COVID-19: maintaining essential rehabilitation services across the care continuum

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INTRODUCTION

COVID-19 is overwhelming healthcare services and healthcare workers globally. The response, appropriately, is on the ability to care for people who become critically ill, protect their carers and keep people physically distanced. However, this response has shifted what is considered and how to provide essential healthcare services. Rehabilitation services, which optimise physical and cognitive functioning to reduce disability, are a core component of high-value care. The decisions to shift, transform, delay or discontinue rehabilitation care are complex. These decisions have societal implications for today and the future. This commentary describes adjustments to the continuum of rehabilitation services across 12 low-income, middle-income and high-income countries in the context of national COVID-19 preparedness responses (table 1) and provides recommendations for decision makers on the provision and payment of these essential services.

CHANGES TO REHABILITATION CARE ACROSS SETTINGS

Rehabilitation addresses health and functioning for individuals across the lifespan. The immediacy of care needs varies by condition. Services are provided in every setting—acute hospitals, rehabilitation hospitals, outpatient clinics, in the community and in people’s homes—and resources vary by region. Guidance for the delivery of rehabilitation during COVID-19 is available for physiotherapy but not yet all rehabilitation professions. Several regions reported fewer non-urgent rehabilitation patient admissions in order to expand acute care bed capacity. Lengths of inpatient stays for patients who receive rehabilitation are now shorter in several countries including Belgium, India, Tanzania and the UK. Shorter inpatient stays reduce the time available to assess and treat patients and train family. Any need for continued home-based care is overwhelmed by the need to protect healthcare workers and their carers and keep people physically distanced.
### Table 1 Continuum of rehabilitation services across 12 low-income, middle-income and high-income countries in the context of national COVID-19 preparedness recommendations

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<tbody>
<tr>
<td>Argentina 20 March</td>
<td>National lockdown: essential trips for cleaning supplies, medicines and food.</td>
<td>Outpatient suspended.</td>
<td>Inpatient rehabilitation still offered in reduced capacity. Other inpatient bed types converted to increase acute hospital bed capacity. Patients are not attending day rehabilitation programmes despite programmes being open. All outpatients clinics in all public and private hospitals closed. Physicians and therapists cannot get reimbursed for video telehealth visits (neither video nor telephone).</td>
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<td>Belgium 17 March</td>
<td>Containment and mitigation: school and retail closures, ban on all gatherings, movement only for essential needs and ban on non-essential international travel.</td>
<td>Non-essential services suspended.</td>
<td>Inpatient rehabilitation operational but discharging more quickly to prevent spread; all activities in patients’ room. Rehabilitation personnel but not beds have shifted to support acute care. All outpatient rehabilitation services discontinued. Government-approved renumeration for telerehabilitation for all provider types (expanded for COVID-19).</td>
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<td>Brazil By state</td>
<td>Containment and mitigation: national guidance defined essential services and recommendations for social distancing and foreign entry restricted.</td>
<td>Non-essential services suspended.</td>
<td>Reduced operations for inpatient rehabilitation. Shift in rehabilitation personnel and outpatient services, encouraged to use telemedicine. Federal Council of Medicine acknowledges use of telemedicine for teleorientation (distance guidance, training and patient referral), telemonitoring under medical supervision or guidance and teleinterconsultation (between physicians for diagnostic or therapeutic assistance).</td>
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<tr>
<td>Germany 22 March</td>
<td>Containment and mitigation: travel restrictions, school closure, closing non-essential businesses and banned public gatherings.</td>
<td>All elective surgeries and non-essential services postponed.</td>
<td>Acute hospitals continued early acute rehabilitation. Rehabilitation hospitals discontinued care for chronic, non-acute problems; acute patients (eg, surgery and stroke) stay as long as needed. Some rehabilitation hospitals could be designated as overflow hospitals. Rehabilitation personnel supporting acute hospitals. Outpatient rehabilitation is reduced but available for high need patients/essential care. Telerehabilitation for physicians and health professionals in the acute COVID-19 phase possible and reimbursed.</td>
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<td>India</td>
<td>24 March</td>
<td>National lockdown: exceptions medical and pharma services, groceries, banks, telecom, gas stations as essential services, school closures and restriction of international and most domestic travel.</td>
<td>Non-essential elective surgeries postponed</td>
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<tr>
<td>Singapore</td>
<td>7 April</td>
<td>National lockdown: temp. screening, hospital and home quarantines, extensive tracing, social distancing, bans on large gatherings, schools closed and travel restricted.</td>
<td>Non-essential appointments, including elective procedures and outpatient rehabilitation, deferred.</td>
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<tr>
<td>Spain</td>
<td>14 March</td>
<td>National lockdown: exceptions medical and pharmacy services, groceries and banks. School closures and restriction of international travel.</td>
<td>Non-essential services suspended, non-urgent surgeries postponed and outpatient clinics closed.</td>
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<tr>
<td>Tanzania</td>
<td>Local only</td>
<td>Containment and mitigation: public gatherings ban, 30-day closure of schools, universities, training institutions, health screening at points of entry, 14-day quarantine for travellers from high-risk countries.</td>
<td>Local KCMC. Example: care for older adults suspended unless an emergency, outpatient block appointments, reduced elective surgeries and prioritised emergency surgeries.</td>
</tr>
<tr>
<td>USA</td>
<td>By state or city</td>
<td>Stay at home orders, school closures, bans of mass gatherings and non-essential business closures.</td>
<td>Recommendations to postpone all elective surgeries and non-urgent procedures and visits.</td>
</tr>
<tr>
<td>UK</td>
<td>23 March</td>
<td>National lockdown: only leave home for food, health reasons, work and other travel restrictions. Social distancing and personal hygiene guidelines.</td>
<td>Non-urgent surgeries postponed.</td>
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*Authors provided reports of rehabilitation practice in the absence of national policies.

CDC, Centers for Disease Control and Prevention; KCMC, Kilimanjaro Christian Medical Center.
care has implications for caregivers particularly while social distancing.

In addition to shorter lengths of inpatient stays, all 12 countries report outpatient and home-based rehabilitation care suspended or operating at reduced service capacity. These inevitable decisions for protection of both healthcare workers and the general public may result in increases in disability and morbidity from a lack of necessary rehabilitation care to those with continued care needs. Patients at home with limited ability to move independently or facilitate their own self-care needs. Patients at home with limited ability to move independently or facilitate their own self-care activities, and patients with prolonged hospitalisation for COVID-19 who have returned home, are at high risk of several adverse health effects. Skin breakdown, muscle weakness, joint stiffness, reduced range of motion, changes to bowel and bladder functioning, venous stasis, oedema, decreased rate of metabolism and respiratory movement, lowered mood and depression are measurable in the first week of limited mobility. It is critical that public health communication continue to address the significance of daily activity and movement while uniquely considering limitations of individuals with significant physical or cognitive disability. Guidance needs to also ensure the safety of caregivers involved and be provided for households without available caregivers.

**PROTECTING PROVIDERS OF DIRECT CARE**

While there is concern for people with unmet rehabilitation needs, it is important to protect all direct care providers, paid and unpaid, during a pandemic response. Many components of rehabilitation care require patient contact, for example, treating patients weaning from mechanical ventilation, developing patients’ balance techniques after stroke and fitting a new limb after amputation. Furthermore, rehabilitation personnel from Guyana to Singapore are being redeployed to meet needs in care settings different than their usual work environment. In Spain, health workers represent 15% of all COVID cases and, in response, the country has mobilised retirees, medical residents or other health personnel. In Singapore, private sector and retired rehabilitation staff may join frontline healthcare. In planning for adequate personal protective equipment and training for its use, governments need to include all direct care providers in their calculations to adequately protect people in homes and community-based settings when direct-patient contact is still necessary.

**TELEREHABILITATION**

Telephone consultation for care is an option in some regions but is dependent predominantly on the availability of personnel. Use of video visits and other forms of virtual care, although preferred for rehabilitation over telephone consultation alone, requires widespread and stable internet connectivity, availability of technology for both the rehabilitation provider and the patient, ‘tech literacy’ or the ability to use a device, the availability of

‘tech support’ to troubleshoot or first get connected and payment for provider time. Although rehabilitation in some countries such as Guyana, Germany and the UK is a component of universal healthcare coverage (UHC), governments and health insurers of other non-UHC countries need to pay therapists, in addition to physicians, to equitably provide care via telehealth.

Use of telehealth under usual circumstances in all forms—text, telephone and video—requires planning, training and iterative improvement. It is imperative that experienced telehealth providers share protocols and become champions to support their peers with rapid scale-up in this challenging environment. Publications are emerging, and some professional societies are sharing guides for remote consultations. China and the USA have live webcast sessions with national experts to train rehabilitation providers and online communities to empower caregivers. Creative solutions to use free and commercially available communication tools like WeChat and WhatsApp are being used in Brazil, China and Guyana. These approaches are limited in Tanzania and likely other low-income countries due to costs for data plans and limited in-home internet access. With the majority of rehabilitation care provided remotely during a pandemic response, telehealth strategies need the infrastructure and to be resourced and financed appropriately.

**MEASURING THE IMPACT OF COVID-19**

Enhanced measurement and monitoring are desperately needed at the individual, health system and national levels. With the release of the WHO Rehabilitation Guide for Action only this past year, few countries had fully completed a systematic assessment of the rehabilitation situation and developed a strategic plan to adequately meet rehabilitative needs prior to this pandemic or to activate during pandemics. Yet, today, we need alignment on a measurement strategy. Longitudinal assessments of health and functional outcomes are needed to monitor individual and population health and support clinical decision making for allocation of scarce resources in all settings.

The global significance of measurement on practice and policy was evident in the release of COVID-19 outcomes assessments of intensive care unit patients; similar data are needed on the functional recovery of patients with COVID-19. Service-level records need to be monitored to ensure adequate quality and equity with constrained resources. In the longer term, greater attention to national census and cohort surveys will be needed to detect changes in population health that can inform policy decisions on rehabilitation service needs and geographic disparities. The rehabilitation community needs to unite to consider a core set of measures to monitor recovery of patients with COVID-19, health of persons with disability and chronic conditions, and the
quality, availability and accessibility of services today and as our nations recover.

RECOMMENDATIONS
Rehabilitation care is at a unique turning point. In 2017, the WHO had already noted ‘substantial and ever-increasing unmet need for rehabilitation services worldwide’. Today, we are faced with a new population of patients at risk of functional decline in addition to the disability pandemic already present among one billion people globally. We are providing care in new ways and standards of care are changing. The following recommendations are provided to mitigate the consequences of COVID-19’s impact on rehabilitation care and support continued health with reduced risk of disability.

► Governments need to include rehabilitation and other direct care providers in home-based and community-based settings in their plans for personal protective equipment acquisition and training.

► Global collaboration across rehabilitation professionals needs to accelerate the sharing of resources, instructional tools, education and training packets for how patients and families can continue rehabilitation at home during a pandemic response.

► Public health messaging on mental and physical health while social distancing needs to expand with input from rehabilitation professionals to provide guidance for persons living with physical and cognitive limitations, with and without caregivers.

► Public-private partnerships are needed to better support rapid scale of telehealth today and in the future to ensure effective use, financing, cybersecurity, access and increased reliability of broadband networks to reach people in low-resourced areas.

► The rehabilitation community needs to unite on measurement of care and outcomes because the evidence established in real world practice today could transform care and lives tomorrow.

CONCLUSIONS
The WHO called on nations to ensure continuity of essential services in parallel to scaling public health preparedness and response measures. Our shared experience is that national agencies did not issue specific guidance for the provision of rehabilitation. Considerations for service delivery balanced risk of transmission with both the availability of resources to provide care and the patient’s acuity, level of urgency and potential for harm if services were postponed or altered. Rehabilitation service providers mobilised quickly to provide the best, safest care possible to those in greatest need; decisions were in many cases made locally. Looking beyond the pandemic, rehabilitation needs to remain at the forefront of discussions for UHC; barriers to infrastructure, implementation and financing care via telehealth and alternative approaches need to be eliminated. Strong leadership for inclusion of rehabilitation in public health and healthcare policymaking is acutely needed to ensure high-value care and reduce the global burden of disease.

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