabilitation outcomes will be tracked for all One-Rehab conditions.
  - Condition-specific outcomes will be assessed based on the patient/client's primary RDG. They are not applicable to other conditions not under One-Rehab.
- Beyond the minimum standard dataset in the One-Rehab Care Plan, institutions have the discretion to capture other additional data and/or outcomes internally, as appropriate, to inform clinical practice and research.

Further Details:

Table 3 lists the rehabilitation outcomes contained in the One-Rehab Care Plan. Instructions for use will be shared when ready.

Can I collect other data or measures which will help me care for my patient/client better?

The current measures may not suffice.

Yes. Rehabilitation healthcare professionals may capture other clinically relevant data in their internal documentation systems. The One-Rehab Care Plan ensures that the same minimum standard set of data and outcomes are referenced across settings so handovers between providers and conversations with patients/clients are made easier. MOH will use this data to develop and refine One-Rehab in future.

Table 3: One-Rehab Rehabilitation Outcomes

These rehabilitation outcomes were decided after consensus by the One-Rehab Implementation and Coordination Committee. Core rehabilitation outcomes such as EQ-5D or Functional Independence Measure (FIM) encourage a holistic view of the patient/client, instead of only focusing on condition-specific measures.

Measured at every rehabilitation setting the patient/client goes to (at admission and discharge)

Core Outcomes (*All One-Rehab conditions*)	**(A) Functional Domain** 1. Functional Independence Measure (FIM) **OR** Modified Barthel Index (MBI) 2. Return to work or school or pre-morbid status		**(B) Quality of Life Domain** 1. EQ-5D score		**(C) Others** 1. Comorbidities 2. Caregiver Status 3. Complications 4. Employment Status 5. No. of therapy sessions & type 6. Discharge destination	
Condition-specific Outcomes (*Based on primary RDG, additional to core outcomes*)	**MSK** • Pain score • Patient Specific Functional Scale	**Deconditioning** • Gait speed (*for those who can walk with supervision*) **OR** • 5X Sit to Stand (*for those who can only stand*) **OR** • Bergs Balance Scale (*for those who can only sit*) (*Choose 1 of 3*)	**Hip Fracture** • Gait speed • Pain score	**Amputation** • K-level • Gait speed • Amputee Mobility Predictor • Pain score	**Stroke** • Frenchay Activities Index • Functional Oral Intake Scale (*for ST assessment*) • Gait speed	**SCI** • American Spinal Injury Association (ASIA) Impairment Scale

- Care teams may select either FIM **OR** MBI to be completed in the One-Rehab Care Plan. A FIM-MBI cross-walk will be used to convert FIM scores into MBI scores and vice versa.
- Rehabilitation outcomes carried out should take into account limitations in the patient/client's physical and cognitive impairment, as well as the type of rehabilitation setting. For example, the EQ-5D does not apply to a patient/client whose cognitive impairment prevents them from responding effectively. Pain score does not apply in patients/clients who are unable to communicate their ratings. Frenchay Activities Index does not apply to inpatient settings.

D. One-Rehab Care Plan

Rationale:

- An end-to-end IT-enabled platform comprising the One-Rehab Care Plan helps the relevant healthcare staff to access the same information for care planning and remain updated on their patient/clients' progress.
- This contains key data to accompany care transitions, improve handover between providers, and help them provide continuing care with the same end in sight.

Key Points:

- The One-Rehab Care Plan contains a minimum standard dataset (see Table 3) to be collected for the entire care episode across the care continuum. It is subjected to the appropriate data governance measures and data safeguards.

E. Rehabilitation Journeys or RDG Pathways

Rationale:

- Establishing rehabilitation journeys ensures that rehabilitation is provided appropriately, and based on the harmonised outcomes tracked across the care continuum.

Key Points:

- Rehabilitation journeys span across the emergency and acute inpatient medical phase (if any), and the rehabilitation phase.
- The One-Rehab framework describes pathways for the Rehabilitation Diagnostic Groups (RDGs) based on the Rehabilitation Needs Classification. These RDG Pathways will also be validated via One-Rehab pilot projects.
- RDG Pathways are based on the patient/client's **Primary RDGs**. They begin in the rehabilitation phase, where patient/clients' primary care needs become predominantly for rehabilitation:
  - Rehabilitation phase for those with Tier 3D needs begins when the rehabilitation physician specialist takes over the patient/client's care as the primary doctor (see Table 2).
  - Rehabilitation phase for those with Tiers 3, 2D, or 2 needs begins when the patient/client first receives rehabilitation.
  - For example, the RDG Pathway for a typical patient/client with "Ischaemic Stroke with Motor Impairment" will show their needs change from Tier 2D to Tier 2.
- Although the RDG Pathways reflect the journeys envisaged for most patients/clients, rehabilitation healthcare professionals should assess and manage their patients/clients holistically. Besides their RDG and rehabilitation needs classification, care planning and a patient/client's ultimate rehabilitation journey should take into account their preferences or circumstances, rehabilitation goals and core activities required to achieve those goals. Treatment should not be limited to just addressing the Primary RDG.
- The patient/client and family play an important role and key care decisions (e.g. discharge planning) should be a consensus between the multidisciplinary care team (or rehabilitation healthcare professional if there is no team) and these stakeholders.

Further Details:

See section on How to Use One-Rehab.

Will most of the patients/clients follow the RDG pathways? What should I do if mine does not suit the pathway?

As with current practice, the care team or rehabilitation healthcare professional should exercise clinical judgement and work with the patient/client and family to plan the most appropriate care aligned with their goals.

Although we expect the RDG Pathways to apply to about 80% of patients/clients with that primary RDG, the care team should consider deviations if needed, to provide the most appropriate pathway for patients/clients. In such cases, clear reasons should be provided in the One-Rehab Care Plan to guide fine-tuning of the RDG pathways in future.

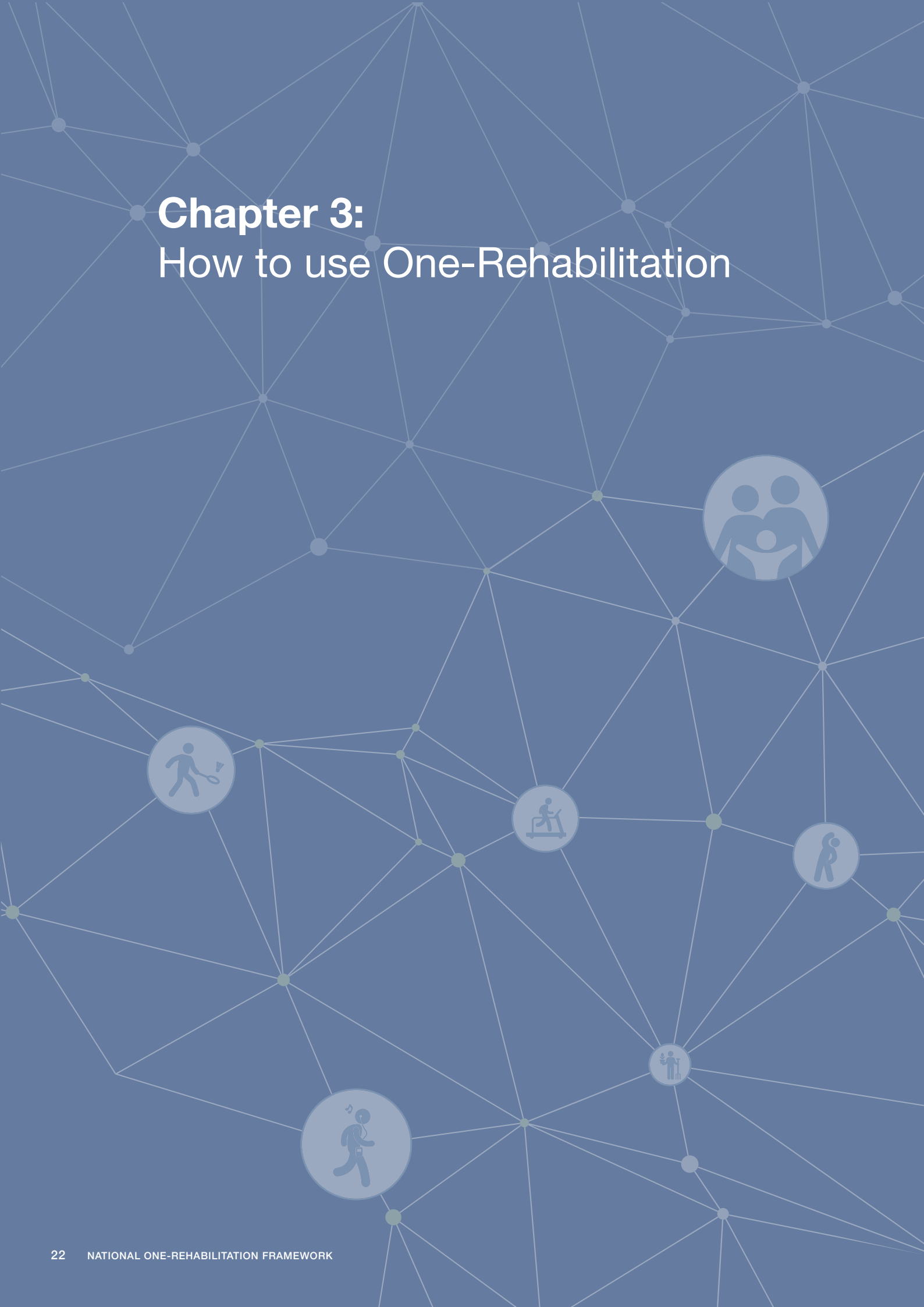
RDG Pathways only apply to One-Rehab RDGs (See Table 1, Page 13). If the patient/client's condition is outside this list, care planning remains as per current practice. The below section on Putting One-Rehab in Practice shows the rehabilitation journey for patients/clients, including RDGs, tiers of Rehabilitation Care Needs and RDG Pathways.

Does the rehabilitation journey consider the patient/client's social circumstances? What happens if they decide on a plan that is different from the RDG Pathway?

One-Rehab aims to provide an appropriate level of rehabilitation **without** replacing individual preference and autonomy. While social circumstances (e.g. presence of family support) are key considerations in care planning, they should not preclude access to rehabilitation especially since it is shown to improve functional outcomes and reduce caregiver burden. MSWs play a key role in removing barriers and ensuring that rehabilitation care is available within the constraints of the patient/clients' circumstances.

Should the patient/client prefer to deviate from the RDG Pathway, care planning will proceed as per current practice. Core data and outcomes should still be collected via the One-Rehab Care Plan.

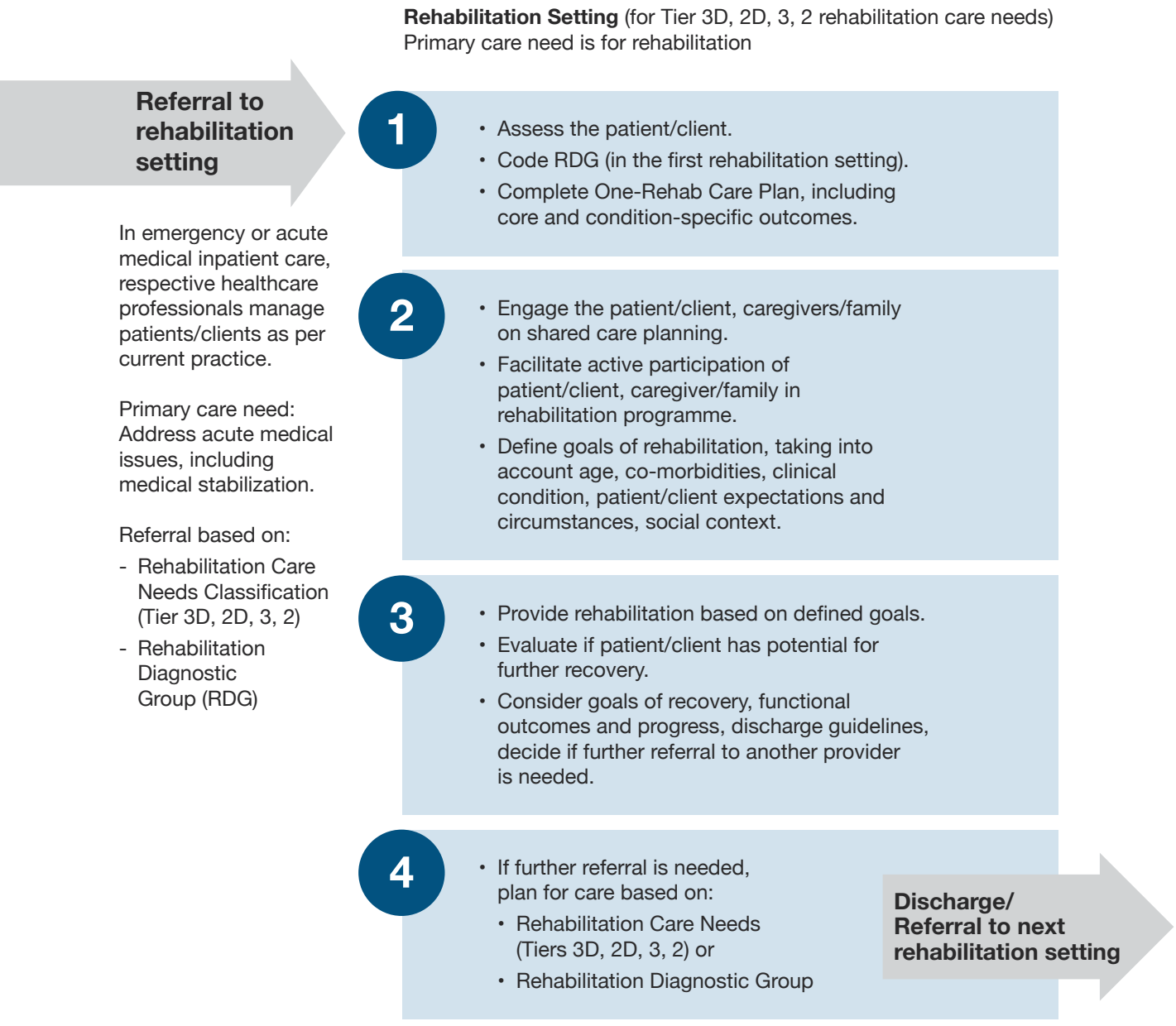
Chapter 3:
How to use One-Rehabilitation



Simplified Workflow
In a Rehabilitation Setting

The below diagram presents a simplified flow of a rehabilitation setting receiving a patient/client, (based on One-Rehab).

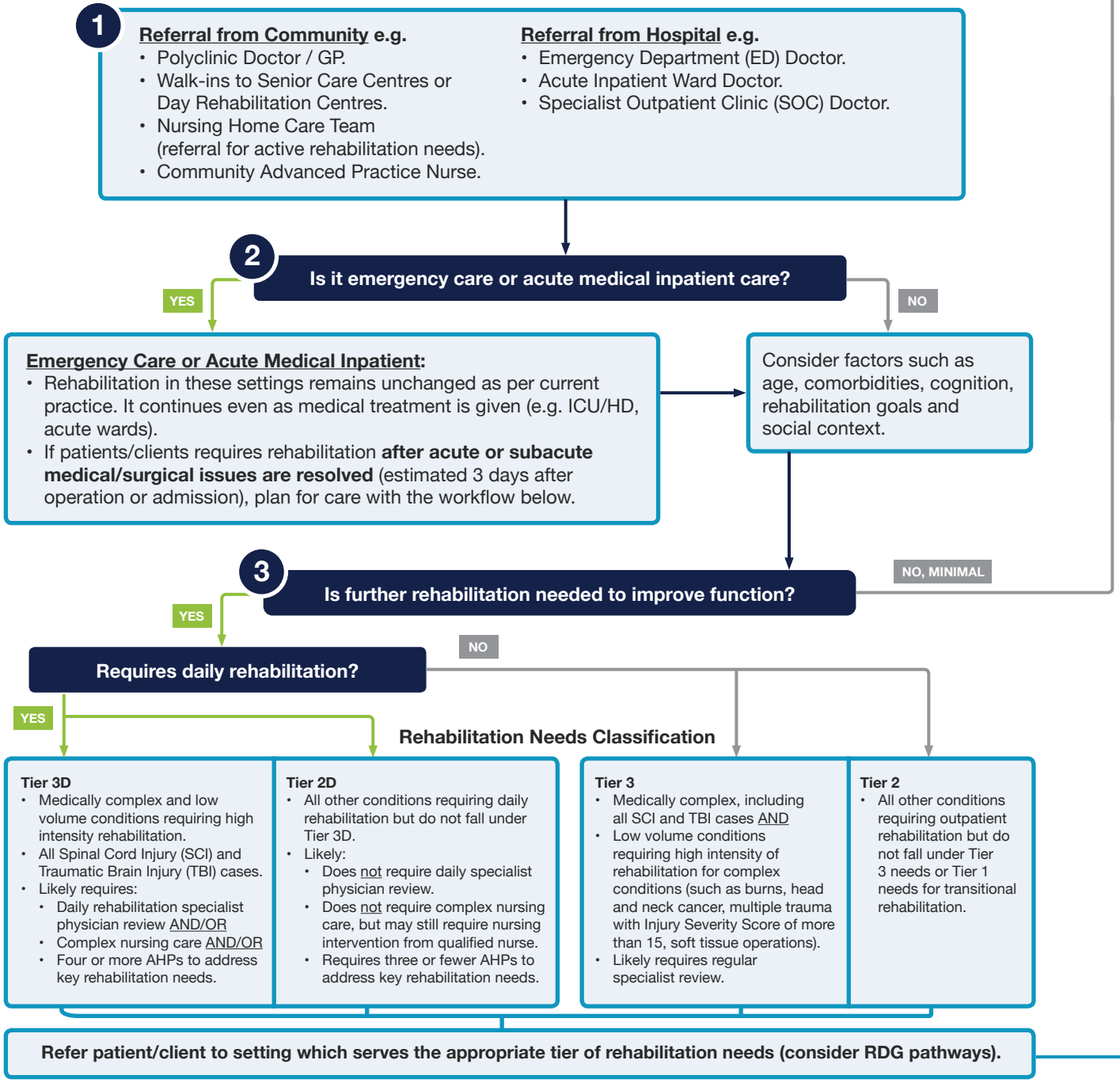
Diagram 4: Simplified Workflow Within a Rehabilitation Setting



Detailed Workflow of Rehabilitation Journey

The below diagram presents a detailed workflow of a rehabilitation journey, putting together the concepts and definitions of the One-Rehab Framework. Healthcare professionals should adhere to the One-Rehab Framework when planning for rehabilitation care.

Diagram 5: Detailed Workflow of Rehabilitation Journey



Consider:
- Availability, readiness of caregiver.
- Readiness of home environment.

Home or Home Support or Long Term Care
If functional maintenance or optimisation through general exercises is needed, refer for community exercises or support in Senior Activity Centre/ Senior Care Centre/Active Ageing Hub e.g. GymTonic, SportsSG gym.

*** If** patient/client/caregiver prefer to deviate from the RDG Pathway, care planning is to proceed as per current practice. Core data and outcomes should still be collected via the One-Rehab Care Plan.

4

(**Refer back to Page 23**)

At the **first** rehabilitation setting, rehabilitation healthcare professionals will:
- Code the patient/client's Primary and Secondary Rehabilitation Diagnostic Groups (RDGs).
- Input the relevant minimal dataset in One-Rehab Care Plan.
- Track core and condition-specific outcomes (latter if applicable) at setting admission and discharge.
- Consider discharge if patient meets any of the following "**Discharge Guidelines**", whichever earlier:
  1. Achieved rehabilitation goal and (additional for inpatients) medically fit for discharge with no transitional care issues requiring inpatient care (e.g. caregiver training completed); OR
  2. Functional plateau and (additional for inpatients) medically fit for discharge with no transitional care issues requiring inpatient care (e.g. caregiver training completed); OR
  3. Achieved rehabilitation duration or Rehabilitation Length of Stay stated in the Annex.
- Consider patient/client's potential to improve function after discharge.

Consider factors such as age, comorbidities, cognition, rehabilitation goals and social context.

Is further rehabilitation needed to improve function?

NO

YES

To decide next destination, refer back to **Tiers of Rehabilitation Needs**, keeping in mind the patient/client's **Primary RDG** and One-Rehab recommended **RDG Pathway for that Primary RDG** (if any).

5 **Is referral based on RDG Pathway appropriate?**

YES

Refer patient/client to next partner institution along RDG Pathway.

NO/ NOT APPLICABLE

- Refer patient to an appropriate setting.
- If the RDG Pathway is not appropriate, explain why in One-Rehab Care Plan.

At **subsequent** rehabilitation setting(s), rehabilitation healthcare professionals will:
- Input the relevant minimal dataset in One-Rehab Care Plan.
- Track core and condition-specific outcomes at setting admission and discharge.
- Plan discharge based on "**Discharge Guidelines**" described earlier.

	Condition	RDG		Care Needs
1	**Stroke**	1.11 1.12 1.21 1.22	Haemorrhagic stroke with motor impairment. Haemorrhagic stroke with cognitive/ perceptual (incl. sensory)/ communication impairment. Ischaemic stroke with motor impairment. Ischaemic stroke with cognitive/ perceptual (incl. sensory)/ communication impairment.	Tier 2D → Tier 2
		1.13 1.23	Haemorrhagic stroke with motor and cognitive/perceptual (incl. sensory)/ communication impairment. Ischaemic stroke with motor and cognitive/ perceptual (incl. sensory)/ communication impairment.	Tier 3D → Tier 3 → Tier 2
2	**Spinal Cord Injury**	2.11 2.12 2.21 2.22 2.31	Non traumatic spinal cord dysfunction – Paraplegia. Non traumatic spinal cord dysfunction – Tetraplegia. Traumatic spinal cord dysfunction – Paraplegia. Traumatic spinal cord dysfunction – Tetraplegia. Other spinal cord dysfunction.	Tier 3D → Tier 3
3	**Hip Fracture**	3.11 3.12	Fracture of hip (#NOF), Operated. Fracture of hip (#IT), Operated.	Tier 2D → Tier 2
		3.13	Fracture of hip, Non-operated.	Tier 2
4	**Amputation**[8]	4.13 4.14 4.23 4.24	Potential Prosthetic user in the home (K1) - Bilateral amputees with at least one AKA on one side. Potential Prosthetic user in the home (K1) - Poly amputee or Hip disarticulation & above. Potential Prosthetic user in the community (K2-3) - Bilateral amputees with at least one AKA on one side. Potential Prosthetic user in the community (K2-3) - Poly amputee or Hip disarticulation and above.	Tier 3D → Tier 3
		4.11 4.12 4.21 4.22	Potential Prosthetic user in the home (K1) - Unilateral BKA. Potential Prosthetic user in the home (K1) - Bilateral BKA / Unilateral AKA. Potential Prosthetic user in the community (K2-3) - Unilateral BKA. Potential Prosthetic user in the community (K2-3) - Bilateral BKA / Unilateral AKA.	Tier 3
5	**Musculoskeletal Conditions**	5.11	MSK Surgical (peripheral):	Tier 3
		5.12	MSK Surgical (spinal).	Tier 2D → Tier 2
		5.13 5.21	Total Knee Replacement. MSK Non-Surgical.	Tier 2
6	**Deconditioning**	6.1	(65 years and below) Deconditioning & functional decline post -surgical procedure and/or post ICU care due to e.g. sepsis, cellulitis.	Tier 2D → Tier 2
		6.2 6.3	(Above 65 years old) Falls at least once in the last 6 months with underlying symptoms (e.g. unsteadiness, dizziness) and requiring individualized rehabilitation care plan. (Above 65 years old) Frail based on any of the following criteria: (1) Clinical Frailty Scale >4; or Meets >3 criteria in the (2) FRAIL scale or (3) Fried's Frail Phenotype.	Tier 2

Discharge from rehabilitation service

[8] Definition of K Levels:
K0: Does not have ability or potential to ambulate or transfer safely with or without assistance, and a prosthesis does not enhance quality of life or mobility.
K1: Has ability or potential to use a prosthesis for transfers or ambulation in level surfaces at a fixed cadence. Typical of the limited and unlimited household ambulatory.
K2: Has ability or potential for ambulation with ability to transverse low-level environmental barriers e.g. curbs, stairs, or uneven surfaces. Typical of limited community ambulator.
K3: Has ability or potential for ambulation with variable cadence. Typical of the community ambulator who has the ability to transverse most environmental barriers and may have vocational, therapeutic, or exercise activity that demands prosthetic use beyond simple locomotion.
K4: Has ability or potential for prosthetic ambulation that exceeds basic ambulation skills, exhibiting high impact, stress, or energy levels. Typical of the prosthetic demands of the child, active adult, or athlete.

Examples and Frequently Asked Questions

FAQ 1: How does the Rehabilitation Journey work?

Rehabilitation journeys are based on tiers of rehabilitation care needs, the patient/client's Rehabilitation Diagnostic Group (RDG), appropriate provision of evidence-based rehabilitation, and harmonised outcomes tracked across the healthcare continuum.

See an example of a rehabilitation journey for Stroke on next page.

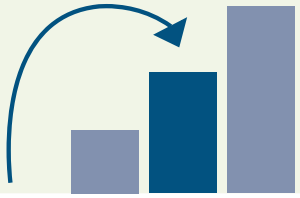
My patient/ client's RDG Pathway shows an inpatient setting (2D → 2 → Discharge). Must I follow it if they do not require it?

No. The RDG Pathway is a guide which should apply to most cases. The care team should exercise their clinical judgement on care planning and if the RDG Pathway is not the most appropriate for that patient/client, these reasons should be documented in their One-Rehab Care Plan. This will guide future reviews of One-Rehab, including RDG Pathways.

If the patient/client has Tier 2 needs instead of Tier 2D with a competent carer, they should be referred to a setting such as a Day Rehabilitation Centre instead of a Community Hospital. The therapist should then document the reason(s). This applies even when none of the pathways are appropriate. For example, patients/clients with Stroke can still be referred from the Acute Hospital Stroke ward to a Day Rehabilitation Centre if they are assessed to have Tier 2 needs instead of Tier 3D, 2D or 3.

If certain cases follow RDG pathways to specific settings based on tiers of rehabilitation care needs, how will I develop experience and skills to see the full range of rehabilitation cases, especially those not managed in my organisation?

One-Rehab aims to ensure patients/clients have equitable access to the appropriate level of rehabilitation. They should visit the appropriate rehabilitation provider depending on the complexity of their needs. We recognise that development of rehabilitation skills and knowledge is also critical for healthcare professionals. Organisations should work with partners in all settings to provide professional exposure to a range of rehabilitation care needs where feasible.



FAQ 1: Example on Rehabilitation Journey for Stroke

Accept Referral and Assess

Mr Lee is 45 years old and works as a security guard. He has a **right middle cerebral artery infarct** and goes to the ED. He is treated by the medical team (e.g. given thrombolysis) and admitted into the inpatient Stroke ward. He is referred for therapy.

Provide care as appropriate

- Mr Lee's therapists see him as he undergoes medical treatment and investigations. He has hemiparesis, some neglect and dysphagia. He stands with moderate assistance.
- When medically fit, the care team **jointly** considers his clinical condition, RDG Pathway and social circumstances. They assess that Mr Lee has potential to further improve his function. They note that he requires daily rehabilitation physician review, as well as daily rehabilitation. Due to his impairment, he requires physio-,occupational and speech therapy.
- They assess his rehabilitation needs to be Tier 3D and refer him to their acute hospital rehabilitation unit.

Plan for Further Care if needed

At the **rehabilitation unit**, the therapists:

- Code Mr Lee's **RDG** "Ischaemic stroke with motor and cognitive, perceptual (including sensory) or communication impairment".
- Track his core rehabilitation outcomes – FIM and EQ-5D. Track his condition-specific outcomes – Functional Oral Intake Scale. They do not carry out Frenchay Activity Index and Gait Speed as he is an inpatient and unable to walk unassisted.
- Fill in the **minimal dataset in his One-Rehab Care Plan** at admission and discharge from the ward.
- The care team considers his clinical condition, RDG Pathway and social circumstances. They discuss care plans with Mr Lee and his family, and initiate applications for a domestic helper. Mr Lee achieves his goal to walk with 1-man moderate assistance and a quad stick. His ADLs require moderate assistance. His helper participates in rehabilitation and learns to care for him.
- The care team notes that Mr Lee does not require further daily rehabilitation although his condition remains medically complex.
- They agree with his RDG Pathway and assess his rehabilitation needs to be Tier 3. They refer him for outpatient rehabilitation in the acute hospital.

At **Acute Hospital outpatient rehabilitation**, the therapists:

- Track his **core** rehabilitation outcomes – FIM and EQ-5D. Track his **condition-specific** outcomes – Functional Oral Intake Scale and Frenchay Activity Index. They do not carry out Gait Speed as he is unable to walk unassisted.
- Fill in his **One-Rehab Care Plan** accordingly.
- Mr Lee improves further. He achieves his goal to walk with 1-man minimal assistance and a quad-stick for 40m.
- The care team considers his clinical condition, RDG Pathway and social circumstances. He has stabilised and does not require rehabilitation that is as intensive.
- They agree with his RDG Pathway and assess his rehabilitation needs to be Tier 2. They refer him to a Day Rehabilitation Centre.

Plan for Further Care if needed

At the **Day Rehabilitation Centre**, the therapists:

- Track his **core** rehabilitation outcomes – FIM and EQ-5D. Track his **condition-specific** outcomes – Functional Oral Intake Scale and Frenchay Activity Index. They do not carry out Gait Speed initially as he is unable to walk unassisted.
- Fill in his **One-Rehab Care Plan** accordingly.
- Mr Lee improves even more. His ADLs are supervised. He ultimately achieves his goal of return to work with modified duties, and is discharged from rehabilitation.
- His therapists measure his Gait Speed on discharge for rehabilitation.

FAQ 2: What if there is more than one condition which requires rehabilitation?

Rehabilitation healthcare professionals should code all relevant conditions requiring rehabilitation, regardless of whether it falls under the six One-Rehab Conditions or not.

a. Each patient/client should only have one **Primary RDG** per rehabilitation episode. This is their primary reason for requiring rehabilitation.

b. **Secondary RDGs** are other conditions which require rehabilitation in that episode of care.

c. Some patients/clients may have more than one applicable RDG. Nevertheless, therapy management should always be carried out holistically. In the One-Rehab Care Plan, the primary condition for requiring rehabilitation is based on the rehabilitation healthcare professional's judgement. This condition should be the Primary RDG while the remaining condition(s) may be coded as Secondary RDGs.

See an example on Deconditioning and Musculoskeletal Conditions below.

FAQ 2: Example on Coding for Deconditioning and Musculoskeletal Conditions

Scenario A (MSK only)	Scenario B (Deconditioning only)	Scenario C (Deconditioning and MSK)
Madam Ho is 70 years old. **She is usually active in her community, and has not fallen before.** When visiting the toilet, she tripped over her bathroom mat which had been misplaced. **She sustained a Colle's Fracture which is treated by a cast.**	Madam Aw is 70 years old. **She gets giddy sometimes, with previous falls.** She is independent, and stays active in the community outside of these giddy spells. Currently, she falls in her bedroom **but does not have any injuries besides some knee abrasions.**	Madam Wong is 80 years old and has gastroenteritis. **Her helper assists her usually.** In her rush to go to the toilet one day, she walked unassisted and tripped over her bathroom kerb. **She sustained a Colle's Fracture which is treated by a cast.**
↓	↓	↓
The care team assesses her and evaluates that: - The fall was **not caused by any significant precipitating health reasons**. - Her rehabilitation needs are of Tier 2.	The care team assesses her and evaluates that: - The fall was caused by the **giddiness which requires management**. - Her rehabilitation needs are of Tier 2.	The care team assesses her and evaluates that: - The fall was caused by **underlying frailty**. - Her rehabilitation needs are of Tier 2.
↓	↓	↓
In the polyclinic, the therapist codes her **Primary RDG** as "**MSK Non-Surgical**".	In the Day Rehabilitaiton Centre, the therapist codes her **Primary RDG** as "**Falls at least once in the last 6 months with underlying symptoms (e.g. unsteadiness, dizziness) and requiring individualized rehabiliation care plan**".	In the Day Rehabilitaiton Centre, the therapist codes her **Primary RDG** as "**Frail with any of the following; (1) Clinical Frailty Score of >4 or meeting >3 critera in the (2) FRAIL scale of (3) Fried's Frail Phenotype**" and her **Secondary RDG** as "**MSK Non-Surgical**".

FAQ 3: What if a new medical event occurs during a rehabilitation episode?

a. If the patient/client is admitted to hospital for a new condition which requires rehabilitation, the first rehabilitation episode will cease and a second new care episode will commence.
   i. The care team managing the patient/client's care in the second episode, including the rehabilitation healthcare professionals, should assess them holistically to determine their rehabilitation needs and whether follow-up rehabilitation is needed after medical discharge. They should then be triaged according to the workflow in Diagram 5, Page 24-25.

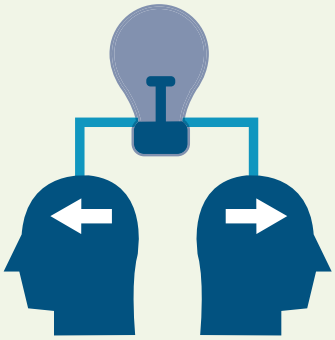
b. If the patient/client's new condition does not require rehabilitation, or does not require a hospital admission, the rehabilitation healthcare professional should exercise their clinical judgement on whether it is appropriate to continue rehabilitation. Their care should then be managed accordingly.

c. Further instructions regarding the One-Rehab Care Plan for use, including in such scenarios, will be shared when ready.

See an example on Stroke and Hip Fracture on the next page.

Are secondary RDGs the same as comorbidities?

Secondary RDGs are other conditions the patient/client has besides the primary RDG that require rehabilitation during the same episode of care. Comorbidities are conditions which may be pre-existing or have developed during the current episode of care.



What happens if patient/client is re-admitted into a hospital in another cluster? Are two One-Rehab Care Plans allowed at the same time i.e. one for each condition that is managed by a cluster?

No, there should not be two One-Rehab Care Plans in effect at the same time. Further instructions for use of the One-Rehab Care Plan, including in such scenarios, will be shared when ready. For example, a patient/client receiving rehabilitation for an MSK condition in a polyclinic may unfortunately sustain a stroke and be admitted. In such cases, the One-Rehab Care Plan for their MSK condition is closed. Once the patient/client is ready for their new RDG pathway, a second One-Rehab Care Plan should be activated. Therapy management for the patient/client should be holistic and address their Stroke and MSK rehabilitation care needs.

FAQ 3: Example on Hip Fracture with Stroke as a New Medical Event

Accept Referral and Assess

Mr Ong has Type 2 Diabetes Mellitus. He falls down and sustains a **hip fracture requiring a hemi-arthroplasty**. Post-operatively, he is sent to an Orthopaedic ward and referred for therapy.

Provide care as appropriate

- Mr Ong's therapists see him as he undergoes post-operative care. He requires moderate assistance with his ADLs, and walks a few steps with a walking frame.
- When medically fit, the care team jointly considers his clinical condition, RDG Pathway and social circumstances. They assess that Mr Ong has potential to further improve his function. They note that he is stable medically, but require daily physio- and occupational therapy.
- They assess his rehabilitation needs to be Tier 2D and refer him to a Community Hospital.

Plan for Further Care if needed

At the **Community Hospital**, the therapists:

- Codes Mr Ong's **RDG** "Fracture of hip (#NOF), Operated". **Comorbidities**: Type 2 Diabetes Mellitus.
- Track his **core** rehabilitation outcomes – MBI and EQ-5D. Track his **condition-specific** outcomes – Pain Score. They do not carry out Gait Speed as he is unable to walk unassisted.
- Fill in the **minimal dataset in his One-Rehab Care Plan** at admission and discharge from the Community Hospital.

Scenario A for Mr Ong

- The care team considers his clinical condition, RDG Pathway and social circumstances. They discuss care plans with Mr Ong and his family. His wife is identified as his carer. Mr Ong achieves his goal to walk with contact guard and a walking frame. His wife learns to care for him competently.
- The care team notes that Mr Ong no longer requires daily rehabilitation.
- They agree with his RDG Pathway and assess his rehabilitation needs to be Tier 2. They refer him to a Day Rehabilitation Centre.

At the **Day Rehabilitation Centre**, the therapists:

- Track his **core** rehabilitation outcomes – MBI and EQ-5D. Track his **condition-specific** outcomes – Pain Score and Gait Speed.
- Fill in the **minimal dataset in his One-Rehab Care Plan** at admission and discharge from the Community Hospital.
- Mr Ong improves even more. He ultimately achieves his goal of modified independence in ADLs and community ambulation with a walking stick. He is discharged from rehabilitation.

Plan for Further Care if needed

Scenario B for Mr Ong

- **Mr Ong unfortunately suffers a stroke in the Community Hospital.** He is readmitted to an acute hospital. His One-Rehab journey for the RDG "Fracture of hip (#NOF), Operated" **stops** and the One-Rehab Care Plan is **closed**.
- In the acute hospital, he undergoes medical management for his stroke and is referred for therapy.
- When medically fit, his care team **jointly** deems his primary reason for requiring rehabilitation to be his stroke, instead of hip hemi-arthroplasty. They consider his clinical condition, RDG Pathway and social circumstances. They discuss care plans with Mr Ong and his family.
- They assess that Mr Ong has potential to further improve in function. He also requires daily rehabilitation physician review, as well as daily rehabilitation. Due to his impairment, he requires physio-, occupational and speech therapy.
- They assess his rehabilitation needs to be Tier 3D and refer him to their acute hospital rehabilitation.

At the **Rehabilitation Unit**, the therapists:

- Code Mr Ong's **Primary RDG** "Ischaemic Stroke with motor and communication impairment". **Secondary RDG**: Fracture of hip (#NOF), Operated. **Comorbidities**: Type 2 Diabetes Mellitus.
- Track his **core** rehabilitation outcomes – FIM and EQ-5D. Track his **condition-specific** outcomes – Functional Oral Intake Scale. They do not carry out Frenchay Activity Index and Gait Speed as he is an inpatient and unable to walk unassisted.
- Fill in the **minimal dataset in his NEW One-Rehab Care Plan** at admission and discharge from ward.
- Mr Ong's One-Rehab journey proceeds as described in Diagram 4. His treating therapists provide holistic rehabilitation for him as is deemed appropriate. They manage his neurological impairments and pain while observing certain hip precautions during his rehabilitation.

FAQ 4: What happens to patients/clients who are temporarily unsuitable for rehabilitation e.g non-weight bearing for a few weeks?

Due to some medical conditions, some patients/clients are temporarily unsuitable to participate in active rehabilitation. Examples of these conditions include fractures which require non-weight bearing to allow bone healing, or wounds which require healing. Suitability for rehabilitation is determined at the discretion of the doctor.

Nevertheless, these patients/clients should keep mobile and exercise safely. If there are no care transition issues (e.g. ready and competent caregiver available), this should be managed at home. Otherwise, a residential facility should be considered in the interim if the patient/client meets the eligibility criteria (e.g. short stay unit or nursing home). These patients/clients should have access to regular exercise programmes to maintain their mobility.

When suited for active rehabilitation, these patients/clients should be reviewed for entry into an appropriate rehabilitation site (e.g. community hospital or day rehabilitation centre) where they will be assigned an appropriate Rehabilitation Diagnostic Group and One-Rehab Care Plan.

See an example on Musculoskeletal Conditions (Patellar Fracture) on the next page.

FAQ 4: Example on Patellar Fracture Precluding Rehabilitation in the Interim

Accept Referral and Assess

Mr. Tan is 80 years old. He falls down and sustains a patellar fracture which is treated conservatively with a cast and a non-weight bearing period of 6 weeks. He is admitted into Orthopaedic ward and referred for therapy.

Provide care as appropriate

- Mr Tan's therapist sees him in the Orthopaedic ward as he receives medical and nursing care. As his uninjured leg is also weak, he sits out of bed with maximum assistance.
- When medically fit, the care team **jointly** considers his clinical condition, RDG Pathway and social circumstances. They assess he is highly unlikely to return to independence as long as he is non weight-bearing. But he has potential to further improve after weight-bearing is allowed.

Plan for Further Care if needed

Scenario A for Mr Tan

- As Mr Tan **lives at home alone,** the care team discusses with him and decides for a **nursing home placement in the interim.**
- Mr Tan **stays in a nursing home for 6 weeks, where care staff assist him.**
- He participates in social activities and exercises.
- In time, he is allowed to weight-bear as tolerated. Nursing home staff consider his clinical condition, RDG Pathway and social circumstances. They discuss care plans with Mr Tan and note that he is unable to cope at home. They assess his rehabilitation needs to be Tier 2.
- He begins active rehabilitation for his Tier 2 needs in the nursing home [**Note**: Mr Tan may also be referred to a co-located senior care centre if there is one, or a community hospital if it is appropriate for his condition].

At the **Nursing Home**, the therapists:

- Codes Mr Tan's **RDG** "MSK Non-Surgical".
- Track his **core** rehabilitation outcomes – MBI and EQ-5D. Track his **condition-specific** outcomes – Pain Score. They do not carry out Gait Speed as he is unable to walk unassisted.
- Fill in the **minimal dataset in his One-Rehab Care Plan** at admission and discharge from his course of rehabilitation in the nursing home.
- Mr Tan improves in function. He achieves his goal of modified independence in ADLs and community ambulation with a walking frame.
- His therapists measure his Gait Speed on discharge from rehabilitation.

Plan for Further Care if needed

Scenario B for Mr Tan

- Mr Tan **lives with his helper.** Before his discharge, the **helper receives caregiver training and becomes competent in managing his care and exercises.**
- Mr Tan **goes home with his helper.**
- In time, he is allowed to weight-bear as tolerated. The doctor discusses care plans with Mr Tan. He assesses Mr Tan's rehabilitation needs to be at Tier 2, and refers him to a Day Rehabilitation Centre. [**Note**: Should the doctor refer Mr Tan to therapy in an acute hospital instead, the therapist may discuss a Day Rehabilitation Centre placement with Mr Tan].

At the **Day Rehabilitation Centre**, the therapists:

- Code Mr Tan's **RDG** "MSK Non-Surgical".
- Track his **core** rehabilitation outcomes – MBI and EQ-5D. Track his **condition-specific** outcomes – Pain Score. They do not carry out Gait Speed as he is unable to walk unassisted.
- Fill in the **minimal dataset in his One-Rehab Care Plan** at admission and discharge from the day rehabilitation centre.
- Mr Tan improves in function. He ultimately achieves his therapy goal of supervised ADLs and ambulation in the community with a quadstick.
- His therapists measure his Gait Speed on discharge from rehabilitation.

FAQ 5: My patient/client's recovery has plateaued, but I am concerned they may decondition if they do not exercise regularly. Can I continue rehabilitation for them?

Patients/clients whose functional recovery has plateaued but still need supervision or assistance to exercise safely may have Tier 1 needs (instead of Tier 2 or 3).

As with other tiers, the therapist has the discretion to decide the patient/client's level of rehabilitation needs after taking into account their potential for recovery and goals. If a patient/client has Tier 1 needs, their rehabilitation journey may be extended for 6 months pending re-certification by the relevant healthcare professional[9], during which time the appropriate referrals should be initiated as per their organisation's protocol for coordination of long-term care in the community. They will undergo exercise programmes which are conducted by support staff under a therapist's oversight, before transitioning into longer-term maintenance programmes.

See an example on Amputation and Stroke on the next page.

[9] Therapist with full AHPC registration; Advanced Practice Nurse registered with Singapore Nursing Board; Medical practitioner with conditional or full registration under Singapore Medical Council.

FAQ 5: Example on Tier 1 Rehabilitation Care Needs for Amputation and Stroke

Accept Referral and Assess

Mr Kwa has a history of right below knee amputation, Peripheral Vascular Disease and Diabetes. Although he has a prosthesis which he uses for transfers, he is mainly wheelchair bound and maneuvers his own wheelchair at home and in the community. He suffers a **left sub-arachnoid haemorrhage**, and visits the ED. He is treated by the medical team and referred for therapy.

Provide care as appropriate

- Mr Kwa's therapists see him as he undergoes medical treatment and investigations. He has motor impairment and transfers with maximum assistance.
- When medically fit, the care team **jointly** considers his clinical condition, RDG Pathway and social circumstances. They discuss care plans with him, and assess that Mr Kwa has potential to further improve his function. Although he does not need daily review by a rehabilitation physician, he requires daily therapy.
- They assess his rehabilitation needs to be Tier 2D and refer him to a Community Hospital.

Plan for Further Care if needed

At the **Community Hospital**, the therapists:

- Code Mr Kwa's **RDG** "Haemorrhagic stroke with motor impairment"
- Track his **core** rehabilitation outcomes – MBI and EQ-5D. Track his **condition-specific** outcomes – Functional Oral Intake Scale. They do not carry out Frenchay Activity Index and Gait Speed as he is an inpatient and unable to walk.
- Fill in the **minimal dataset in his One-Rehab Care Plan** at admission and discharge from ward.
- Mr Kwa has some functional recovery. He requires moderate assistance for transfers and ADLs. The care team considers his clinical condition, RDG Pathway and social circumstances. They discuss care plans with him and initiate applications for a domestic helper, who receives training and becomes competent in managing his care.
- They agree with his RDG Pathway and assess his rehabilitation needs to be Tier 2. They refer him to a Senior Care Centre.

At the **Senior Care Centre**, the therapists:

- Track his **core** rehabilitation outcomes – FIM and EQ-5D. Track his **condition-specific** outcomes – Functional Oral Intake Scale and Frenchay Activity Index. They do not carry out Gait Speed as he is unable to walk unassisted.
- Fill in his **One-Rehab Care Plan** accordingly.
- Mr Kwa improves further. He achieves his goal of minimal assistance for transfers and ADLs but his functional recovery soon plateaus.
- The care team considers his clinical condition, RDG Pathway and social circumstances.
- Although he needs assistance in ADLs, Mr Kwa values the independence he has. His team feels he should continue his exercises and community activites. His helper is not confident in assisting with high-level standing exercises.
- They discuss care plans with him, and assess his needs to be Tier 1. He continues assisted exercises with a therapy support staff and his helper. Although his helper gradually learns to manage his standing exercises, he prefers to be part of a group. He transitions to a longer-term senior activity programme in his Senior Care Centre and is ultimately discharged from rehabilitation.

FAQ 6: Are Home Rehabilitation services part of One-Rehab?

Yes, Home Rehabilitation service providers may see clients referred from various sources. Those which receive clients referred from the public healthcare institutions under One-Rehab pilot projects are considered part of One-Rehab. They should access their clients' One-Rehab Care Plans and track the relevant rehabilitation outcomes.

See an example on Home Rehabilitation for Stroke on next page.

FAQ 6: Example on Home Rehabilitation for Stroke

Accept Referral and Assess

Mr Yeo is 77 years old. He has a previous stroke and heart attack and furniture cruises with a walking stick indoors due to an unsteady gait. A helper cares for him. One day, he suffers a new posterior circulation infarct.

Provide care as appropriate

- Mr Yeo's physio- and occupational therapists see him as he undergoes medical treatment and investigations. He walks with moderate assistance and a walking stick (given his previous hemiparesis).
- When medically fit, the care team **jointly** considers his clinical condition, RDG Pathway and social circumstances. They discuss care plans with him, and note that his helper actively participates in his therapy sessions.
- His care team assesses that he would benefit from inpatient rehabilitation and has Tier 2D needs. However, Mr Yeo is against the idea of an inpatient stay and desires to go home. He is discharged home after his helper undergoes caregiver training. He is also referred for home therapy to continue his rehabilitation.

Plan for Further Care if needed

At the **home**, the therapists:

- Code Mr Yeo's **RDG** "Ischaemic Stroke with motor impairment". **Comorbidities**: Old middle cerebral artery infarct 5 years ago, Acute Myocardial Infarct 3 years ago. [Note: Mr Yeo does not require a secondary RDG as his active rehabilitation needs are assessed to be due to the current stroke instead of the old stroke.]
- Track his **core** rehabilitation outcomes – MBI and EQ-5D. Track his **condition-specific** outcomes – Functional Oral Intake Scale, Frenchay Activities Index. They do not carry out Gait Speed as he is unable to walk without assistance.
- Explain in the One-Rehab Care Plan why he was referred to Home Rehabilitation instead of a Community Hospital i.e. patient/client's preference.
- Fill in the **minimal dataset in his One-Rehab Care Plan** at admission and discharge from the Home Rehabilitation service.
- The home therapists provide therapy for Mr Yeo to improve his motor control. They assess Mr Yeo's home environment and equipment and teach his helper home exercises.
- Mr Yeo slowly improves in his motor control, and is eventually able to walk with a walking stick and minimal assistance with his ADLs but feels that is adequate recovery for him. He is discharged from rehabiliation.

Chapter 4:
Models of Care using the One-Rehabilitation Framework

DEVELOPING COMMUNITY REHABILITATION RECEPTACLES

- For Centre-based Care Clients
- For Nursing Home Residents
- For Patients/Clients Requiring Musculoskeletal Therapy

ENABLING DIRECT REFERRALS TO ALLIED HEALTH PROFESSIONALS






CHAPTER 4

Key Messages:

- The One-Rehab framework helps to align processes and pathways to a certain extent but it does not define rehabilitation services entirely. Care models should be developed to help patients/clients achieve goals which make a difference to their lives, and ensure that the care provided can be sustained to benefit as many individuals as possible.
- This can be achieved through collaborative practices, transdisciplinary roles between care providers, as well as role delegation to staff who are upskilled to undertake selected responsibilities.
- Three key principles should be applied to decision-making in developing care models:
  - Good quality and safe rehabilitation through appropriate governance.
  - Effective, accessible and sustainable care which considers patient/client-reported outcomes, clinical outcomes, logistics burden, resource utilisation or costs associated with traditional care.
  - Holistic, people-centred care[10] through shared care planning and skill-sharing.

[10] As described by the World Health Organisation, people-centred health services is an approach to care that consciously adopts the perspectives of individuals, families and communities, and sees them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic wants. People-centred care requires that people have the education and support they need to make decisions and participate in their own care. It is organised around the health needs and expectations of people rather than diseases.

I work in the community sector. How can I be involved in One-Rehab?

Community providers should establish partnerships with clusters and design pilot models to test out various RDG Pathways. While clusters may lead the partnerships, all pilot partners are strongly encouraged to collaborate and provide appropriate and integrated rehabilitation care.

This involves sharing of thought leadership across both sectors, and could involve plans such as exchange programmes for learning, and a coordinated approach towards resources such as funding and manpower in tandem with caseload shifts.

Are Tele-Rehabilitation services considered part of One-Rehab Pilot Projects?

Tele-rehabilitation is a clinical intervention. To be part of a One-Rehab pilot project, it must be provided as part of rehabilitation service which uses the Rehabilitation Diagnostic Group, Rehabilitation Needs Classification and One-Rehab Care Plan.

- Pilot projects are to be designed for sustainability, and strive to reduce the logistics burden, resource utilisation or costs associated with traditional care.
- Care protocols are to include One-Rehab rehabilitation and programme outcomes.
- Pilot projects which aim to partially substitute care using tele-rehabilitation are to aim for a functional outcome that is comparable to traditional intervention. This is to ensure that the level of care is of the same or higher.

Community Rehabilitation: Centre-Based Model of Care

The envisaged model of care will make community rehabilitation more targeted and accessible to clients. Current centre-based rehabilitation may be time-based and more restricted in the range of activities provided. Rehabilitation in future will be driven by the client's goals, their self-reported and clinical outcomes, to include a wider range of community reintegration activities.

Tier 2 active rehabilitation, will be directed towards these goals and reintegrating clients to their community. Clients' goals and outcomes will be monitored and reviewed regularly based on the recommended RDG pathways. **Tier 1 transitional rehabilitation** is available for clients who require more time to transit from active rehabilitation to long term wellness programmes. Care provided during this period of transition is underpinned by trained support staff who are empowered to take on extended roles. **Long term wellness** programmes in the community should be offered to clients who have achieved their goals and require regular physical or social activity. Apart from physical activity, these programmes should also empower clients and their caregivers towards self-management and independence.

See Diagram 6 on centre-based care on next page.

Diagram 6: Centre-based Model of Care

Making community rehabilitation care more targeted and accessible to patients/clients.

CURRENT	FUTURE *Supported by clinical governance frameworks addressing aspects such as training, competencies and escalation protocols*
Active Rehabilitation: • Requires rehabilitation potential; • Need recertification by relevant professional* to extend rehabilitation every 6 months. • Intervention by therapist.	**Goal-oriented Active Rehabilitation (Tier 2):** • Therapy aims to empower meaningful participation in community. • Held to One-Rehab rehabilitation outcomes, re-certification and discharge guidelines.
Maintenance Exercise: • No rehabilitation potential; • Objective is to reduce functional decline; • No entry or exit criteria; • Overseen by therapist.	**Transitional Rehabilitation (Tier 1):** • Train caregiver and/or allow those who require supervised exercises a transition period towards long-term wellness care • Up to 6 months of transitional care provided by trained care staff, with oversight by therapist. • Held to One-Rehab rehabilitation outcomes, recertification and caregiver readiness.
Active Aging: • For well seniors; • Activities such as Zumba, Tai Chi, cooking.	**Wellness (Active Aging):** • Help well or pre-frail seniors lead engaged and active lifestyles in the community. • Programmes will be refined to cater to frail seniors after discharge from Tier 1.

* Therapist with full AHPC registration; or Advanced Practice Nurse registered with Singapore Nursing Board; or Medical practitioner with conditional or full registration under Singapore Medical Council.

Community Rehabilitation: Nursing Home Model Of Care

In nursing homes, residents who have the potential to return home should be offered rehabilitation to achieve this. Even for the residents who remain in nursing homes, those with potential for further functional recovery should be able to receive the appropriate rehabilitation as this helps the resident move better and stay engaged in more activities, and also helps the nursing home staff care for them more effectively. To enable this system, trained care staff in nursing homes (e.g. therapy assistants, nursing aides) should be empowered to identify residents with changes in functional status and escalate them for further assessment and care planning by therapists.

The extent of rehabilitation services available varies based on the nursing home, and some are able to provide active rehabilitation. Otherwise, residents can be referred to

- Community Hospitals if they meet the admission criteria in the Manual on Clinical Services Capabilities for Community Hospitals; or
- Centre-based rehabilitation if they meet the admission criteria in Centre-based Care Service Requirements.

See Diagram 7 on nursing homes on next page.

Diagram 7: Nursing Home Model of Care

Developing community rehabilitation receptacles for nursing home residents:
Clearer guidelines to stratify rehabilitation needs, enabling better screening and referral to appropriate sites for rehabilitation.

CURRENT

Feedback from service providers:

Although Nursing Homes are not resourced to provide rehabilitation, there are still a small number of residents who require rehab.

There is no stratification of rehabilitation needs.

FUTURE

Care staff screen residents for rehabilitation needs and plan for care based on One-Rehab.

(A) *Upon admission* ***(B)*** *During review and care planning* ***(C)*** *As part of care escalation with change in functional status*

*Estimations to be validated through pilots.

About 3%* aim for return to home or community

Tier 2D (Active Rehabilitation):

- Daily active rehabilitation and appropriate case management.
- Nursing Homes can refer residents to a Community Hospital; or to a co-located Day Rehabilitation Centres or Senior Care Centres (if available).
- To adhere to RDG Pathways.

About 10%* aim to improve function and reduce burden of care

Tier 2 (Active Rehabilitation):

- Active rehabilitation but not daily.
- Nursing Homes with on-site or roving therapists assisted by care staff can provide rehabilitation care; or can refer residents to Day Rehabilitation Centres, Senior Care Centres.
- To adhere to RDG Pathways.

About 87%* of residents aim to lead engaged and active lifestyles

Wellness (Active Aging):

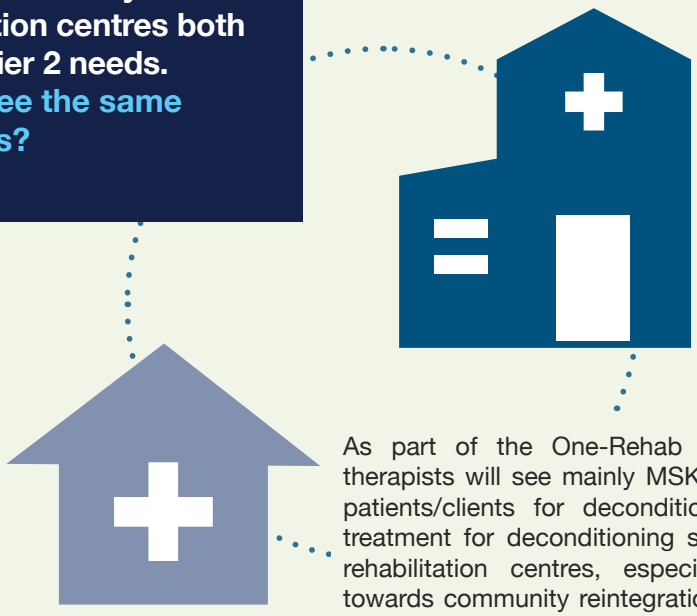
- Weave exercise and cognitive activities into daily routine.
- National Allied Health Guidelines will be developed to guide direct care staff, who are trained and empowered to conduct these actvities.

Community Rehabilitation: Musculoskeletal Therapy Model of Care

The envisaged model for musculoskeletal therapy aims to allow patients/clients to better access therapy services in the community for the appropriate MSK conditions. This comprises a physician and a PT who work together to triage patients/clients with Tier 2 or Tier 3 needs appropriately based on established clinical governance frameworks. This saves Orthopaedic specialists' time spent in referring non-surgical cases back to polyclinic PTs, and polyclinic physicians' time spent in seeing patients/clients with non-complex conditions for recertification just so they can continue therapy. To ensure time for services in the community to be adequately developed, a sub-set of patients/clients with Tier 2 needs for selected conditions can be referred for allied health management at the acute hospitals, subjected to approval by the Ministry of Health.

See Diagram 8 on Musculoskeletal Therapy on next page.

Polyclinics and day rehabilitation centres both cater to Tier 2 needs. Do they see the same conditions?



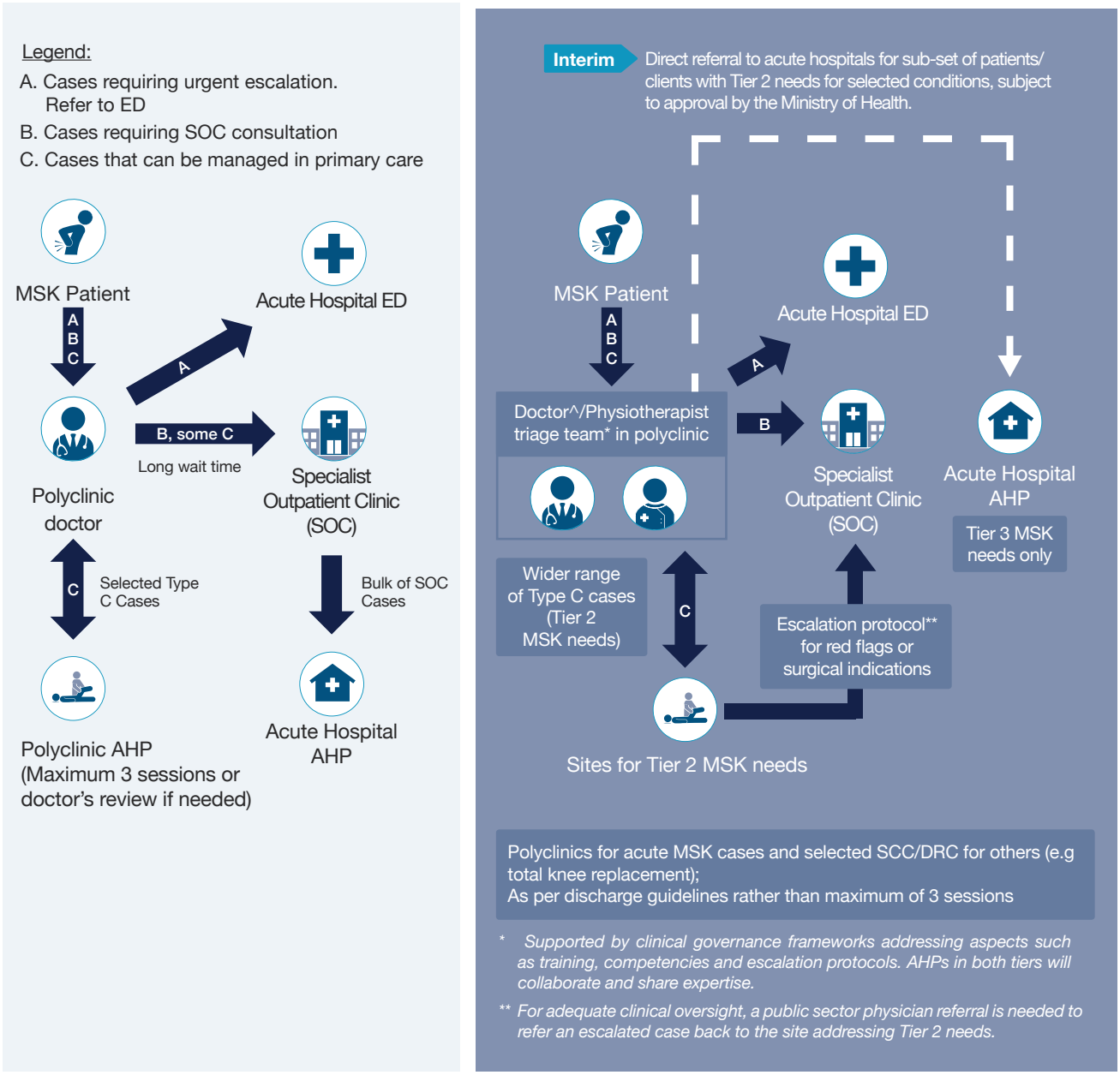
As part of the One-Rehab pilot projects, polyclinic therapists will see mainly MSK cases, and screen other patients/clients for deconditioning if needed. Further treatment for deconditioning should be referred to day rehabilitation centres, especially if activities geared towards community reintegration are required. Protocols will be developed to guide care pathways and service provision. In the long-term, therapists should be empowered to manage patients/clients holistically at these care settings so cross-referrals between polyclinics and centre-based rehabilitation are minimised.

Diagram 8: Musculoskeletal Therapy Model of Care

CURRENT

FUTURE

Supported by clinical governance frameworks addressing aspects such as training, competencies and escalation protocols. AHPs in both tiers will collaborate and share expertise.



^ Refers to doctors with full or conditional registration from the Singapore Medical Council, and who are practising in an organisation funded by MOH. Examples include acute public hospitals, polyclinics, medical centres run by public healthcare clusters, community hospitals run by public healthcare clusters or voluntary welfare organisations, and all nursing homes receiving MOH funding. Only subsidised patients/clients from these institutions would be referred on a subsidised basis.

CHAPTER 4

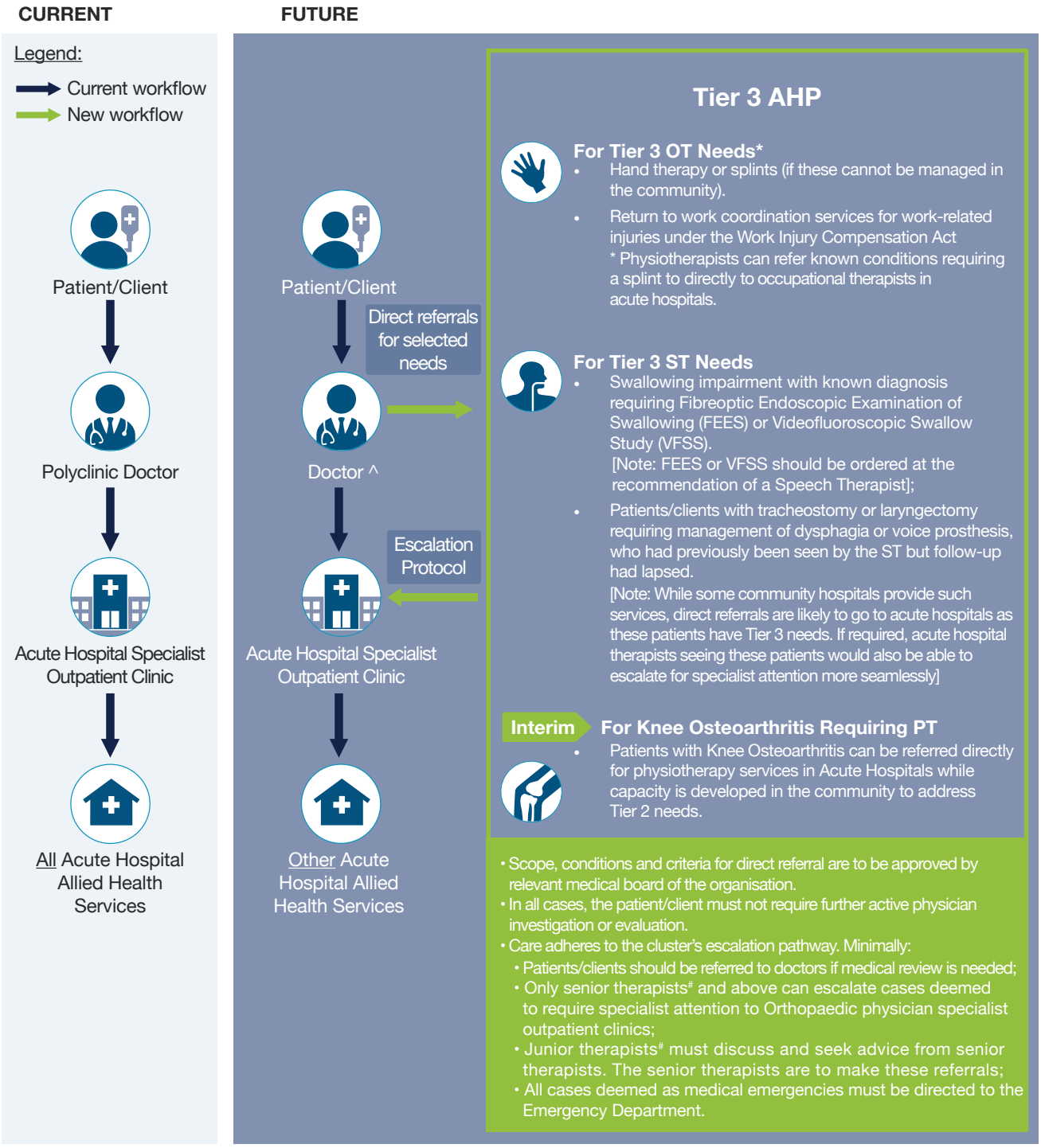
Direct Referrals to Allied Health Professionals

Direct Referrals for Tier 3 Needs (For Occupational and Speech Therapy)

Patients/clients with selected Tier 3 needs may require interventions which are more complex and less common in the community. In such cases, they can be directly referred to occupational or speech therapy in the Acute Hospitals if there is approval from the relevant clinical or medical boards. This enables them to receive timely treatment, and reduces time spent by specialist physicians in referring such cases to Acute Hospital Allied Health Professionals.

See Diagram 9 on Direct Referral for Tier 3 Occupational and Speech Therapy Needs on next page.

Diagram 9: Direct Referrals for Tier 3 Needs (For Occupational and Speech Therapy)



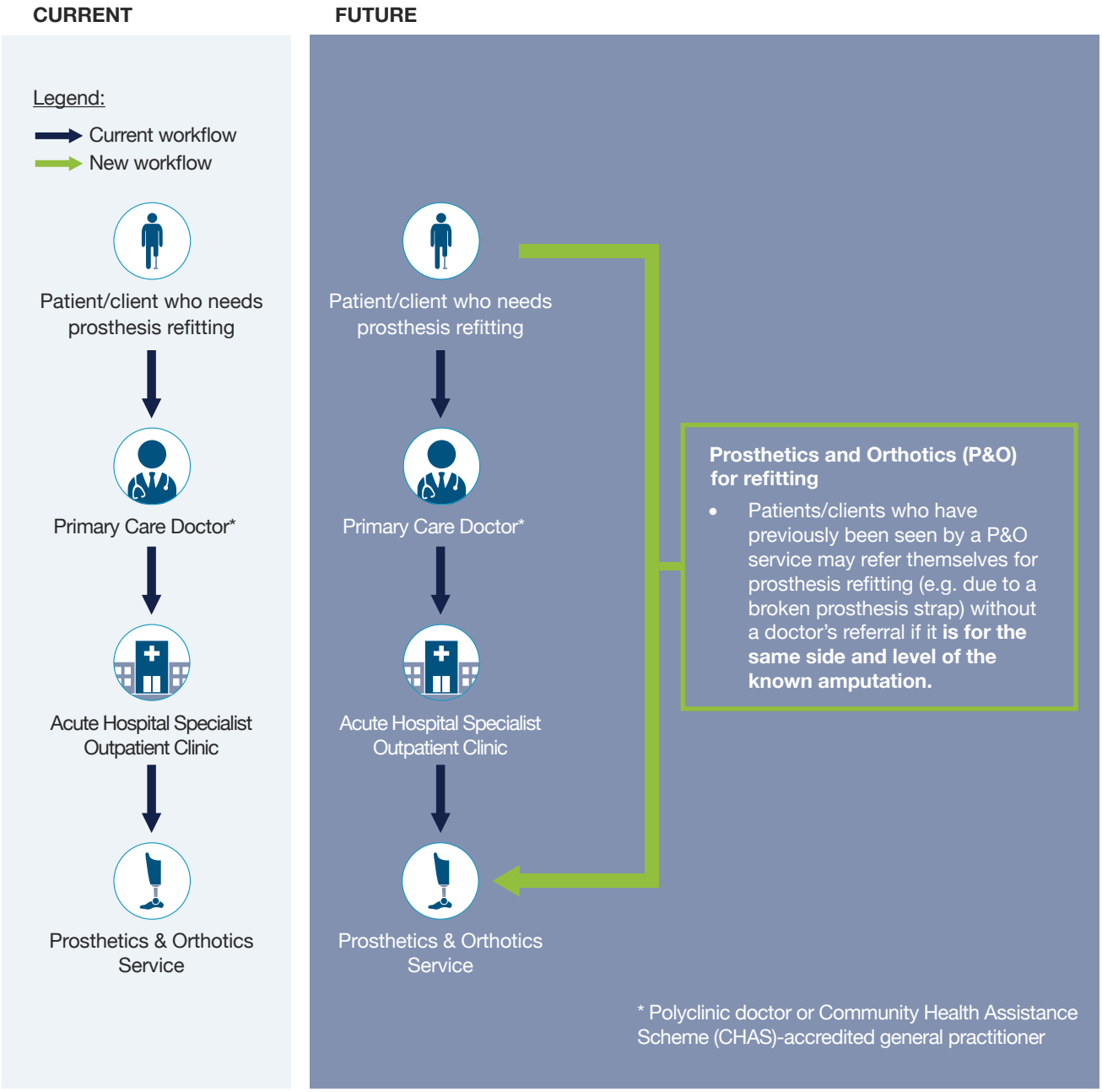
^ Refers to doctors with full or conditional registration from the Singapore Medical Council, and who are practising in an organisation funded by MOH. Examples include acute public hospitals, polyclinics, medical centres run by public healthcare clusters, community hospitals run by public healthcare clusters or voluntary welfare organisations, and all nursing homes receiving MOH funding. Only subsidised patients from these institutions would be referred on a subsidised basis.

Junior or Senior Therapist as described under the Skills Framework for Healthcare, accessible at: https://www.skillsfuture.sg/skills-framework/hc#

Direct Referrals for Tier Needs (For Prosthetics & Orthotics Services)

People using prostheses are currently required to visit a public sector doctor for subsidised referral to prosthetics and orthotics (P&O) services. Permitting direct self-referrals to these P&O services e.g. for prosthesis fabrication or fixing of a broken strap would allow these individuals to receive timely intervention, and clinic slots to be used for those with more medical needs.

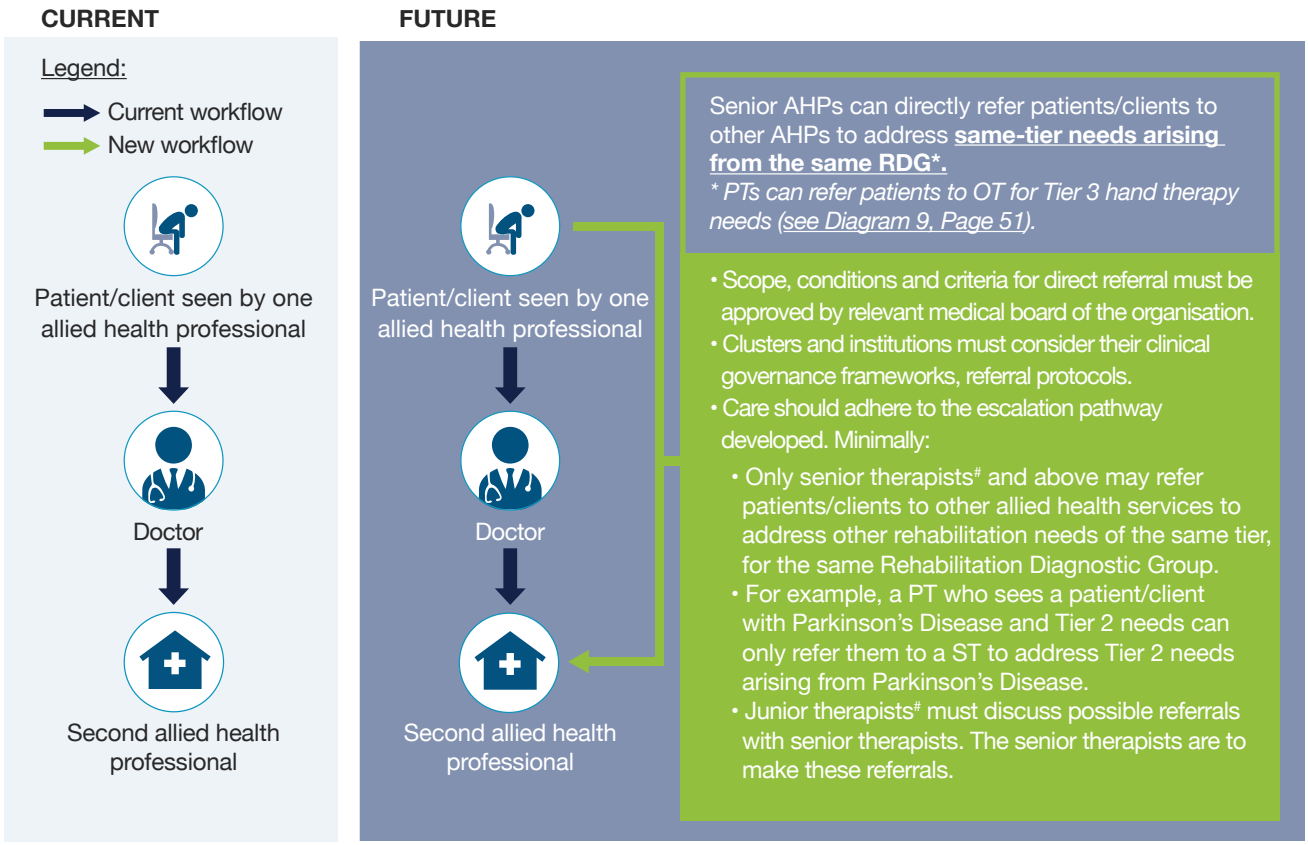
See Diagram 10 on Tier 3 Prosthetics & Orthotics Needs below.



Direct Referrals Between AHPs (For the Same Tier of Rehabilitation Needs)

Senior AHPs can directly refer patients/clients to other AHPs to address needs of the **same tier arising from the same RDG**. This enables them to receive timely treatment for their condition, and reduces time spent by specialist physicians in referring such cases to other AHPs.

See Diagram 11 on Direct Referrals Between AHPs below.

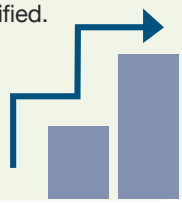


I am a junior therapist. Does this mean I cannot refer my patient/client to other AHPs such as a medical social worker or dietitian?

You can still refer your patient/client to other AHPs through a senior therapist colleague after a discussion with them. This is required to ensure there is mentoring for junior staff and ongoing development of clinical reasoning while still helping the patient/client receive care more efficiently.

My patient/client has certain rehabilitation needs which are higher tier. Can I refer them to the relevant rehabilitation provider?

Direct AHP-to-AHP referrals are only permitted for rehabilitation care needs of the same tier and same RDG. If your patient/client requires services as described in the section on "Direct Referrals for Tier 3 Needs", a public sector physician may initiate a direct referral. Therapists should otherwise follow current protocols until otherwise notified.



Junior or Senior Therapist: As described under the Skills Framework for Healthcare, accessible at: https://www.skillsfuture.sg/skillsframework/hc#

Other Ideas for Innovative Models of Care

Models of care need to be constantly reviewed and reinvented so they best cater to the changing needs of our patients and clients (Pighills, 2015). Additional training may be needed, as well as the relevant clinical governance. In this section, MOH summarises examples of other innovative models of care which can be considered. Rehabilitation healthcare professionals are encouraged to think out of the box on other ways to provide rehabilitation based on the guiding principles below.

Guiding Principles:

Model of Care: Risk-stratifying Allied Health Services

- Allied health services are evaluated and risk-stratified.
- They are delegated to therapy assistants and volunteers with upskilling if needed.
- For example, an organisation has established a protocol and training programme for therapy support staff to conduct simple screening tests for orientation state. An ST may then delegate the screening to the therapy support staff, who will conduct the screening and report results back.

Model of Care: Shared "First touch" Assessment Algorithm

- In selected settings, either a physiotherapist (PT) or occupational therapist (OT) first sees a patient/client who is referred to PT and OT. The first therapist assesses the patient/client and evaluates if a review by the second therapist is needed.
- Instead of patients/clients seeing multiple therapists, skills-sharing and transdisciplinary practice enable either the PT or OT to have shared competencies in areas that may include:
  - Gait assessment and walking aid prescription;
  - Wheelchair prescription.

Model of Care: Team-based Care

- The same professional team e.g. nurse, PT, OT or MSW manages a group of clients.
- Each team member is a consistent point of contact for a client instead of the client liaising with multiple care professionals.
- The team member learns how to manage the client's case holistically, seeking advice and expertise from other the care team members. The other care team members only intervene when necessary.
- Example: Team-based care may be applied to Parkinson's Disease. Currently, both the PT and OT would teach the patient/client cueing strategies to overcome freezing episodes. A single patient/client could be managed by either therapist in the first instance. The second therapist could be roped in should in-depth profession-specific opinion be required.

ANNEXES

ANNEX A

Rehabilitation Diagnostic Groups for Other Conditions[12]

Reference: Australasian Rehabilitation Outcomes Centre (AROC) impairment codes.

Apart from the six One-Rehab conditions, we have extracted the AROC impairment codes for twelve other groups that use rehabilitation services. This will enable providers to code and key in relevant rehabilitation outcomes for these conditions (see section on Rehabilitation Outcomes). The data collected will allow MOH to better define the RDGs and recommended pathways for these conditions in subsequent tranches of work

4. AMPUTATION

Non-Potential Prosthetic user

4.31	Single upper above elbow
4.32	Single upper below elbow
4.33	Partial foot (single or double)
4.34	Other amputation

7. BRAIN DYSFUNCTION

Non-traumatic

7.11	Sub-arachnoid haemorrhage
7.12	Anoxic brain damage
7.13	Other non-traumatic brain dysfunction

Traumatic

7.21	Open injury
7.22	Closed injury

8. NEUROLOGICAL CONDITIONS

8.1	Multiple Sclerosis
8.2	Parkinsonism
8.3	Polyneuropathy
8.4	Guillain-Barre
8.5	Cerebral palsy
8.8	Neuromuscular disorders
8.9	Other neurological conditions

9. CARDIAC

9.1	Following recent onset of new cardiac impairment
9.2	Chronic cardiac insufficiency
9.3	Heart and heart/lung transplant

10. PULMONARY

10.1	Chronic obstructive pulmonary disease
10.2	Lung transplant
10.9	Other pulmonary conditions

11. BURNS

11	Burns

12. CONGENITAL DEFORMITIES

12.1	Spina bifida
12.9	Other congenital deformity

13. OTHER DISABLING IMPAIRMENTS

13.1	Lymphoedema
13.9	Other disabling impairments that cannot be classified into a specific group

14. DEVELOPMENTAL DISABILITIES

14.1	Developmental disabilities (excludes cerebral palsy)

15. PAIN SYNDROMES

15.1	Headache (includes migraine)
15.2	Other pain (includes abdomen/chest wall)

16. CANCER

16	Cancer rehabilitation

17. OTHER REHABILITATION CONDITION(S)

17	Other rehabilitation condition not listed

[12] The paediatrics population is excluded for the first tranche of One-Rehab implementation.

ANNEX B

Discharge Signposts in RDG Pathways

- Rehabilitation healthcare professionals should exercise their clinical judgement, and plan care for patients/clients based on their progress towards rehabilitation outcomes and goals. Nevertheless, the table on the following page provides discharge signposts on rehabilitation length of stay and sessions for the institutions' reference. These discharge sign-posts will be validated through the One-Rehab pilot projects.

- The "+" sign in the rehabilitation length of stay or number of sessions indicates when a therapist (e.g. "3+3 sessions") should, minimally, review the patient/client's rehabilitation journey and assess if they are suitable for discharge. At this point, junior therapists who intend to extend their patient/client's rehabilitation length of stay or sessions should discuss the case with senior therapists. Senior therapists are to approve the extension and this should be documented.

- Example:
    - A PT sees a patient/client with RDG "MSK Non-surgical". He notes that the RDG Pathway in his setting describes 3+3 sessions. This means that after 3 sessions, a senior PT would decide if additional sessions (up to a maximum of 3 more sessions) are needed based on clinical outcomes. All sessions should be completed within 6 months.
    - Regardless, he has the discretion to discharge the patient/client after 1-2 sessions; or extend the number of rehabilitation sessions after agreement by a senior therapist. He manages his patient/client based on what he deems is most appropriate clinically, including the number of therapy sessions provided. His primary focus is the patient/client's progress towards outcomes and goals.
    - He completes the minimal dataset in the patient/client's One-Rehab Care Plan. This data is used going forward, to further refine the discharge signpost of "3+3 sessions, maximum 6 months".

ANNEX B

Discharge Guidelines with Rehabilitation Length of Stay or Number of Sessions included for reference:

(Applies to 80% of patients/clients in the RDGs)

At every setting, rehabilitation healthcare professionals should consider the patient/client for discharge if any of the following applies (whichever earlier):

1. Achieved rehabilitation goal and (for inpatients) medically fit for discharge with no transitional care issues requiring inpatient care (e.g. caregiver training completed); OR
2. Functional plateau and (for inpatients) medically fit for discharge with no transitional care issues requiring inpatient care (e.g. caregiver training completed); OR
3. Achieved rehabilitation duration or RLOS as shown in the table below.

	Condition	RDG	Care Needs	
1	**Stroke**	Haemorrhagic stroke with motor impairment. Haemorrhagic stroke with cognitive/ perceptual (incl. sensory)/ communication impairment. Ischaemic stroke with motor impairment. Ischaemic stroke with cognitive/ perceptual (incl. sensory)/ communication impairment.	**Tier 2D** (30days) → **Tier 2** (3+3 months)	**Discharge from rehabilitation service**
		Haemorrhagic stroke with motor and cognitive/ perceptual (incl. sensory)/ communication impairment. Ischaemic stroke with motor and cognitive/ perceptual (incl. sensory)/ communication impairment.	**Tier 3D** (30days) → **Tier 3** (3+3 months) → **Tier 2** (3+3 months)	

	Condition	RDG	Care Needs	
2	**Spinal Cord Injury**	Non traumatic spinal cord dysfunction – Paraplegia. Non traumatic spinal cord dysfunction – Tetraplegia. Traumatic spinal cord dysfunction – Paraplegia. Traumatic spinal cord dysfunction – Tetraplegia. Other spinal cord dysfunction.	**Tier 3D** (40days) → **Tier 3** (12 months)	**Discharge from rehabilitation service**

	Condition	RDG	Care Needs	
3	**Hip Fracture**	Fracture of hip (#NOF), Operated Fracture of hip (#IT), Operated	**Tier 2D** (21days) → **Tier 2** (3+3 sessions, maximum 6 months)	**Discharge from rehabilitation service**
		Fracture of hip, Non-operated	**Tier 2** (3+3 sessions, maximum 6 months)	

	Condition	RDG	Care Needs	
4	**Amputation**	Potential Prosthetic user in the home (K1) - Bilateral amputees with at least one AKA on one side. Potential Prosthetic user in the home (K1) - Poly amputee or Hip disarticulation & above. Potential Prosthetic user in the community (K2-3) - Bilateral amputees with at least one AKA on one side. Potential Prosthetic user in the community (K2-3) - Poly amputee or Hip disarticulation and above.	**Tier 3D** (30days) → **Tier 3** (12 months)	**Discharge from rehabilitation service**
		Potential Prosthetic user in the home (K1) - Unilateral BKA. Potential Prosthetic user in the home (K1) - Bilateral BKA / Unilateral AKA . Potential Prosthetic user in the community (K2-3) - Unilateral BKA. Potential Prosthetic user in the community (K2-3) - Bilateral BKA / Unilateral AKA.	**Tier 3** (12 months)	

	Condition	RDG	Care Needs	
5	**Musculoskeletal Conditions**	MSK Surgical (peripheral):	**Tier 3** (3+3 sessions, maximum 6 months)	**Discharge from rehabilitation service**
		MSK Surgical (spinal).	**Tier 2D** (21days) → **Tier 2** (3+3 sessions, maximum 6 months)	
		Total Knee Replacement. MSK Non-Surgical.	**Tier 2** (3+3 sessions, maximum 6 months)	

	Condition	RDG	Care Needs	
6	**Deconditioning**	(**65 years and below**) Deconditioning & functional decline post-surgical procedure and/or post ICU care due to e.g. sepsis, cellulitis.	**Tier 2D** (30days) → **Tier 2** (6 months)	**Discharge from rehabilitation service**
		(**Above 65 years old**) Falls at least once in the last 6 months with underlying symptoms (e.g. unsteadiness, dizziness) and requiring individualized rehabilitation care plan. (**Above 65 years old**) Frail based on any of the following criteria: (1) Clinical Frailty Scale >4; or Meets >3 criteria in the (2) FRAIL scale or (3) Fried's Frail Phenotype.	**Tier 2** (6 months)	

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