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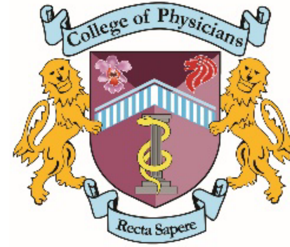

CHAPTER OF REHABILITATION PHYSICIANS
COLLEGE OF PHYSICIANS, SINGAPORE

SPECIALTY SPECIFIC GUIDANCE

TELEMEDICINE

REHABILITATION MEDICINE

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Developed by

CHAPTER OF REHABILITATION PHYSICIANS
COLLEGE OF PHYSICIANS, SINGAPORE

BACKGROUND

Community Rehabilitation (CR) is a sessional programme that aims to improve the individual's functional status to the maximum level medically possible, and hence allow them him/her to remain active in the community. Services provided under CR include: Active Rehabilitation (AR) – to improve the client's functional status; and Maintenance Exercise (ME) – to reduce the client's functional decline.

CR provides physiotherapy, occupational therapy, and/or speech therapy targeted at people with disabilities due to conditions such as stroke, Parkinson's Disease, and orthopaedic conditions (e.g., fractures and, post-amputations) etc., as well as de-conditioning due to other medical conditions. The process of rehabilitation consists of assessment, target setting, therapy, and evaluation of outcomes. Community re-integration efforts, as well as caregiver training and support are also incorporated into the rehabilitation programme to support the individual in the community.

Sessions can only be conducted by AHPC-registered therapists. Clients are usually seen once a week, depending on their therapy needs. Once a client is referred to a service, the provider would conduct initial assessment to assess clients' mobility status, functions, endurance, Activities of Daily Living (ADL), Instrumental ADL (IADL), cognition, perception and psychosocial status. Clients are to be re-assessed regularly to determine their response to services and to plan for continued services or discharge. Re-assessment and re-certification of the needs and suitability of a client for rehabilitation is to be done every six months. Clinical indicator used for OT and PT is modified Barthel Index (MBI).

VC USE IN COMMUNITY REHABILITATION

Providers determine client's suitability for Video Consultation (VC) based on each organisation's inclusion / exclusion criteria and enrol the client for VC if the client accepts.

The proposed models of care for VC by providers are hybrid model, with both VC and physical visits for clients. VC for rehabilitation is conducted via synchronous video without any sensors on clients. VC is generally used to conduct and review rehab exercises, to observe general observations (overall wellbeing, signs of deterioration) and vital signs. Some providers also use VC for home environment review. Please refer to the attached excel file for a more detailed summary of the inclusion / exclusion / use of VC criteria by individual home medical[1] and home nursing service providers.

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[1] *Home medical services typically refer to doctor-led house call services where the doctor delivers care through physical examinations, review and/or prescribe medications, as well as offer medical advice.*

We aim to seek AMS's input for a standardised set of guidelines that can be applicable for the home medical and home nursing client population.

Rehab inclu exlcu criteria summary_up

1. Whether first therapists' consultations must be conducted in-person for all conditions, OR if there are conditions which can be managed solely over VC.

To accurately assess patients' impairments, function, set goals, educate and manage expectations, first therapists' consultations should be conducted in-person for all conditions.

2. Whether there are any additional patient inclusion/exclusion criteria for therapists use of VC (for first, or follow-up consults).

- **Whether there are broad principles to define clinical stability for therapy? Should it be based on disease progression? Some providers indicate clinically stable as part of inclusion criteria. However, definition of clinically stability vary amongst providers.**

If the patients are well enough and cleared by health care professionals to attend centre-based rehabilitation sessions, they should be stable enough to receive sessions via VC. Admission/exclusion criteria for centre-based rehabilitation sessions will apply as outlined on page 2-3 under (2) Access to Care of Service Requirement from MOH.

Additional exclusion criteria for use of VC can include but are not limited to:

- Patients with poor cognition, behavioural issues, visual and/or hearing impairments making VC challenging and unproductive.
- Patients unable to sit or stand safely for the duration of the therapy sessions.
- Patients who have not reached at least modified independent level and do not have the presence of a family member or carer during the VC session.
- Patients who are unable to adhere to exercise precautions such as none or partial weight bearing of a limb.
- Patients who require frequent vital signs monitoring throughout the session.
- Lack of proper equipment/hardware/WIFI/IT support.
- Lack of an undisturbed quiet space devoid of environmental hazards.
- Patients and/or family declined VC.

3. Whether there are conditions that are not appropriate for VC. Is VC suitable for all rehabilitation conditions as long as clients meet inclusion and exclusion criteria?

Generally, if the patients are deemed fit for centre-based rehabilitation and do not have exclusion criteria, they can be considered for VC.

4. Whether there are broad principles to determine when VC should/should not be used for rehabilitation?

Patients should not use VC if:

- they need gym-based equipment for rehabilitation.
- they need/can benefit from co-treatment from different rehabilitation disciplines.
- patient finds VC too challenging due to lack of IT skills/computer equipment to benefit from VC sessions.

5. Whether there are any speciality specific clinical red flags where if observed, specialists should escalate patients for an in-person consultation or A&E where appropriate;

Escalate to A&E:

- Unstable vital signs,
- unexplained oxygen desaturation,
- exertional chest pain,
- neurological deterioration,
- severe pain (pain score > 8) unrelieved by rest,
- syncope/near syncope,
- severe shortness of breath on exertion, etc.

Escalate to in-person consultation:

- finds VC too taxing/challenging and are not benefiting from the VC sessions.
- patients who have deteriorated functionally.
- patients who have plateaued functionally for the past 2-3 months. Review for consideration of downgrading to maintenance sessions.
- patients who can benefit more from gym-based rehabilitation sessions.

6. Whether there are any specific visual cues or other indications (e.g., tests or use of devices) that should be done/used when healthcare professional manages patients over VC.
- **Is the provision of vital signs monitoring essential for home medical and home nursing clients using VC?**

Some providers gave feedback that monitoring equipment is a necessity as VC only allowed visual observation. Even with competent caregivers, subjective information may not be sufficient due to the nature of highly variable symptoms in the elderly population. As such, objective measurement is important for clinicians to pick up signs before the elderly deteriorated quickly. Other providers indicate that monitoring equipment is highly recommended but not necessary, while others indicate that the need for each client would be based on clinical judgement.

- Vital signs and pulse oximetry monitoring when appropriate (for patient undergoing pulmonary rehabilitation or with history of lung disease) should be done at the beginning and end of each VC session.
- Recheck during VC session as needed depending on patient's condition and response to exercise.

7. Whether there any assessments that cannot be done over VC. For example, formal assessments such as MBI).

MBI potentially can still be done over VC with a standardised set of questions to ensure consistency.

Assessments that cannot be done over VC include ones that:

- need equipment,
- need to be physically done by therapists in person.
- Assessments associated with a higher risk of fall or other complications are better done in person.

8. For Speech Therapy, can review of swallowing disorders or feeding in home environment be conducted over VC?

Some providers mentioned that for some sessions, they would either engage the client's trained caregiver or send a therapist assistant to clients' homes to assist with palpating and feeding

Speech therapy can be done over VC.

Review of swallowing disorders or feeding in home environment can also be done over VC on selected cases.

Whether a trained carer or a therapist assistant should be present to assist in feeding is better assessed on a case-to-case basis. High risk patients can potentially aspirate silently during oral trials resulting in pneumonia. Each centre should decide if a trained carer or therapist assistant needs to be present based on the in-person assessments.

9. Whether there are broad principles to determine maximum duration that clients can receive care through Video Consultations without a physical rehabilitation session?

- Suggest patients to be re-assessed in-person minimally every 3 months.
- Sooner if functionally deteriorating or not making improvements as expected.
- Swallowing re-assessments may need to be done sooner.

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Table below summarises **conditions, inclu/exclusion criteria** provided by rehab SPs in their VCQs. Have excluded lack of technology/ technological knowledge and client's refusal from the list.
Service providers in highlighted in orange cells provides speech therapy services. Factors specific to ST are denoted in orange text.

S/N	Service Provider	Use Case	Target Condition: Targets all rehab clients regardless of conditions	Neurological conditions e.g. stroke, spinal cord injury	Orthopedic e.g. hip fracture, OA, TKR	Cardiopulmonary e.g. asthma, COPD, IHD	Degenerative conditions e.g. Parkinson's, Alzheimer's	Deconditioning due to underlying conditions and co-morbidities such as dementia, falls	Language disorders	Speech Disorders e.g. aphasia, dysarthria	Voice Disorders	Dysphagia (swallowing difficulties)	Inclusion Criteria: Client/ CG is reliable i.e. able to give accurate hx, communicate clearly, follow instructions, CG able to assist in exercises	Session can be conducted at home/ does not require hands-on therapy	Client has necessary monitoring devices e.g. BP, glucose	Medically stable	Pandemic related reasons	Others	New patients/ 1st consult
		No. of SPs	2/16 SPs mentioned all clients targeted regardless of condition, 4/16 SPs did not mention target conditions	8/16 SPs	8/16 SPs	3/16 SPs	8/16 SPs	7/16 SPs	4/6 SPs	6/6 SPs	1/6 SPs	5/6 SPs	9/16 SPs	5/16 SPs	3/16 SPs	7/16 SPs	4/16 SPs		8/16 SPs
1	SP1	DRC	-	✓ (also mentioned craniectomy)	✓	✓	✓	✓	✔	✔	✔	✔	✓ Basic level of attention to task and cognitive skills and able to tolerate activities	-	-	-	-	-	-
2	SP2	HT	-	✓	✓	-	✓	✓					-	✓	-	✓	-	-	-
3	SP3	DRC	Mentioned that rehab via VC can be used for those with functional decline and reduction in muscle strength/ range	NA	NA	NA	NA	NA					✓	✓	-	-	✓	-	✓
4	SP4	DRC	✓	NA	NA	NA	NA	NA	-	✔	-	✔	✓	✓	✓ (with optional thermometer and pulse oximeter)	-	-	-	-
5	SP5	DRC	✓	NA	NA	NA	NA	NA					-	✓	-	-	-	-	✓
6	SP6	DRC	-	✓	✓	-	✓	✓	✔	✔	-	✔	✓(only mentioned presence of CG throughout the session)	-	-	-	-	-	-
7	SP7	DRC/HT	-	✓	✓	✓	✓	✓					-	-	-	-	-	-	-
8	SP8	HT	Not mentioned	NA	NA	NA	NA	NA					✓ • able to give an accurate history • able to understand at least 3-steps verbal instructions in English and/or Mandarin • open to receiving feedback and able to translate feedback into action	-	✓ (e.g. blood pressure monitor for hypertensive patients, glucometer for patients with diabetes mellitus)	✓ Patient's chronic diseases has been stable for at least 6 months	-	-	✓
9	SP9	DRC/HT		✓									✓ has competent caregiver(s)	-	-	✓ Patient is stable, usually only requiring 4 to 6-monthly reviews, has no new complaints,	✓ • Patient under quarantine, or staying with household member under quarantine. • Patient suspected of having COVID-19.	-	✓
10	SP10		-	✓	✓	-	✓	-					✓ • Client exhibits potential to participate during VC session • Client who is cognitively stable, able to express his/her concern, patient with available spokesperson	-	✓ Highly recommended to have own pressure monitoring set (as BP andHR readings are required pre- and post-physiotherapy video consultation sessions most of the time)	✓		-	-
11	SP11	HT	Incorporated into routine HT care and offered to all stable HT patients	NA	NA	NA	NA	NA					-	✓ simple and no comprehensive physical examination required	Vital signs taking was a must - vitals would be monitored throughout the HT session	✓ Definition of clinically stable same across all service types under Tzu Chi	NA as Tzu Chi applies VC to HT as part of standard care	-	✓ Initial assessment considered first consult
12	SP12	DRC	Not mentioned	NA	NA	NA	NA	NA	-	✓		✓	-			✓	-	-	-