

A TTSH PUBLICATION FOR PRIMARY CARE PHYSICIANS

# GPBUZZ

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JULY-SEPTEMBER 2021

REHABILITATION:  
THE NEXT LEAP  
FORWARD

LINKING  
REHABILITATION  
CARE NEEDS  
AND SERVICES

TECHNOLOGY IN  
REHABILITATION



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**Tan Tock Seng**  
HOSPITAL  
National Healthcare Group

The World Health Organization (WHO) defines rehabilitation as a set of interventions designed to optimise functioning and reduce disability in individuals with health conditions in interaction with their environment.

## INKING REHABILITATION CARE NEEDS AND SERVICES

With increasing awareness of the importance of rehabilitation in restoring function and improving quality of life, rehabilitation services today are available across a wide spectrum of settings, from pre-operative rehabilitation (Page 5) to acute care settings (Page 8) to community and home. Post-acute, common rehab settings include specialised rehab centres, community hospitals, primary care, day rehab centres (Page 12) and home therapy services. Many Voluntary Welfare Organisations (VWOs) run rehab services, especially in step-down rehab. The care providers include rehab and family physicians, nurses, physiotherapists, occupational therapists, speech therapists, psychologists and other relevant allied health professionals.

As residents may transit across different settings throughout the care continuum, they navigate the challenges of a

fragmented system, arising from gaps in communication and coordination between service providers. Today, information exchanges between medical and surgical specialists, rehab, primary care physicians and VWOs are not seamless, often resulting in delays in treatment for patients with chronic complications that may further hinder functional recovery.

One-Rehab, a framework introduced by MOH in October 2020, attempts to close these gaps. The framework aims to provide better linkages across the rehab care continuum, especially by providing guidelines and standardisations to better organise rehab services according to the complexity of rehabilitation needs. One-Rehab will guide rehab care providers through common care terms used, as well as provide them with a standardised classification, triaging system and set of rehab outcome measurements to follow.

# GPBUZZ

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This initiative will consolidate the efforts of rehab care providers, as part of a collaborative effort to provide improved links within the totality of rehab care offered within our community. Additionally, the iCONNECT IT system, has been developed to help rehab care providers capture rehab outcomes so that a person's rehab progress can be charted throughout their journey of rehabilitation.

There is an impetus for rehab services to grow in the community with demand expected to rise with our rapidly ageing population. Primary care partners play an integral role in continued collaboration with public healthcare to provide shared care for patients with chronic and disabling conditions. Currently, primary care providers face challenges in direct access and referral to allied health services to support the rehab needs of their patients without the right funding system in place. One of the early efforts in improving this current state is addressed through an MOH-supported initiative at Ang Mo Kio Specialist Centre, where Primary Care can directly access physiotherapy and occupational therapy services for musculoskeletal conditions (Page 9).

Equally exciting advances in rehab delivery, such as the use of robotics, virtual reality and movable or wearable sensor devices with telehealth services are also seeing prominent functions within our larger rehabilitative care system. With new evidence in neuroplasticity guiding the use of these advanced forms of rehab treatment, many rehabilitation care settings are increasingly adopting these devices to complement traditional diagnostic and therapeutic strategies to enhance intensity and task specificity. With the addition of gamification elements taking the form of rehabilitative software, it is hoped that patients will look forward to improved motivation to complete their rehabilitation journeys with us (Page 10). Ongoing validation in clinical protocols and programs catering to patients of differing rehab complexities will ensure improvement in clinical and functional outcomes in the use of these technologies.

**We aspire to join hands with Primary Care Physicians to provide continually improving and more robust rehab services to meet the future needs of our society in Singapore.**

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# OCCUPATIONAL THERAPY SELF-CARE FOR A BETTER YOU

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Self-care can be described as daily activities that include deliberate acts by individuals to take care of their physical, mental, and emotional wellbeing. It is also defined as the ability of individuals, families, and communities to promote health, prevent

disease, maintain health and cope with illness & disability with or without the support of a healthcare provider<sup>1</sup>.

From an Occupational Therapy (OT) perspective, self-care includes activities such as personal care (bathing, toileting, dressing, feeding), functional mobility, and community management (grocery shopping, driving, taking public transportation, managing finances)<sup>2</sup>.

### Role of OT in Community Health Team (CHT)

Occupational therapists in CHT help individuals in addressing difficulties encountered while performing self-care as the result of injury, disability, or aging. An OT assessment takes a number of considerations into account, including the client’s goals, individual abilities, limitations, environment and the task itself. Any necessary intervention by the OT may include taking a specific focus on the individual, adapting to the environment, or modifying the task to enable them to achieve their goal.

**References:**

1. What do we mean by self-care? (2019, May 15). Retrieved April 29, 2021, from <https://www.who.int/reproductivehealth/self-care-interventions/definitions/en/>
2. Guidetti, S., & Tham, K. (2002). Therapeutic strategies used by occupational therapists in self-care training: A qualitative study. *Occupational therapy international*, 9(4), 257-276.

### Vignette

Mdm S, a 77 year old lady, has been following up with her General Practitioner (GP) for her chronic conditions such as hypertension and arthritis. During her recent routine follow up, it was discovered that she had experienced frequent falls at home. Mdm S’ GP then referred her to TTSH CHT for intervention and to identify the cause of falls within her home environment. CHT OT conducted an assessment of Mdm S’ home and found that the home environment was not conducive for her level of function, resulting in difficulty for Mdm S’ family to support her showers and ultimately posing fall risks. To alleviate the issue, CHT OT assisted Mdm S’ family in applying for a commode via the Senior Mobility Fund (SMF) and a ramp leading into the toilet via the HDB Enhancement for Active Seniors (EASE). In addition to these home modifications, CHT OT also educated the family in home personal care techniques to empower Mdm S in achieving self-care goals over time.

### When to refer to CHT OT

Know of a patient or resident that could benefit from assessment and review of their function and home environment? Refer them to a CHT. GPs will be kept updated on the status of their referred patients.



Scan the QR code for direct referral to Community Health Team for occupational therapy assessment for your patients who may have self-care issues at home.

## CME (OCTOBER – DECEMBER 2021)

TITLE	CME POINTS	DATE	TIME	VENUE	REGISTRATION DETAILS
2021 Virtual GP Symposium on Haematology*	2 CME Points	30 October 2021, Saturday	2.00pm to 4.00pm	Online webinar	 Scan the QR Code to register for this event

A confirmation email will be sent after registration. Please email the contact person if you do not receive any confirmation. Thank you.

# Recovery of Surgery in the Elderly (ROSE) Programme



With the increased global life expectancy, the ‘Silver Tsunami’ is also approaching our shores, as we anticipate projections of one in four Singaporeans being over the age of 65 and above by the year 2030<sup>1</sup>.

**S**urgical advancement and improvements made in peri-operative care have allowed for surgeries to be performed with improved efficiency in patients with advanced age. However, the age-related decline in physiological reserve and functional capacity will still place these patients at higher risks of peri-operative morbidity and mortality<sup>2</sup>.

In the past decade, there has also been increasing global awareness on the concept of frailty and its significance in post-operative outcomes. In line with the growing focus on delivering better quality for this unique group of patients, the Recovery Of Surgery in the Elderly (ROSE) Programme was launched in 2018 in Tan Tock Seng Hospital (TTSH) by a multi-disciplinary group of healthcare professionals who recognised the need for our elderly and frail patients to receive more intensive preparation and optimisation before they undergo surgery.

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## What is the ROSE Programme?

The main components of the ROSE Programme are:

- To identify the group of elderly and frail patients undergoing major surgery, who would be at high risk of peri-operative complications
- Increase the pre-operative functional reserves of these frail patients, involving a series of assessments and interventions by a multi-disciplinary team, which collectively form a Prehabilitation Programme
- Enhance post-operative recovery, aiming for a decrease in complication rates and improved functional and discharge outcomes

**Pre-Operative Screening**

The programme is currently available to elderly patients (age 65 years and above) undergoing major colorectal and hepatopancreatobiliary (HPB) surgeries with a view of future expansion to other surgical specialties.

Upon listing for surgery, the surgeon will perform screening for frailty using a simple FRAIL scale, as well as nutritional screening. All patients will receive a routine pre-anaesthesia assessment, counselling and optimisation of their medical conditions: this includes elements such as correction of pre-operative anemia, ensuring control of background co-morbidities such as hypertension and diabetes mellitus, and specialist referrals where necessary. Additionally, patients identified as potentially being frail and who are enrolled into the ROSE programme will undergo a multi-modal prehabilitation programme comprising:

1. Exercise programme with Physiotherapy
2. Geriatric Surgical Service assessment and optimisation
3. Dietician review and optimisation of nutritional status

**The Concept of Prehabilitation**

Prehabilitation is the practice of enhancing a patient’s functional capacity before surgery, and there is growing evidence that it leads to improvements in post-operative outcomes including length of stay, post-operative pain and post-operative complications<sup>3,4</sup>.

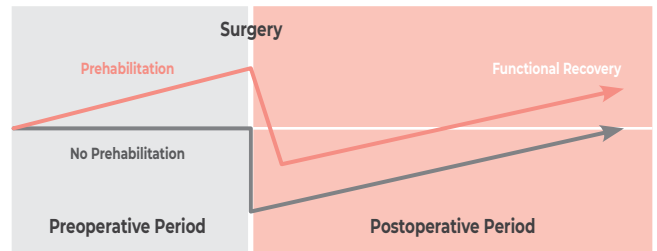
Our patients undergo this programme in the time-interval between the decision for surgery and the actual surgery date (which typically spans 2-6 weeks), which is an opportune period to build up their functional reserves in preparation for the stress of an upcoming major surgery.

**Physiotherapy: Pre-operative Exercise Programme**

Our physiotherapists will first perform a detailed assessment of the patient’s baseline status, including performing a 6-minute walk test (6MWT).

The patient will then be prescribed with a structured and sustained exercise programme, to be performed regularly over the weeks leading up to his surgery. These exercises are aimed at improving cardiovascular, respiratory and muscular strength, and comprise of deep breathing and endurance exercises, upper and lower limb exercises, as well as bed mobility practice and transfer techniques.

**PREHABILITATION CONCEPT**



In order to enhance uptake and compliance to the exercise programme, our patients have different options on how to carry out their exercises:

- a. Physical exercise sessions conducted in TTSH with our physiotherapists,
- b. Inpatient rehabilitation programme: partnering with Ren Ci Hospital where patients can be admitted to during the pre-operative period, and
- c. Partnership with Community Healthcare Team (CHT): where suitable patients can perform their exercise classes in their own homes under supervision by CHT physiotherapists.

The patient’s progress is assessed via the 6MWT which is performed at baseline, immediately pre-operatively, as well as at the 1-month post-discharge. Our preliminary results for patients who have completed the programme are encouraging, demonstrating an improvement in their 6MWT results immediately pre-surgery, as well as a preserved functional capacity compared to their baseline, at 1-month post-discharge.

**Geriatric Surgical Service (GSS)**

Our ROSE patients, being elderly and frail, are assessed by our Geriatric Surgical Service team pre-operatively: this is performed on the same day of their pre-anaesthesia assessment, allowing for a consolidation of patient visits, as well as better communication with the anaesthesia team with regards to the medical optimisation and counselling required for the patient.

The geriatric assessment is comprehensive, and features an establishment of the patient’s actual frailty status using the Clinical Frailty Scale and Frailty Index. As many elderly patients may have poly-pharmacy, a medical reconciliation is also performed, aiming to optimise control of medical conditions while reducing



TTSH ROSE Programme Team

ROSE programme is available to elderly patients undergoing major colorectal and hepatopancreatobiliary (HPB) surgeries to enhance their functional capacity before surgery to improve post-operative outcomes.

unnecessary medication that can lead to problems such as delirium in the peri-operative period.

Recognition of discharge planning and decision-making issues are also a part of the GSS review, in order to better prepare for the post-operative recovery and discharge planning.

**Dietitian Review**

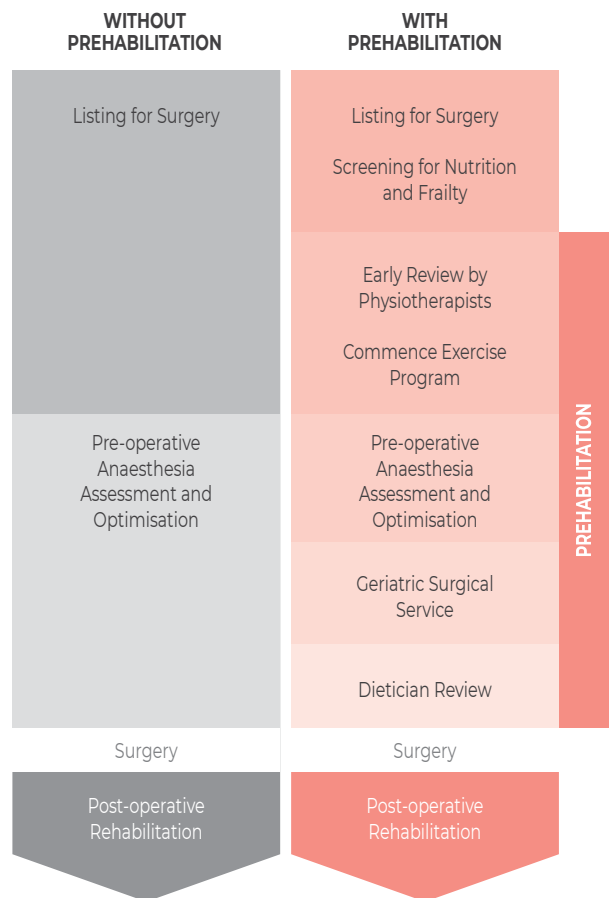
The association between malnutrition and poor post-operative outcomes is well-established<sup>3</sup>. Our patients undergo a Subjective Global Assessment (SGA) by our dietician, who would then estimate their nutritional requirements, provide dietary counselling to ensure adequate intake prior to surgery, and prescribe oral nutritional supplements as required.

**The Post-operative and Recovery Process**

Holistic care of the patient continues throughout the post-operative period: during the hospital stay, our patients will continue to be reviewed by the teams from GSS, physiotherapy and dietetics.

The focus on the post-operative period is the prevention of complications and early recovery to function. For this geriatric population, this includes prevention, early recognition and management of post-operative cognitive dysfunction and delirium. Together with the inpatient nursing team, we aim to enable patients to recover with minimal decline in their functional ability: this is measured via the Modified Barthel Index which tracks one's independent performance in activities of daily living, and is performed pre-operatively, upon discharge, and again at 1-month post-discharge.

With the ROSE programme, our multi-disciplinary team has worked together to consolidate the set of practices aimed at enhancing the post-operative recovery in our elderly and frail surgical patients. As the interest in prehabilitation and frailty in surgical patients continues to develop, the team will update and refine our practices to help our patients achieve better outcomes and a faster return to their normal daily lives.



**References:**

1. Ministry of Health, Ageing Planning Office. Ageing in Singapore. Online resource: <https://www.gs.org.sg/sg50conference/pdf/s4-1.pdf>
2. Peri-operative optimisation of elderly and frail patients: a narrative review. S P Chan et al. Anaesthesia 2019, 74 (Suppl.1) 80-89
3. Prehabilitation. Banugo BJA Education Dec 2017, 17 (12): Pg 401-5
4. Prehabilitation before major abdominal surgery: A systematic review and Meta-analysis. Michael J Hughes et al. World J Surg 2019

# STROKE LIFE SUPPORT CENTRAL HEALTH ALLIANCE

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Stroke is often a devastating illness for patients that happens suddenly and changes their lives drastically. When patients with stroke are admitted to Tan Tock Seng Hospital (TTSH), they begin their journey of rehabilitation with a multi-disciplinary team consisting of neurologists, rehabilitation physicians, physiotherapists, occupational therapists, speech therapists, psychologists and medical social workers, who attend to their varied needs, and ensure that they get holistic care. After the initial stabilisation and medical treatment in the acute ward, some patients require a further continuing period of inpatient rehabilitation at either the rehabilitation ward or a community hospital before being discharged home. Patients suffering from milder strokes may be discharged home directly from the acute hospital.

However, a stroke patient's rehabilitation journey does not end with being discharged from the inpatient care setting. They have rehabilitation needs that can continue to be addressed at a variety of settings ranging from their own homes to those provided at Community Day Rehab Centres or outpatient therapy services at TTSH.

In fact, the stroke patients and their caregivers face many challenges when they go home. They need to adjust to their environment, take care of their daily activities without the help of nurses and therapists and also cope emotionally and financially with the change to their functional status. This can be overwhelming for both patients and caregivers. If unsupported, failure to overcome these challenges will erode their self-efficacy and self-esteem, ultimately undermining their reintegration with society. While physical

functional issues are more apparent, the hidden deficits such as psychological and social needs tend to be poorly-recognised. The prevalence of mood related issues, such as depression and anxiety, or cognitive issues are significant and can impact on the patients' daily activities. Some patients also face issues readjusting to their family roles, returning to work or resuming once commonplace daily activities such as driving a vehicle.

Unique services to address these needs are found in some community agencies as well as within National Healthcare Group's (NHG) restructured hospitals.

Presently, there is a double challenge of getting timely identification of evolving issues as it surfaces as well as facilitating patients' swift access to the appropriate service providers. To address these challenges, a project is underway in NHG to inculcate the practice of performing self-evaluation of evolving issues among stroke patients and their families

using the Post Stroke Checklist (PSC), a validated tool by the World Stroke Association. As much of the stroke patients' rehabilitation journey is outside of the hospitalisation phase, our community partners in the polyclinics, GP clinics and day rehabilitation centres play a very crucial part in the journey of the stroke patient. Within this project, we seek to grow an alliance of stroke care providers within NHG, spanning the hospital and community continuum. The intent is to facilitate the utilisation of the PSC and support them with the pertinent services to address the patients' needs through the use of this common evaluating tool. As the project matures and scales-up, we look forward to partnering you in our Stroke Life Support Central Health Alliance.





# Osteoarthritis Care in the Community and Beyond

**K**nee Osteoarthritis (OA) is one of the most common conditions seen at the orthopaedic outpatient setting. Orthopaedic surgeons aim to alleviate pain and improve quality of life for our patients through arthroplasty surgery.

For most patients, GP partners are the first port of call when symptoms appear. Physiotherapy and lifestyle modifications can help patients with mild mechanical knee pain that do not significantly limit their ambulation and quality of life. Such patients may benefit from direct referrals to the physiotherapist and many of them do not require specialist orthopaedic review.

Knee arthroplasty can provide good relief of pain with excellent satisfaction for patients with significant deformity (e.g. severe varus knees) in their alignment or pain affecting their ambulation. TTSH's Enhanced Recovery After Surgery protocols (ERAS) and technology-enabled services such as computer navigated and robotic assisted surgery ensure patients are up on their feet and ambulating with the physiotherapist as early as the evening of their date of surgery itself.

Management of knee OA has evolved in recent years, with recognition that physiotherapy is synergistic with medical treatment, and fairs better than pharmacological treatments alone. Among non-surgical intervention options, physiotherapy is one of the most commonly recommended treatments by doctors and healthcare professionals. Physiotherapy, education and weight management are core treatments recommended in clinical guidelines<sup>1</sup>. Structured land-based exercises targeting aerobic fitness, strengthening, neuromuscular conditioning and balance have shown to be effective in improving pain and function among patients with knee OA. Physiotherapists are trained to assess one's functional status and to provide individualised exercise programmes for their patients.

## CASE STUDY

Mdm Tan is a 70-year-old housewife who presents with bilateral knee pain which worsened with prolonged standing and walking, in turn affecting her daily activities. Mdm Tan's GP then referred her for physiotherapy management of her bilateral knee OA.

Mdm Tan's physiotherapist established care goals through discussions and assessments. She went through a course of four physiotherapy sessions and progressed with exercises which included aerobic, strengthening and balance exercises tailored to her functional level. After three months, Mdm Tan's knee pain had resolved completely and allowed her to resume her usual daily activities. Satisfied with her improvements, Mdm Tan continues to lead a physically active lifestyle by incorporating exercises and advice that she received from her physiotherapist.

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GPs can make CHAS and private referrals to Ang Mio Kio Specialist Centre (AMKSC) by calling 6554 6500 or email to [AMK\\_Specialist\\_Centre@ttsh.com.sg](mailto:AMK_Specialist_Centre@ttsh.com.sg) for the following conditions for physiotherapy services:

- Achilles tendinopathy
- Ankle sprain
- Elbow epicondylitis (Tennis/Golfers' Elbow)
- Flat foot
- Frozen shoulder
- Knee osteoarthritis
- Lower back pain
- Plantar fasciitis
- Rotator cuff tendinopathy

### References:

1. Bannuru, R.R, Osani, M.C, Vaysbrot, E.E, Arden, N.K, Bennell, K, Bierma-Zeinstra, S.M.A, et al. OARSI guidelines for the non-surgical management of knee, hip, and polyarticular osteoarthritis. *Osteoarthritis and cartilage*. 2019;27(11):1578-89.



Technology has made significant inroads within the field of rehabilitation, and influenced how rehabilitation care can be delivered.

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# TECHNOLOGY IN REHABILITATION

Rehabilitation is the process of restoring functional ability in people who suffer physical disabilities. One of the key determinants of outcome is the intensity of rehabilitation – adequately expressed by the idea that ‘more is better’. In recent years, technology has made significant inroads within the field of rehabilitation, and influenced how rehabilitation care can be delivered. The Centre for Advanced Rehabilitation & Therapeutics (CART), Tan Tock Seng Hospital was established in 2011 to provide state of the art rehabilitation technology. Here are highlights of some of these rehabilitation technologies.

## ROBOT-ASSISTED LOCOMOTION

### LOKOMAT

The Lokomat is a robotic training system that uses a body weight support system to suspend individuals while their legs are attached to orthotic devices. The patient is strapped to the orthosis by the waist, thighs and shanks, and the system can be adjusted according to the individual’s anthropometry. During training, the Lokomat moves the patient’s legs through a pre-programmed gait pattern. An augmented feedback module provides feedback to the patient while walking, by projecting the results of their exercises on a display panel, to enhance motivation.

The Lokomat is particularly beneficial for patients with severe mobility issues due to neurological disorders e.g. stroke, spinal cord injury, as it allows them to practise ambulation of adequate intensity – something which is not likely to be achieved with conventional rehabilitation.

### EKSO BIONICS

The Ekso Bionics is a wearable exoskeleton that enables patients to stand up and walk over ground. Sensors automatically detect whether patients are leaning, and the exoskeleton will provide feedback to their therapist to help improve their gait.

## ROBOT-ASSISTED UPPER LIMB REHABILITATION

Upper limb robotics allows for assisted movements of the paralysed upper limb, even when the paralysis is complete and no active movement can be detected. Examples include Armeo Spring, Armeo Power and Amadeo.

The Armeo Spring and Armeo Power allow for training of predominantly proximal upper limb joints/muscles e.g. shoulder, elbow, while the Amadeo targets training of the fingers. Training invariably involves engagement through video games, and the degree of assistance provided by these robotic devices can be adjusted as the patient improves.

## OTHER UPPER LIMB REHABILITATION DEVICES

The Handtutor device consists of a smart glove worn by the patient which is connected to a laptop. The glove has inbuilt bending sensors for monitoring individual finger movements and built-in inertial measurement unit sensors for capturing wrist and hand motions. Hand exercises are designed in the form of challenging games which is tailored to the patient’s condition.

Compared to conventional therapy, robotic devices have the following advantages: greater rehabilitation intensity that is delivered consistently, ability to capture detailed kinematics data which reflects the patient’s performance and progress, and incorporating gaming to make rehabilitation interesting.

The COVID pandemic has emphasised the importance of tele-rehabilitation and home-based rehabilitation as an alternative to hospital-based rehabilitation. The use of commercially available interactive gaming devices, such as the Kinect system by Microsoft, with remote supervision by the therapist, is a possible solution for suitable patients.

TTSH provides technology enabled services at its Centre for Advanced Rehabilitation Therapeutics (CART). To refer a patient, GPs should call 6889 4580 or email [CART@ttsh.com.sg](mailto:CART@ttsh.com.sg)



# Day Rehabilitation Centre

## A Multi-disciplinary Team Under One Roof

**D**ay Rehabilitation Centres (DRC) provide various services, brought under a single domain to provide easier access to the community, more comprehensive care plans, and improved health outcomes. DRC services also seek to prevent future hospital re-admissions. Care at DRCs are delivered by multi-disciplinary teams, allowing patients to receive care that is holistic and seamless as they recover from their injuries or medical illnesses.

### Overview of Day Rehabilitation Centres

DRCs deliver important services as part of the Intermediate and Long-Term Care (ILTC) landscape in Singapore, where rehabilitation services are provided to patients who have experienced a decline in their physical or cognitive function. DRCs should not be confused with Day Care Centres, where the latter provides daytime supervision and basic care for people who are not able to care for themselves and manage their condition. In contrast, DRCs provide rehabilitation therapy with the aim of helping the patient recover to a desired level of function in work, self-care or in leisurely activity.

### The Role and Services at DRC

DRCs mainly provide physiotherapy and occupational therapy services, while speech therapy services are only available at specific centres. Every therapy programme is individualised and tailored to the needs of the patient, with the aim of achieving specific rehabilitation goals and to optimise the patient's activities of daily living,

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and mobility so as to reduce fall risk. The frequency of therapy is usually set at one or two sessions per week, depending on the care requirements of the patient and availability of service slots.

Physical activities provided by DRCs are guided by a qualified therapist. Main exercise types include:

- i. Range of motion exercises
- ii. Stretching exercises
- iii. Strengthening exercises
- iv. Cardiovascular training
- v. Balance and co-ordination exercises
- vi. Functional re-training

In addition, some DRCs also offer programmes that assist patients in transitioning to employment or with returning to work. Such examples include SPD and ABLE, which aims to support physically challenged patients to reintegrate into their communities and employment.

#### How to apply for DRCs?

Services at DRCs should be considered whenever a patient has declined in physical or cognitive function, especially after recovering from a debilitating disease in order to maintain, restore or maximise functional abilities.

GPs may refer suitable patients directly to a DRC of choice, by contacting the DRC directly. To learn more about the available programmes, services and locations of your nearest DRC, please visit [www.aic.sg/care-services](http://www.aic.sg/care-services).

The primary physician should perform a comprehensive assessment, including evaluation of medical fitness and rehabilitation needs. There should be proper documentation for patients with recent cardiac events or underlying pulmonary disease. Safety precautions in terms of heart rate limitation, effort tolerance and recent surgery are important information that should be conveyed to the therapist in order to plan for an appropriate level of physical activity and safety during the rehabilitation process. Other important information such as weight bearing status, cognitive impairment, behavioural issues, or pain that may affect rehabilitation progress should be documented and communicated as well.

The primary physician should also ensure that the patient's chronic disease is relatively well controlled prior to making a referral to DRCs. Patients with any communicable infectious diseases are not suitable for DRC services as there are no isolated rooms for therapy at DRCs.

Every therapy programme is individualised and tailored to the needs of the patient, with the aim of achieving specific rehabilitation goals to optimise the patient's activities of daily living and mobility so as to reduce fall risk



Ren Ci DRC @ Novena provides rehabilitation services such as Physiotherapy, Occupational Therapy and Caregiver Training. GPs may directly refer patients who would benefit from community rehabilitation services to the centre. Ren Ci will assess patients' rehab suitability and eligibility for subsidy.

To refer patients,

Step 1: Download form from <https://tinyurl.com/screferrallform>

Step 2: Email completed form to [novenascc\\_admin@renci.org.sg](mailto:novenascc_admin@renci.org.sg)

Step 3: Ren Ci team will contact you for more information, if needed

For assistance, please contact 6355 6404 or email [novenascc\\_admin@renci.org.sg](mailto:novenascc_admin@renci.org.sg)

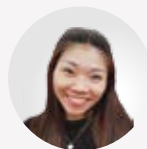


Scan to watch  
a video on  
Ren Ci DRC

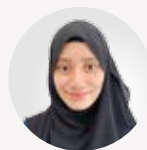
# Maintenance Rehabilitation and Self-management within the Community

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Recovery and rehabilitation following medical conditions takes time. Often, the focus on regaining health can be stressful in itself. This is especially so when expectations of the extent or pace of recovery are not met. The perceived lack of or slow progress may lead to a patient experiencing frustration, disappointment and sadness. This may in turn affect one's motivation to continue with rehabilitation and engage in activities on a day-to-day basis. The unintended consequences would be poorer rehabilitation outcomes. Hence, pacing oneself to allow time for recovery to take place, having the support and encouragement of family and friends to be patient and persevere with rehabilitation, noticing the improvements and gains over time instead of focussing on what hasn't been achieved, are critical for maximising rehabilitation outcome. Certainly, the challenge of not losing hope and maintaining a positive mind-set must be acknowledged.

During this period of adjustment, it is important to continue engaging in activities that bring joy and a sense of achievement to oneself, be it spending quality time with loved ones or pursuing hobbies or interests, perhaps with some modification as required. Having a routine can be helpful, as it provides structure and guides how one spends one's time throughout the



day. Behavioural activation allows the individual to stay meaningfully engaged, contributing to positive self-appraisal, and enhancing one's sense of self-efficacy<sup>1</sup>. This, in turn, helps to improve mood, preventing the vicious cycle of negative thoughts and deterring the development of low mood. This intricate relationship between our thoughts, feelings and behaviours directly contributes to improved rehabilitation outcomes. Hence, the importance of psychological wellbeing cannot be overstated, and one of the easiest ways to improve psychological wellbeing is staying active, focusing on activities that are most beneficial to us, and to be surrounded by a supportive social environment.

Partnerships between hospital and community providers have increased accessibility to care services beyond hospital walls, improving health-social integration, delaying the onset of chronic conditions and preventing unnecessary return to the hospital. Community Health Posts (CHPs), situated conveniently within the neighbourhoods, offer community health programmes and activities to encourage residents in the community to take ownership of their own health. CHPs provide an avenue for residents to meet with trained health coaches, where the resident's "stage of change" is identified and the appropriate

1. Self-efficacy refers to an individual's belief in their ability to perform a given task



PROGRAMME	DESCRIPTION
Make it Siew Dai	<b>Diabetes Management:</b> Learn about nutrition, exercises and skills you can incorporate into your daily life to prevent or delay the onset of diabetes.
SteadyLah!	<b>Fall Prevention:</b> Learn how to improve strength, balance and bone health; and pick up tips on fall prevention.
Fitter Life	<b>Weight Management:</b> Learn about exercise and healthy diets to reduce your BMI and manage weight.

health-social interventions are applied to establish achievable lifestyle goals for the benefit of the resident’s overall health. Each health coaching session seeks to improve the resident’s self-efficacy and self-management of their lifestyle habits.

Since 2019, Health Coaches have launched a variety of community health programmes and activities. Aptly named to resonate closely with local culture, these programmes, named such as “Make It Siew Dai”, “SteadyLah!”, “Fitterlife”, provide an inclusive environment where many residents are engaged in activities together, to provide them with a close-knit community they can be a part of. Through the course of such programmes, there is no surprise that peer support groups organically form to cultivate a sense of community and belonging, as residents are able to share their experiences, common struggles and uplift each other’s

motivations by providing support and encouragement, hence improving their social well-being.

Such peer support groups also serve as a branch to our Community Health Team (CHT) in promoting healthy lifestyles. Exceptional residents from such health programmes or CHPs have also had the opportunity to become Peer Support Leaders (PSL). Through a series of trainings to become equipped with the skills and knowledge as a PSL, they then empower and encourage their peers to make impactful lifestyle changes. The initiation of such supportive social environments begins with Health Coaches, and the introduction of these community programmes creates an ecosystem where members of our community can be further empowered to take charge of their own health, and quality of life, together.

Partnerships between hospital and community providers have increased accessibility to care services beyond hospital walls.

Know someone who can benefit from any of these community programmes?



Scan the QR code to indicate your interest, and TTSH’s CHT will be in touch with you soon.

# 3 Steps for referring patients to TTSH

Here's a comprehensive chart listing the steps to refer **non-subsidised patients and patients under the Community Health Assist Scheme (CHAS)** to Tan Tock Seng Hospital (TTSH).



\*To ensure that your patients are seen promptly at TTSH, triaging may be conducted by our staff. Our staff will get back to you with an appointment date within 3 to 5 working days.

\*\*Please retain a copy of the documents for reference purpose.

We thank you for your kind understanding.