Rehabilitation of patients with COVID-19 in African Settings:

Guidance for Community Based Rehabilitation Workers, Physiotherapists, Occupational Therapists, Speech and Language Therapists, and Assistants

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PURPOSE: This document provides current guidance for health care professionals working in African rehabilitation settings with clients and patients during the COVID-19 crisis. An international team of expert researchers and clinicians have compiled these recommendations. It is an initial version.

Introduction and Background

COVID-19 is the disease caused by SARS-COV-2, one of a large family of coronaviruses. Common symptoms include fever, dry cough, sore throat, headache, generalized weakness or fatigue, and difficulty breathing. Severe forms of the disease can lead to respiratory failure with multiple organ failure necessitating rehabilitation in both acute and long term care (1).

COVID-19 in Africa is reported through the WHO AFRO (World Health Organization Africa Region Office https://www.afro.who.int/health-topics/coronavirus-covid-19), and the WHO EMRO (Eastern Mediterranean Regional Office http://www.emro.who.int/health-topics/corona-virus/index.html). Africa confirmed the first case on the 14 February 2020 in Egypt, and soon after in Algeria, Nigeria, and Senegal. Since then the numbers of countries reporting cases, active cases with moderate to severe form of the disease, and deaths have been rising steeply. Although African health systems are growing, there are still many places where health services are inadequate. Therefore, a call is made to rehabilitation professionals to think of innovative ways to deliver effective services despite the extra burden imposed by COVID-19 (2).

We recognize the diversity, the strengths, and the challenges across the continent. In many places there are low resources and poorly developed health systems, with inadequate infrastructure and human resources. There is often a very low ratio of health professionals to patients. This lack of health personnel is even more evident in relation to rehabilitation workers, such as community-based rehabilitation workers (CBRWs), occupational therapists (OTs), physiotherapists (PTs), speech and language therapists (SLTs), and respiratory

therapists (RTs). In many African settings, when respiratory therapists are not available, PTs' scope can include the work that respiratory therapists might do in other places.

Informed by the best available evidence, and in consultations with rehabilitation professionals and communities across Africa, this document consolidates findings for frontline workers in African settings. We recognize that the situations in different settings, cities, regions, and countries can be very different. There are significant differences between the management of COVID-19 in the better healthcare settings, and more challenges in many other African settings. Social and cultural conditions must be taken into account (3).

This document is not meant to replace institutional policies and practices but rather to supplement existing efforts and resources put in place to improve client/patient and healthcare professionals' safety. This document is intended to be used in complement with other resources from credible sources such as the WHO, national Ministries of Health, guidelines from professional associations and world professional bodies (i.e. WCPT, WFOT).

Health care providers are encouraged to take time to consider professional ethics, and how to best practice in specific settings. Work with colleagues to consider practice and decision making grounded in good practices and ethical decision making. Already existent resource limitations and expected high patient load mean that most rehabilitation procedures will require improvisation without extra equipment (4).

The Disability Community Action COVID-19 Matrix (5) (see Appendix 2) reminds us to keep compassion, access, communication, participation, and networks in mind during the pandemic.

A list of acronyms is at the end of the document in Appendix 1.

Visit https://www.wcptafrica.org/ and https://afri-can.org/ for updates of this document.

Key Considerations

Seven interconnected key considerations applicable to all rehabilitation providers were identified and are elaborated on below.

1) Determine risk and take action to reduce risk of infection and spread of COVID-19 in rehabilitation settings
2) Work as a team
3) Do as much as possible without person-to-person contact
4) Anticipate an increased demand of workforce
5) Determine type of Personal Protective Equipment (PPE) needed for patient contact
6) Include people with impairments and disabilities
7) Streamline documentation procedures

KEY CONSIDERATION 1 – Determine risk and take action to reduce risk of infection and spread of COVID-19 in rehabilitation settings

- Wear appropriate PPE in all situations where COVID-19 might be present to prevent transmission of the virus (6).
- Recognize the realities of African settings: In most African settings with COVID-19 community cases, there are undiagnosed cases, limited testing facilities, and rehab workers are therefore potentially interacting with "asymptomatic and undiagnosed" clients as part of regular work; PPE should be used in situations where community spread is present.
- Provide detailed, current, and ongoing education to CBRW, PTs, OTs, and SLTs about risk of COVID-19 and PPE use (7).
- Do not routinely enter an isolation area just to screen or see a patient with COVID-19. Start by considering the risk of a person receiving or not receiving immediate rehabilitation services on critical outcomes (i.e., risk of hospitalization, extended hospital stay) (8).
- If proceeding with a rehabilitation assessment or treatment session, point-of-care risk assessments should be conducted prior to each client interaction (8).
- Staff evaluated to be at high risk of developing moderate to severe forms of COVID-19 should not be allowed to enter or work in COVID-19 isolation areas or wards. High risk includes pregnant women, staff with chronic respiratory illnesses, immunosuppressed, above 60 years of age, and those with chronic health conditions, such as heart disease, lung disease, diabetes.
- Try to limit staff from moving between COVID-19 units and other units where possible.
- Use usual and innovative strategies to include patients with pre-existing disabilities in risk reduction strategies.

KEY CONSIDERATION 2 - Work as a team

- All COVID-19 work is interprofessional teamwork, whether you are in a home, screening clients, working in acute care or ICU, with people who are in isolation or in treatment rooms.
- Consult with others on your team and outside of your local team to share information.
- Organizational policies related to COVID-19 should INCLUDE all workers, including rehabilitation providers. When developing localized policies and practices, work with professional associations' codes of ethics to ensure there is no clash with developed policies and practices.
- Adopt the use of flow charts that can be posted in all departments and ICUs to provide clear guides and reminders to all therapists and other health professionals to appreciate the roles of rehabilitation at different phases of illness (7).
- In many rehabilitation settings, we might need to educate colleagues on the roles of rehabilitation professionals in COVID-19 care. Some medical colleagues might not realize the importance of the many contributions that rehabilitation can make in all phases of the disease (2). For example, PTs and OTs can address ICU-acquired weakness (ICUAW) and other conditions (9,10).
- Many rehab professionals might find themselves tasked to have an extended scope of practice or to engage in new roles as part of interprofessional and transdisciplinary work. For example, PTs might be requested to manage ventilators in case there are not enough critical care nurses in a hospital.
- Rehabilitation providers can advise teams on how to include patients with disabilities.

KEY CONSIDERATION 3 – Do as much as possible without person-to-person contact

- Gather information without direct contact for your subjective review where possible. Consult the case notes or any other possible source and deduce the following: premorbid status, pre-treatment screening, and/or discharge planning.
- Consider telerehabilitation (11–13) tools to observe and communicate directly with patients and/or staff already in isolation areas (e.g., use of WhatsApp, data-secure cameras, iPads). In some instances, these tools can assess dysphagia, communication, mobility, and cognition when this is possible, safe, and practical (8).
- Observe local and international COVID-19 requirements for person to person contact for health care providers (6).
- Constantly consider your ethical principles.

KEY CONSIDERATION 4 - Anticipate an increased demand for rehabilitation workforce

- Offer staff the opportunity to electively cancel annual leave and other deserved holidays.
- Recruit where possible and conduct task shifting to prioritize skill input at required times.
- When needed, attend only to patients requiring immediate care.
- Identify and deploy additional staff to areas with higher activities associated with COVID-19 admissions or management.
- Keep staff updated with work plans and updated data for successful delivery of clinical services.
- All staff should be psychologically supported during this period to improve morale and reduce anxiety over personal safety and health of the family (14).
- Therapists with expertise that is specific to COVID-19 treatment may need to train colleagues. For example, PTs with expertise in cardiopulmonary physiotherapy may be requested to train volunteer physiotherapists on handling of equipment and required interventions for COVID-19 patients.

KEY CONSIDERATION 5 – Determine type of Personal Protective Equipment (PPE) needed for patient contact

- Guidance about PPE can be found https://www.cdc.gov/coronavirus/2019-ncov/downloads/A_FS_HCP_COVID19_PPE.pdf
- All rehab teams always need to don full PPEs while attending to COVID-19 patients (15). Cross-infection and contamination is real, and healthcare providers are at high risk for contracting COVID-19.
- For instance, you should not share PPE or devices with colleagues, or reuse PPE it if it has not been properly sterilized.
- All rehabilitation practitioners should be trained on Infection Prevention and Control (IPC), use of PPE, and other precautionary and safety policies. They should be supported in all aspects of their work, including safe access to and exit from treatment spaces, and the provision of electronic communication devices, and appropriate PPEs.

Aerosol Generating Procedures (AGPs) require airborne precautions (8,14). Other procedures may require droplet and contact protection only (8). All providers should understand these differences.

5.1 Droplet precautions

For all suspect and confirmed cases, at a minimum, droplet precautions should be implemented. Staff will wear the following items for droplet precautions:

- Surgical mask
- Fluid resistant long-sleeved gown
- Goggles/face shield
- Gloves (15)

5.2 Precautions for Airborne Precautions and Aerosol Generating Procedures (AGPs)

Airborne precautions are:

- HCP (health care providers) in the room should wear an N95 or higher-level respirator such as disposable filtering facepiece respirators, PAPRs (Powered Air Purifying Respirators), and elastomeric respirators, eye protection, gloves, and a gown (16).
- The number of HCP present during the procedure should be limited to only those essential for patient care and procedure support. Visitors should not be present for the procedure (16).
- AGPs should ideally take place in an Airborne Infection Isolation Rooms (AIIR) (16).
- Clean and disinfect procedure room surfaces promptly as described in the section on environmental infection control below (16).

Two considerations determine whether a procedure is aerosol generating: 1) the type of respiratory support and type of oxygen therapy the patient is receiving, and 2) the type of procedure being conducted (8,16).

Descriptions of AGPs are evolving – it is suggested that teams stay current with changes in the literature and guidelines.

The following therapies require airborne precautions:

- High flow nasal oxygen (e.g., Airvo, Optiflow)
- Non-invasive ventilation (e.g., BiPAP, CPAP)
- Nebulizer treatments (Nebulizing should be avoided in the acute phase of COVID-19) (14,17)
- Tracheostomy tubes with/without mechanical ventilation requiring open suctioning, trach mask trials, cuff inflation/deflation, and tube changes (note**:** In-line suctioning is *not* an aerosol-generating procedure) (8).

Procedures that induce sputum require airborne precautions (8). Examples include:

- Respiratory physiotherapy (e.g., airway clearance techniques, open suctioning, nasopharyngeal suctioning, mechanical in-exsufflation (cough-assist)) (8).
- Swallowing and select speech assessments and treatments at bedside (e.g., oral mechanism exams, bolus trials, laryngectomees with/without mechanical ventilation, or tracheostomies with/without mechanical ventilation or speaking valves as part of a multidisciplinary team). Instrumental swallowing assessments should be avoided (8).
- Any activity that can result in expectoration of sputum, including moving from lying to sitting, walking, and/or bedside ADLs (8).
- Prone positioning (with or without mechanical ventilation), and/or where a patient may be inadvertently disconnected from the ventilator (18).

Additional considerations before beginning direct contact treatment:

- Ensure you are following the best practice, step-by-step process for donning and doffing PPE to avoid contamination (8). https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks
- Identify the minimum number of people required to safely conduct a session (8).
- Consider bundling care with other healthcare professionals (e.g., coordinating activities; grouping care for all patients with COVID-19) (8).
- Carefully consider equipment use and discuss with infection control services to ensure it can be properly decontaminated. Avoid moving equipment between infectious and non-infectious areas. Wherever possible, single patient use, disposable equipment is preferred (e.g., low tech augmentative and alternative communication (AAC) equipment that can be discarded after use, theraband rather than hand weights). (8)

KEY CONSIDERATION 6 – Include people living with impairments and disabilities

- All health care providers should consider the needs and situations of persons with disabilities (PWDs), both PWD who are health care workers and PWDs who are patients (19,20).
- Consider how you will work with people with pre-existing impairments and disabilities, for example, mobility impairments, visual impairments, hearing impairments, and cognitive impairments (20).
- Consider how to prevent and address new impairments and disabilities which might develop as a result of COVID-19 and/or other recent conditions (2,8,21).
- Develop options for health workers working with PWDs in your setting.

Key CONSIDERATION 7 - Streamline documentation procedures

Due to the many other demands on time, support the use of a template for assessment and treatment notes. This can improve consistency in charting.

A sample template from the Ghana Physiotherapy Association Guidelines for COVID19 (7) is included in Appendix 3.

COVID-19 CONSIDERATIONS BY SPECIFIC REHABILITATION PROFESSIONS

Treatments will vary case by case, based on client/patient need, practitioner experience, the specific setting, and local protocols.

Considerations for Community-based Rehabilitation Providers

In Home or community clinic service provision when presence of COVID-19 is not known.	• Maintain your personal safety and reduce risk through physical distancing, hand washing, and other precautions, and use them as an opportunity to explain to client and family • Education of clients and family members on prevention, detection, and monitoring of COVID-19 • Consider and assess mental health and emotional coping strategies for people (8,22) • As much as possible, address human needs – food, water, basic needs. Know relevant sources of support in your area to be able to refer clients. • Education on physical activity as a preventive measure, and for dealing with stay-at-home and confinement measures.
In-Home service provision when COVID-19 is present in the home	• Use complete PPE or use of telehealth (or other remote strategies) instead of physical presence • Training and informing informal/family carers about how to care for the patient despite the infection, following all precautions for in home isolation. • Assessment and management of impairments in physical and cognitive functioning (8) • Optimize bed and seating positioning using pressure relief principles (e.g., mattress) (8) • Assessment and management of ADLs to encourage early mobilization (8) • Provision of assistive devices for ADLs, communication, seating and mobility (8) • Consider and assess mental health and emotional coping strategies for patients (8,23)

Acute Care: Rehabilitation & COVID-19

Table and information adapted from Thomas et al, 2020 (14); Kho et al, 2020 (8); Ghana Physiotherapy Guidelines (7); Mbarara Regional Referral Hospital, Department of Physiotherapy. COVID-19 Pandemic Response – Version I (2/4/2020) (4); 2020; Nigeria Society of Physiotherapy Oyo State Chapter, Physiotherapy in the Management of Patients with COVID-19: Recommendations to Guide Practice (24); Nigeria Society of Physiotherapy Ebonyi State Chapter. Physiotherapy in the Management of Patients with COVID-19: Recommendations to Guide Practice, 2020.

Detailed recommendations are available to guide practitioners in these and several other sources, and you are encouraged to read these in detail. In Africa OT and SLT are rare, and not understood, which impacts their roles.

PPE must be used for ALL categories of Acute Care when in physical contact with patients/clients, including in home and community clinic settings.

All rehab professionals helping family and care givers should emphasize the use of safety precautions and provide instructions to care givers, e.g. use of face masks, washing hands, physical distancing. The patients MUST put on PPE as well.

Service Category	**COVID-19 presentation**	**CBR**	**Occupational therapy** (8,25)	**Physiotherapy** (8,10,14,17,21)	**Speech Therapy**
A	Asymptomatic positive patients	Assess home situation; intervene as needed/possible Provide support and education as needed/available.	Assess for function and home situation Provide support and education as needed/available.	Physiotherapy interventions are not indicated for airway clearance or sputum samples Assess for physical fitness by distance. Recommend low to moderate intensity physical activity.	Follow guidelines (26)
B	Mild respiratory symptoms without significant respiratory compromise (e.g.	Refer for testing if has not been done	*By distance*: Assessment and management of impairments in	*By distance:* Assess for fatigue and physical fitness	Patients with dysphagia may or may not still need to be seen based on

Service Category	**COVID-19 presentation**	**CBR**	**Occupational therapy** (8,25)	**Physiotherapy** (8,10,14,17,21)	**Speech Therapy**
	fever, dry cough, no chest x-ray changes)	Consider the whole household as your client Assess for home situation; isolation at home should be followed Provide support and education as needed/available.	physical and cognitive functioning (8,27) Assessment and management of ADLs to encourage continued mobilization by distance (8,27) Provision of assistive devices for ADLs, communication, seating, and mobility (8) Consider and assess mental health and emotional coping strategies for patients (8,23,28) Teach breathing and relaxation techniques	Teach breathing exercises and relaxation techniques (29) Low moderate intensity aerobic exercises recommended	medical advice. Clarify with medical staff before seeing them. Wear PPE; (26)
C	Pneumonia presenting with: a. Low-level oxygen requirement (e.g. oxygen	Patient should be under continuous medical care If you are providing support to person at home, you should be part of a team	Prevention, detection, and monitoring of delirium(8,30) Assessment and management of ADLs to encourage	Include strategies as outlined for category 'B' Teach Active Cycle of Breathing Technique (ACBT)	

Service Category	COVID-19 presentation	CBR	Occupational therapy (8,25)	Physiotherapy (8,10,14,17,21)	Speech Therapy
	flow ≤ 5l/min for SPO2 ≥ 90%) b. Non-productive cough or patient coughing and able to clear secretions independently	Consider the whole household as your client Assess for home situation; isolation at home should be followed Provide support to family Provide supports and education as needed/available.	continuous mobilization (8) Provision of assistive devices for ADLs, communication, seating, and mobility if needed (8) Consider and assess mental health and emotional coping strategies for patients (8,23,28)		
D	Mild symptoms and/or pneumonia co-existing with: a. respiratory or neuromuscular comorbidity (e.g. COPDs, neuromuscular disease, spinal cord injury, bronchiectasis) b. current or anticipated	Use airborne precautions. Consider the whole household as your client Where possible, patients should wear a surgical mask Prevention, detection, and monitoring of delirium (8,30) Assessment and management of impairments in	Use airborne precautions. Patients should wear a surgical mask Prevention, detection, and monitoring of delirium (8,30) Assessment and management of impairments in physical and cognitive functioning (8,27) Optimize bed and seating positioning	Use airborne precautions. Where possible, patients should wear a surgical mask during any physiotherapy Assessment and management of Airway clearance Assessment of mobilization as tolerable Assessment and Plan care in line with present	Use airborne precautions.

Service Category	**COVID-19 presentation**	**CBR**	**Occupational therapy** (8,25)	**Physiotherapy** (8,10,14,17,21)	**Speech Therapy**
	difficulties with secretion clearance	physical and cognitive functioning (8) Optimize bed and seating positioning using pressure relief principles (e.g., mattress) (8) Assessment and management of ADLs to encourage early mobilization (8) Provision of assistive devices for ADLs, communication, seating and mobility (8) Consider and assess mental health and emotional coping strategies for patients (8,20,23)	using pressure relief principles (e.g., mattress) (8,31) Assessment and management of ADLs to encourage early mobilization (8,27) Provision of assistive devices for ADLs, communication, seating and mobility(8,31) Consider and assess mental health and emotional coping strategies for patients (8,23,28)	comorbidity e.g. neurorehabilitation	
E	Moderate symptoms and/or pneumonia AND evidence of exudative consolidation with difficulty clearing	Use airborne precautions Refer to hospital Consider the whole household as your client	Use airborne precautions Prevention, detection, and monitoring of delirium (8,30)	Use airborne precautions Assessment and management of respiratory symptoms including airway clearance and decreasing work of breathing.	Use airborne precautions Assessment and management of dysphagia post-

Service Category	COVID-19 presentation	CBR	Occupational therapy (8,25)	Physiotherapy (8,10,14,17,21)	Speech Therapy
	or inability to clear secretions independently (e.g. weak, ineffective, and moist sounding cough, tactile fremitus on chest wall, wet sounding voice, audible transmitted sounds)	Prevention, detection, and monitoring of delirium (8,30) Assessment and management of impairments in physical and cognitive functioning (8,27) Optimize bed and seating positioning using pressure relief principles (e.g., mattress) (8) Assessment and management of ADLs to encourage early mobilization (8) Provision of assistive devices for ADLs, communication, seating and mobility (8) Consider and assess mental health and emotional coping strategies for patients (8,23,28)	Assessment and management of impairments in physical and cognitive functioning (8,27) Optimize bed and seating positioning using pressure relief principles (e.g., mattress) (8,31) Assessment and management of ADLs to encourage early mobilization (8,27) Provision of assistive devices for ADLs, communication, seating and mobility (8,31) Consider and assess mental health and emotional coping strategies for patients (8,23,28)	Assessment and management of mobility and early mobilisation as tolerated	extubation (8,22) Assessment and management of dysphagia upon decompensation (8,22,32) Assessment and management of dysphagia upon respiratory compromise (8,32) Assessment of basic cognitive (33) and communication (32) functions Provision of primarily low-tech AAC equipment that can be discarded after use (8)

Service Category	**COVID-19 presentation**	**CBR**	**Occupational therapy** (8,25)	**Physiotherapy** (8,10,14,17,21)	**Speech Therapy**
F	Severe symptoms suggestive of ARDS, pneumonia/lower respiratory tract infection (e.g.: increasing oxygen requirements, fever, difficulty breathing, frequent, severe or productive coughing episodes; chest x-ray, CT or lung ultrasound changes consistent with consolidation) Involvement of ICU is recommended	N/A for home care Person should be in hospital	Use airborne precautions Prevention, detection, and monitoring of delirium (8,30) Assessment and management of impairments in physical and cognitive functioning (8,27) Optimize bed and seating positioning using pressure relief principles (e.g., mattress) (8,31) Assessment and management of ADLs to encourage early mobilization (8,27) Provision of assistive devices for ADLs, communication, seating, and mobility (8,31) Consider and assess mental health and emotional coping	Use airborne precautions Consider physiotherapy referral for airway clearance. Physiotherapy may be indicated, particularly if weak cough, productive and/or evidence of pneumonia on imaging and/or secretion retention. Patients should wear a surgical mask during any physiotherapy. Early optimisation of care and involvement of ICU is recommended Assessment and management of respiratory symptoms, and of mobility and early mobilisation as tolerated. Observe significant rest between interventions. Use prone positioning to optimise oxygenation and should last 12–16 hours per day (15)	Use airborne precautions Assessment and management of dysphagia post-extubation (8,22) Assessment and management of dysphagia upon decompensation (8,22) Assessment and management of dysphagia upon respiratory compromise (8) Assessment of basic cognitive (33) and communication (32) functions Provision of primarily low-tech AAC equipment that can be discarded after use (8)

Service Category	**COVID-19 presentation**	**CBR**	**Occupational therapy** (8,25)	**Physiotherapy** (8,10,14,17,21)	**Speech Therapy**
			strategies for patients (8,23,28)	Consider mental health and coping strategies (8,23)	
G	Any patient at significant risk of developing or with evidence of significant functional limitations e.g. patients who are frail or have multiple comorbidities impacting their independence, ICU patients with significant functional decline and/or (at risk for) ICU acquired weakness	Consider the whole household as your client Prevention, detection, and monitoring of delirium (8,30) Assessment and management of impairments in physical and cognitive functioning (8,27) Optimize bed and seating positioning using pressure relief principles (e.g., mattress) (8,31) Assessment and management of ADLs to encourage early mobilization (8,27) Provision of assistive devices for ADLs, communication, seating and mobility (8,31)	Prevention, detection, and monitoring of delirium (8,30) Assessment and management of impairments in physical and cognitive functioning (8,34) Optimize bed and seating positioning using pressure relief principles (e.g., mattress) (8,31) Assessment and management of ADLs to encourage early mobilization (8,27) Provision of assistive devices for ADLs, communication, seating and mobility (8,27) Consider and assess mental health and emotional coping	If not ventilated, patients should wear a surgical mask during any physiotherapy whenever possible. Assessment and management of respiratory symptoms Consider prone positioning in discussion with rest of healthcare team Rehabilitation to address functional decline(9) Assessment and management of mobility and early mobilisation as tolerated. Consider mental health and coping strategies. (8,23)	Assessment and management of dysphagia (8) Assessment and management of dysphagia upon decompensation (8) Assessment and management of dysphagia upon respiratory compromise (8) Assessment of basic cognitive and communication functions (8) Provision of primarily low-tech AAC equipment that can be discarded after use (8)

Service Category	COVID-19 presentation	CBR	Occupational therapy (8,25)	Physiotherapy (8,10,14,17,21)	Speech Therapy
		Consider and assess mental health and emotional coping strategies for patients (8,23,28)	strategies for patients (8,23,28)		Management of tracheostomies (8)
H		All providers should consider post discharge activities and exercises, with follow-up appointments scheduled using direct contact or telehealth to monitor patients until full recovery.			
	All initially positive patients with COVID-19, who now tests negative but with reduced cardiopulmonary function or other functional deficits at the point of discharge As a team: Consider social determinants of health when discharge planning (e.g., income, influence of family, (un)employment, job (in)security, transportation,	Work with client and family to provide support Provide as much material support as possible and needed (food, medicines) Monitor mental health and cognitive status (8,20,23) Assessment and management of impairments in physical and cognitive functioning (8,27) Assessment and management of ADLs	Assessment and management of impairments in physical and cognitive functioning (8,27) Assessment/ Re-assessment and management of ADLs, such as adaptive strategies, assistive devices and energy conservation, that encourage functional independence after assessment in the acute phase (8,34) Provision of assistive devices for ADLs, communication,	Follow-up Pulmonary Rehabilitation Detailed recommendations from the European Respiratory Society15 include: Monitoring of pre-existing comorbid conditions (8) Assessment of exercise and functional capacity (8,14) Exercise training and/or physical activity coaching i.e. training of muscles for ambulation, strength training of both upper and lower limbs	Assessment and rehabilitation of dysphagia and voice due to prolonged intubation (8) Assessment and rehabilitation of cognitive communication due to brain hypoxia (8) Assessment and management of respiratory strength and coordination (8)

Service Category	**COVID-19 presentation**	**CBR**	**Occupational therapy** (8,25)	**Physiotherapy** (8,10,14,17,21)	**Speech Therapy**
	social support, local policies.	to encourage ongoing mobilization (8,27) Provision of assistive devices for ADLs, communication, seating and mobility (8,27) Consider and assess mental health and emotional coping strategies for patients (8,23,28)	seating and mobility (8,31) Consider and assess mental health and emotional coping strategies for patients (8,23) Preparation and planning for discharge, including home safety and caregiver supports (8,35)	Consider mental health, coping strategies and community integration (8,23) Printed handouts	

Additional Topics (for future guidance notes)

Resource planning

There is a need for more work about resource planning in African settings. Thomas et al (2020) provide examples of how to do resource planning for specific settings. For example, an ICU physiotherapy resource plan would include a phased approach, and details about plans related to bed capacity, staffing levels, equipment needed, and interventions provided.

Triaging in Practice

In the development of this document, several reviewers asked for guidance for triaging and spacing of patients in various settings. We hope to address this topic in a future document. In applying the above guidance to your own setting, consider questions such as: What informs decision making about who to see immediately and who not to see? Do we need to develop different pathways of accepting referrals in this COVID-19 era, and on what basis? Your decisions should be guided by the highest ethical principles.

Remaining healthy in isolation

Reviewers also suggested providing guidance on fitness, daily life, and function during times of isolation. People in isolation centers or isolated at home may experience deconditioning, are at risk of mental health problems, and other issues if left unattended to. Recognizing that this deconditioning and isolation can further decrease their immunity and make them prone to infection, possible reinfection, or prolong their recovery, there are roles for CBRWs, OTs, PTs, and others to promote health and prevent illness. Many people who are infected are asymptomatic or experience mild symptoms and may be at home.

Information Sharing and Data Collection

Reviewers of this document suggested that African therapists who are in direct contact with COViD-19 patients should collect data with respect to symptoms and treatment from onset through the treatment period until the time of recovery and share their experiences with others. This would provice a better picture of how and when to intervene in our African contexts. Guidelines for data collection and sharing in COVID-19 settings could be the topic of another guidance paper.

Assessment Tools

Several reviewers suggested that it would be beneficial to have recommended assessment tools listed to ensure uniformity and consistency in service provision and in reporting on conditions and experiences. These assessment tools could include A) Assessments of Mental health and coping strategies; B) Assessments of ADL (activities of daily living); C) Assessments of Fatigue; D) Assessments of muscle strength and conditions; and E) Assessments of dysphagia.

Appendix 1: Acronyms

AAC Augmentative and alternative communication

ACBT – Active cycle of Breathing Techniques

ADLs – Activities of Daily Living

AGP Aerosol Generating Procedure

AIIR Airborne Infection Isolation Rooms

ALOC Altered Level of Consciousness

ARDS – Acute Respiratory Distress Syndrome

ARI Acute Respiratory Infections

BiPAP Bilevel Positive Airway Pressure

CBR – Community Based Rehabilitation

COPD – Chronic Obstructive Pulmonary Disease

COVID-19 Coronavirus Disease 2019

CPAP Continuous Positive Airway Pressure

HCP – Health Care Providers

IADLS Instrumental Activities of Daily Living

ICU Intensive Care Unit

ICUAW – ICU acquired weakness

IPC – 1) Infection Prevention Control and 2) Interprofessional Care

OT – Occupational Therapist

PPE – Personal Protective Equipment

PAPR Powered Air Purifying Respirators

PT – Physiotherapist (Physical Therapist)

PWD – Person [living] with a disability

SPO2 Peripheral Oxygen Saturation

SLT – Speech and Language Therapist

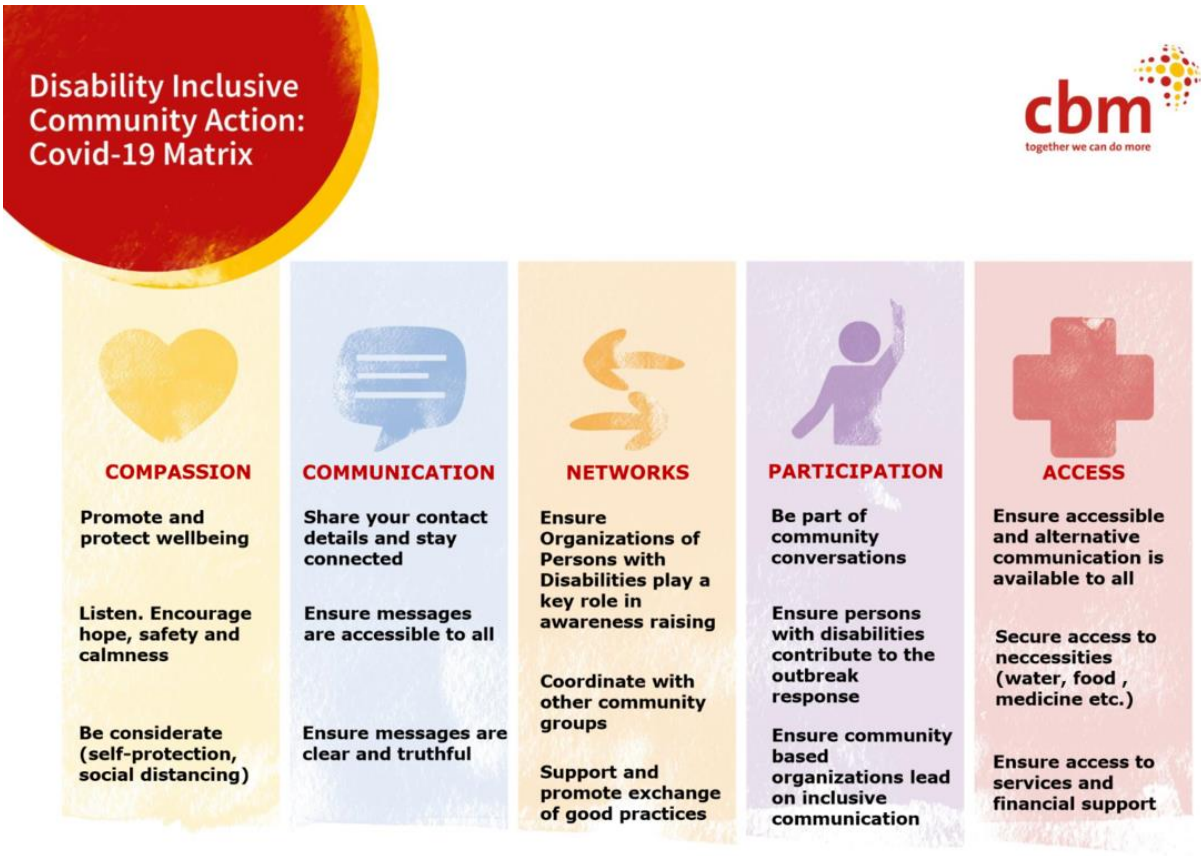
WCPT World Confederation for Physical Therapy

WFOT World Federation of Occupational Therapists

WHO – World Health Organization

Appendix 2: Disability Community Action COVID-19 Matrix

Source: https://www.cbm.org/news/news/news-2020/cbm-develops-disability-inclusive-community-action-covid-19-matrix/



Appendix 3 Sample Template for Documentation

Proposed template for assessment notes

CURRENT CONDITION	
GOALS	
Subjective assessment	
Objective assessment	
Analysis of problems	
Plans for goals	
Evaluation	
Progress Note	

from PHYSIOTHERAPY MANAGEMENT FOR COVID-19 IN THE PRIMARY, COMMUNITY AND ACUTE (HOSPITAL) SETTINGS: A PRELIMINARY GUIDELINE
GUIDELINE DEVELOPMENT COMMITTEE FOR COVID-19, GHANA PHYSIOTHERAPY ASSOCIATION

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This document was inspired by, and adapted with permission from*:*

Kho, M.E., Brooks, D., Namasivayam-MacDonald, A., Sangrar, R. and Vrkljan, B. (2020) Rehabilitation for Patients with COVID-19. Guidance for Occupational Therapists, Physical Therapists, Speech-Language Pathologists and Assistants. School of Rehabilitation Science, McMaster University. https://srs-mcmaster.ca/covid-19/

We used the original document by this McMaster group; their document should be checked for updates. An updated version current to April 24th has been published, and a French version will be available shortly.

Many of the guiding principles within this document are based on, and we encourage readers to refer to:

Thomas P, Baldwin C, Bissett B, Boden I, Gosselink R, Granger CL, Hodgson CL, Jones AYM, Kho ME, Moses R, Ntoumenopoulos G, Parry SM, Patman S, van der Lee L (2020): Physiotherapy management for COVID-19 in the acute hospital setting. Recommendations to guide clinical practice. Version 1.0 published 23 March 2020. Journal of Physiotherapy: https://doi.org/10.1016/j.jphys.2020.03.011(English) or https://www.wcpt.org/news/Novel-Coronavirus-2019-nCoV

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Additional resources

The African CBR Network has an extensive list of resources available here: https://afri-can.org/covid-19-resources-for-persons-with-disabilities/

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