CURATIO INTERNATIONAL FOUNDATION

25 Years for Better Health Systems

HEALTH SYSTEMS STRENGTHENING ACCELERATOR

Report on Phased (Stepwise) Plan for the Capability Development of the Priority Rehabilitation Services

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Contents

Abbreviations

BSRM	British Society of Rehabilitation Medicine
CIF	Curatio International Foundation
DDI	Development, Democracy, and Innovation
FMI	Functional Independence Measure
GDP	Gross Domestic Product
GMH	Georgian Medical Holding
GNI	Gross National Income
HIC	High Income Country
HSL	Health Service List
ICD	International Classification of Diseases
ICF	International Classification of Functioning, Disability and Health
ICRC	International Committee of the Red Cross
ISPO	the International Society for Prosthetics and Orthotics
ICU	Intensive Care Unit
LMIC	Low and Middle Income Countries
MoIDPLHSA	Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia
MCR	Model of Care for Rehabilitation
MDT	Multidisciplinary Team
NGO	Nongovernmental organization
NHA	National Health Agency
NCSP	Nordic Classification of Surgical Procedures
SLT	Speech and Language Therapist
OT	Occupational Therapist
P&O	Prosthetist and Orthotist
PHC	Primary Health Care
PIR	Package of Interventions for Rehabilitation
PRM	Physical and Rehabilitation Medicine
PT	Physical Therapist
ToT	Training of Trainers
TSMU	Tbilisi State Medical University
UHCP	Universal Health Coverage Program
UEMS	European Union of Medical Specialists
UK	United Kingdom
US	United States
USAID	United States Agency for International Development
WHO	World Health Organization

1. Introduction

The World Health Organization (WHO) estimates that 2.4 billion, or one in three people globally, have a health condition over the course of their life that would benefit from rehabilitation.[1] According to the 2014 Census in Georgia, the number of people with self-reported difficulty functioning in the country is over 1,3 million, or over one-third of the population, who may have benefited or still benefit from rehabilitation.[2] The global and national prevalence of disability is expected to grow further due to population aging and the rapid increase of chronic noncommunicable diseases, with major implications for individuals and health systems. These systems already fail to adequately meet the needs of the disabled and other populations in rehabilitation services, particularly in Low- and Middle-Income Countries (LMICs), such as Georgia. Commonly reported barriers to accessing rehabilitation in LMIC include logistical factors (distance to service, lack or cost of transport), affordability (of services, treatment, lack of insurance), knowledge and attitudinal factors (including perceived need, fear, and lack of awareness about the service), discrimination from the health provider, provider lacking skills, and communication barriers.[3] The increasing number of people experiencing disability, as well as those living with comorbidities, means there is a rising demand for healthcare and rehabilitation services, adding pressure to already constrained health and household budgets.[4]

Defined broadly as "a set of measures that assist individuals who experience, or are likely to experience, disability to achieve and maintain optimal functioning in interaction with their environments,"[5] rehabilitation is among *key health strategies* for achieving population health and well-being as it promotes recovery from illness, improves human functioning, and maximizes opportunities for social participation.[6] Rehabilitation encompasses various medical interventions and specific measures required by persons experiencing disability, from diagnosis and therapy to assistive technology and psychosocial support. As a person-centered strategy, rehabilitation enhances personal autonomy and empowers people to take full control over their lives.[7] Moreover, rehabilitation has the potential to improve efficiency and reduce healthcare costs by reducing secondary complications associated with primary health conditions and the subsequent utilization of expensive acute services.[8] Also, rehabilitation is cost-

[1] Cieza, Alarcos et al. Global estimates of the need for rehabilitation based on the Global Burden of Disease study 2019: a systematic analysis for the Global Burden of Disease Study 2019. The Lancet, Volume 396, Issue 10267, 2006 - 2017

[2] 2014 general population census. Tbilisi: National Statistics Office of Georgia; 2014 (http://census.ge/en/results/census1/health accessed 1 July 2022)

[3] Bright T, Wallace S, Kuper H. A Systematic Review of Access to Rehabilitation for People with Disabilities in Low- and Middle-Income Countries. Int J Environ Res Public Health. 2018 Oct 2;15(10):2165. doi: 10.3390/ijerph15102165. PMID: 30279358; PMCID: PMC6210163

[4] World Health Organization. The need to scale up rehabilitation. In Rehabilitation 2030: A Call for Action; World Health Organization: Geneva, Switzerland, 2017

[5] World Health Organization and World Bank. World Report on Disability; World Health Organization: Geneva, Switzerland, 2011.

[6] World Health Organization. Rehabilitation: Key for Health in the 21st Strategy; WHO Doc: WHO/NMH/NVI/17.3. World Health Organization: Geneva, Switzerland, 2017; p. 6.

[7] World Health Organization. The need to scale up rehabilitation. In Rehabilitation 2030: A Call for Action; World Health Organization: Geneva, Switzerland, 2017

[8] White Book on Physical and Rehabilitation Medicine in Europe, Chapter 2. Why rehabilitation is needed by individual and society. Eur. J. Phys. Rehabil. Med. 2018, 54, 166–176, doi:10.23736/s1973-9087.18.05145-6

effective and is associated with reductions in hospital length of stay for various patient groups,[9] as well as increased labor market participation for both individual patients and their caregivers.

Yet, despite these obvious benefits in making rehabilitation an integral part of the national health strategy and the state health programs, the WHO Situation Assessment of Rehabilitation in Georgia established that only a limited spectrum of rehabilitation and habilitation services are physically available for the population. Moreover, almost no rehabilitation services are publicly financed, except for a limited set of rehabilitation and habilitation services for children, making rehabilitation inaccessible and unaffordable for most of the Georgia population.[10]

The unmet need for rehabilitation in the country is recognized by the Government of Georgia, as the Ministry of Internally Displaced Persons, Labour, Health and Social Affairs (MoIDPLHSA), in cooperation with the national and international stakeholders, has recently completed the elaboration of the national strategy for rehabilitation which envisions "Increasing access to timely, effective, person-centered rehabilitation services that are integrated at all levels of the health care system and reach the community." The strategy encompasses four objectives and a three-year action plan to achieve these objectives.

The Inclusive Development Hub of USAID's Bureau for Development, Democracy, and Innovation has partnered with the Accelerator to support countries in strengthening and integrating rehabilitation in health systems in post-conflict countries. Georgia was selected as a priority country for program support, which will entail direct technical assistance and regional and global level activities to catalyze country-level work. The program will be implemented from July 2021 to September 2023 in close collaboration with USAID in Georgia and the DDI Bureau in Washington.

The Accelerator issued a subgrant to Curatio International Foundation (CIF) to support the program's implementation on the ground. This includes operational support and technical expertise on Georgia's health systems and financing context to complement the Accelerator's global expertise and translation of existing knowledge into locally feasible solutions.

The main goal of the project is to improve population financial protection for rehabilitation according to need. The project collaborates with the MoIDPLHSA and other key stakeholders toward the following objectives:

1. Integration of rehabilitation in Georgian health systems and health financing programs.
2. Creating support systems for implementing programs from Objective 1.

Identifying the priority health conditions amenable to rehabilitation and establishing access and barriers to rehabilitation services for these priority health conditions in Georgia were the first steps undertaken by CIF in achieving the Project objectives. The second section of this document presents the final priority list of health conditions amenable to rehabilitation and briefly describes the process for developing this

[9] Howard-Wilsher S, Irvine L, Fan H, Shakespeare T, Suhrcke M, Horton S, Poland F, Hooper L, Song F. Systematic overview of economic evaluations of health-related rehabilitation. Disabil Health J. 2016 Jan;9(1):11-25. doi: 10.1016/j.dhjo.2015.08.009. Epub 2015 Sep 14. PMID: 26440556.

[10] Situation assessment of rehabilitation in Georgia: February 2020. Copenhagen: WHO Regional Office for Europe; 2021. Licence: CC BY-NC-SA 3.0 IGO

priority. A standalone Report on the prioritization of rehabilitation services in Georgia describes this process in more detail.[11]

The next step for integration of rehabilitation services in the national health sector framework entails defining a plan for the phased (stepwise) scale-up of the rehabilitation services for the priority health conditions through developing capabilities for rehabilitative service providers and for integration of these services in the healthcare financing system –state-funded programs over a medium to long-term period. This plan is expected to inform the content of the programmatic, operational, policy, and regulatory documents necessary for the development and delivery of these services under the future state-funded program for rehabilitation services.

The third and fourth sections of this document present two key components of this plan. The third section describes the current and desired rehabilitation capabilities in terms of infrastructure, workforce, funding and governance and regulatory requirements. The fourth section presents the key actions and timelines of the stepwise plan.

3. Priority rehabilitation services

The prioritization process of rehabilitation services proposed for public financing entailed three steps:

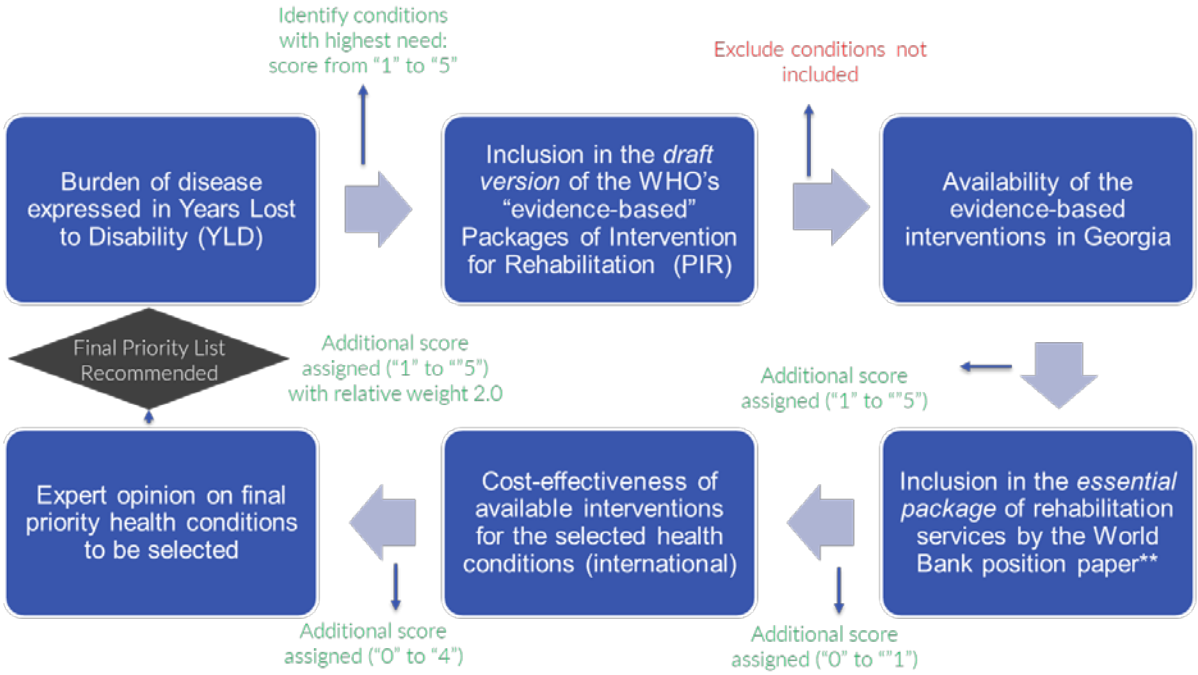
2. Identification of priority health conditions that are associated with limitations in functioning and are amenable to rehabilitation, and
3. Identification and grouping of *evidence-based* interventions for rehabilitation available in the country for these *priority* health conditions to be considered for inclusion in the state health programs for public financing.
4. Validation of the selected priority health conditions and the evidence-based intervention groups with key national stakeholders through the consensus-building workshop.

The priority health conditions that are associated with limitations in functioning and are amenable were defined using predefined criteria and commensurate qualitative scores to derive a priority list of health conditions that (a) generate the highest need for rehabilitation in the country; (b) are amenable to evidence-based rehabilitation interventions; (c) these evidence-based rehabilitation interventions are currently available and provided in Georgia and (d) the same interventions are recommended for the inclusion in an "essential package of services" proposed by the World Bank position paper;[12] (e) in expert opinion is of highest priority considering the existing demand for the respective rehabilitation services and their public health importance (see Figure 1).

[11] Report on prioritization of rehabilitation services in Georgia. CIF. 2022

[12] Table 15.1, Essential Package of Rehabilitation Interventions - Disease Control Priorities: Improving Health and Reducing Poverty - NCBI Bookshelf (nih.gov) accessed 3 July 2022.

Figure 1: Process and criteria used for prioritization of health conditions amenable to rehabilitation for public financing in Georgia



The second step was completed for *five priority health conditions* currently not included in the publicly financed rehabilitation programs (fractures, amputation, stroke, traumatic brain injury, and spinal cord injury). This step implied "matching" interventions included in the WHO Package of Interventions for Rehabilitation (PIRs)[13] with respective rehabilitation interventions available in Georgia and grouping them in larger intervention groups (by type of intervention) to be considered for reimbursement of the rehabilitation services under the proposed state program.

[13] The draft WHO PIRs that are under development were kindly shared with CIF team (see more details in "Documenting the use of the Package of Interventions for Rehabilitation (PIR) Developed by WHO in Georgia". CIF 2022)

4. Desired capabilities for providing rehabilitation services

The desired capabilities for delivering rehabilitation services are determined by the *future model of care for rehabilitation in Georgia*.

4.1. Future model of care for rehabilitation in Georgia

A model of care is a multifaceted concept that broadly defines how health care is delivered, including the values and principles, the roles and structures, and the care management and referral processes. The elements of a model of care should be based on best practice evidence and defined standards and provide structure for delivering health services and a framework for subsequent evaluation of care. It has a facilitating role between the strategic direction of the health system and the delivery of care in local services settings.

The future Model of Care for Rehabilitation (MCR) in Georgia presented in this paper provides the framework for building rehabilitation services and clinical pathways to achieve optimal quality outcomes for rehabilitation patients. According to WHO, "the best way to ensure that rehabilitation services reach all those who need them is by integrating rehabilitation across all levels of the health system, as part of universal health coverage."[14] The future MCR for Georgia determines how to plan, design, and finance the hierarchy of rehabilitation services across all health system levels and is proposed using the integrated care model approach, incorporating the elements of the population-based health management and the "Innovative Care for Chronic Conditions Model."[15]

"Integrated health services delivery is defined as an approach to strengthen people-centred health systems through the promotion of the comprehensive delivery of quality services across the life-course, designed according to the multidimensional needs of the population and the individual and delivered by a coordinated multidisciplinary team of providers working across settings and levels of care. It should be effectively managed to ensure optimal outcomes and the appropriate use of resources based on the best available evidence, with feedback loops to continuously improve performance and to tackle upstream causes of ill health and to promote well-being through intersectoral and multisectoral actions".[16]

The proposed MCR also entails the development and implementation of the clinical pathways for the priority health conditions for rehabilitation that are expected to improve the equity of access and consistency of service quality from the variable starting points of current care delivery across the health system of Georgia and to reduce the length of stay and hospital utilization in both acute care and non-acute facilities.

The MCR presented here is not prescriptive in terms of work practices or service planning but allows for flexibility in service design practices that suit the rehabilitation services needs at the local, regional and national levels, leaving room for innovation in service delivery. The MCR should also be regarded as a pre-condition to the acceptance and successful implementation of changes to current practices by clinicians and rehabilitation professionals.

[14] Integrating rehabilitation into health systems (who.int)
[15] Integrated care models: an overview (who.int)
[16] WHO Regional Office for Europe. Strengthening people-centred health systems in the WHO European Region: framework for action on integrated health services delivery. 2016

The successful institutionalization of the MCR in the national health system will require changes across all health system building blocks, effective public-private collaboration in building the rehabilitation services capabilities, and support by the clinicians to changes in clinical practice and service delivery.

The proposed MCR draws on WHO's "Rehabilitation 2030 Initiative",[17] "Rehabilitation in health systems: Guide for Action,"[18] the models and frameworks of rehabilitation developed by the British Society of Rehabilitation Medicine (UK)[19] and the Agency of Clinical Innovation (Australia)[20].

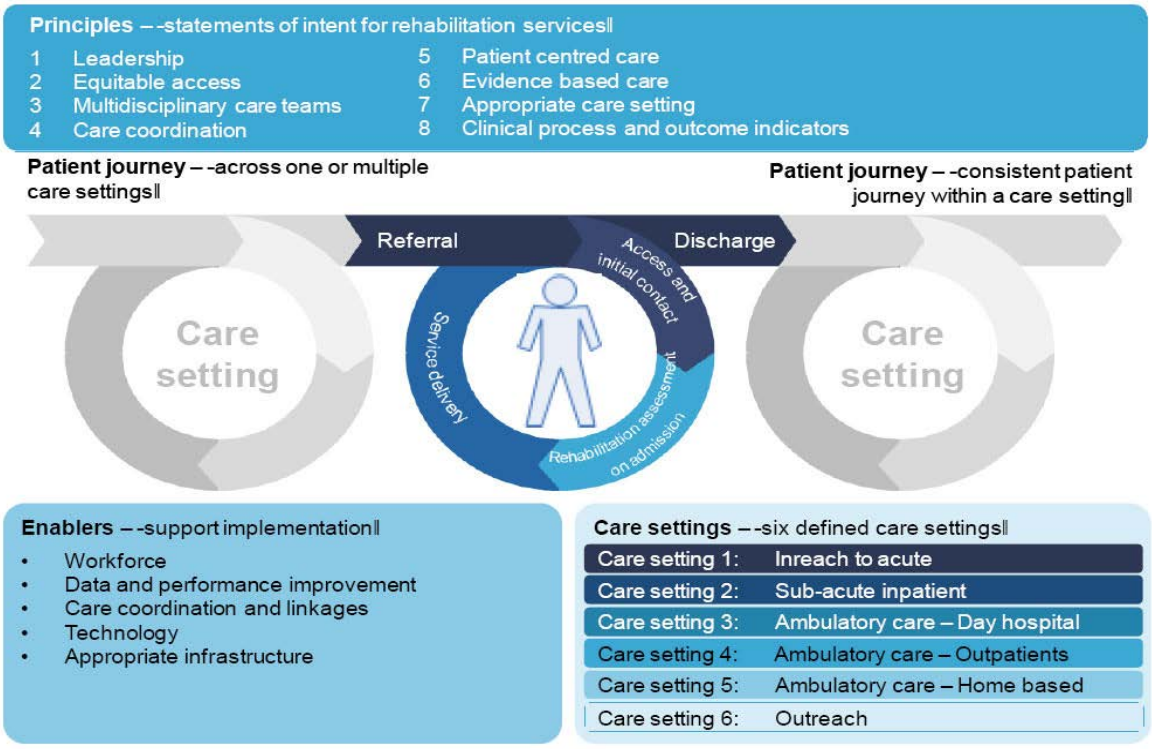
The following *key goals* are proposed for the MCR in Georgia:

- Build on and strengthen current health care and rehabilitation services to deliver these outcomes, acknowledging the fundamental need to redress the balance of services across inpatient and ambulatory settings.
- Ensure the availability of rehabilitation services nationwide across the continuum of care that are patient-centered, sustainable, responsive, accessible and cost-effective and based on population need and the best available evidence internationally.
- Deliver services that are integrated across the continuum of care and promote smooth transitions between care settings vertically and horizontally.
- Promote the integration of clinical services with quality, workforce development, education, and training.
- Provide comprehensive interdisciplinary rehabilitation and habilitation services (including inpatient and community based) that are cost-effective, equitable and consistent across the country.
- Reduce dependence on the health, aged care and disability sectors over the long term.

The foundational principles, enablers, and elements of a patient journey across care settings of the future MCR in Georgia are presented in Figure 2.

[17] Rehabilitation 2030 (who.int) accessed on November 23, 2022
[18] Rehabilitation in health systems: guide for action (who.int) accessed on November 23, 2022
[19] 2021-v9.3-22-3-21-speccommunitystandards-summary-fortheweb-clean.pdf (bsrm.org.uk) accessed on November 23, 2022.
[20] Agency for Clinical Innovation Rehabilitation Network. Principles to support Rehabilitation Care. 2019 at Principles to Support Rehabilitation Care (nsw.gov.au) accessed on 3 December 2022

Figure 2: Future Model of Care for Rehabilitation in Georgia



Source: Adapted from Agency for Clinical Innovation 2019[21]

The eight principles of the MCR in Georgia are defined as *"statements of intent"* on what is desired to be achieved and include:

1. Leadership – Leadership of the Ministry is realized through properly aligned regulatory levers and financial incentives supporting the integrated care continuum and the key principles of rehabilitation care outlined below.
2. Equitable access – Patients receive equitable access to rehabilitation services nationwide, in the most appropriate setting and on time.
3. Multidisciplinary[22] care teams – Patients have access to a *core Multi Disciplinary Team (MDT)* who work collaboratively within an *interdisciplinary*[22] framework. Access to non-core team specialist services is available as required.
4. Care coordination – Patient care is communicated and coordinated between the multidisciplinary team and other care providers across the continuum of care.Patients and their caregivers are encouraged to participate in goal setting and care planning.
5. Patient-centered care – Rehabilitation services are patient-centered and delivered to promote an enablement model of care. Patient-centered care ensures an ongoing understanding of an individual's needs and expectations.

[21]Agency for Clinical Innovation Rehabilitation Network. Principles to support Rehabilitation Care. 2019 at Principles to Support Rehabilitation Care (nsw.gov.au) accessed on 3 December 2022.

[22] Health care providers from different professions work together to collaboratively provide care and treatment within their individual scope of practice and areas of competence

6. Evidence-based care – Processes to promote the development and implementation of national guidelines based on international best practices are in place to support safe, effective and efficient care. Evidence-based practice is supported through professional development, teaching, quality research and quality assurance activities.
7. Appropriate care setting – Patients receive rehabilitation services in the most appropriate setting based on individual patient fit with the admission and discharge criteria for the relevant care setting and the potential to achieve rehabilitation goals.
8. Clinical process and outcome indicators – Performance and accountability framework and consistent and regular measurement processes across rehabilitation services are in place to monitor and demonstrate patient outcomes.[23]

Rehabilitation services in the future MCR in Georgia will be provided in three main care settings: *inpatient, day hospital/ambulatory and at a patient's home*, further sub-divided into the six access points (1) inreach to acute, (2) sub-acute inpatient, (3) ambulatory care – day hospital, (4) ambulatory care – outpatient, (5) ambulatory care – home and (6) outreach (see Figure 2). These multiple access points into rehabilitation and streaming of patients into the most suitable pathway/service following *comprehensive assessment* will be needed. This will ensure that the suite of available rehabilitation services works successfully and aligns with the key principles of this rehabilitation model.

4.1.1. Access and triage

Early assessment, screening and identification of a person's rehabilitation needs and risk of functional decline should be undertaken as soon as possible following presentation to the hospital during the acute care rehabilitation period. The timing will depend on the individual's medical status but may be possible within the emergency department. This process will be assisted by the availability of a multidisciplinary rehabilitation team, or the rehabilitation physician to triage referrals to inpatient, ambulatory and outpatient rehabilitation.

4.1.2. Inpatient rehabilitation services

Inpatient rehabilitation is the most intense level of care, which provides an interdisciplinary team approach to enhance and restore an individual's function following a disabling injury, illness or surgical intervention. Individuals, especially older people, admitted to a hospital for an acute episode are at high risk of loss of function and independence due to periods of inactivity, immobility, and prolonged bed rest. This is further impacted by individuals who have multiple co-morbidities, experience complications and require lengthy periods in intensive care. Individuals in inpatient rehabilitation require a goal-orientated program of medical interventions to regain independence, confidence and optimum function. Interventions that either prevent decline or maximize function should start immediately on admission to a hospital for most patients over 65 years of age and those with neurological and orthopedic conditions such as stroke, brain injury and hip fracture if there are no medical contraindications for this to occur. This may facilitate direct discharge home with early supported discharge and ambulatory rehabilitation services. Integrated care models suitable for acute settings will include integrated pathways where specialist rehabilitation teams will work with physicians and

[23] Adapted from Agency for Clinical Innovation Rehabilitation Network. Principles to support Rehabilitation Care. 2019 at Principles to Support Rehabilitation Care (nsw.gov.au) accessed on 3 December 2022

surgeons (e.g. stroke, brain injury); and early consultation and transfer to specialized wards and services (e.g. spinal cord injury, young complex disability).

The individual program of rehabilitation will vary for each patient depending on presenting condition and subsequent cognitive and physical deficit. The individual's goals also form a rehabilitation variable. This will influence the health professionals involved in the program and the intensity of therapy. Hence, the inpatient rehabilitation services will be subdivided into general inpatient and specialized inpatient rehabilitation services to be provided across acute (early), sub-acute and post-acute (or non-acute) care continuum.

Specific attention in the future MCR will be devoted to *early rehabilitation* in the acute care settings that will be provided in the specialized acute rehabilitation wards. Patients hospitalized for an acute illness or injury are at risk of experiencing a significant loss of functioning as defined by the International Classification of Functioning, Disability and Health (ICF). The risk of a significant loss of functioning is increased in critically ill patients, in patients with complications or long-term intensive care stays, in persons with disabilities or with pre-existing chronic conditions and in the elderly. Early identification of rehabilitation needs and early rehabilitation start can reduce healthcare costs by reducing dependence and nursing care, length of stay and prevention of disability. Two principles of rehabilitation for acute and early post-acute care can be distinguished. First, the provision of rehabilitation by health professionals who are generally not specialized in rehabilitation in the acute hospital. And second, specialized rehabilitation care is provided by an interdisciplinary team. There is a large variation in how this specialized, typically post-acute rehabilitation care is organized, provided, and reimbursed in different countries, regions, and settings. For instance, it may be provided either in the acute hospital or in a rehabilitation or nursing setting. Most in-patients do not receive specialized rehabilitation at all during their whole stay in the acute hospital. But it is important to point out that health professionals working in acute hospitals and who are not specialized in rehabilitation need to be able to recognize patients' needs for rehabilitation care and to perform rehabilitation interventions themselves or assign patients to appropriate rehabilitation care settings. Out of the two models promoted by the European Union of Medical Specialists - UEMS,[24] a dedicated acute rehabilitation ward is recommended as the preferred setting for providing early rehabilitation services for the MCR in Georgia.

4.1.3. Day hospital and ambulatory rehabilitation services

Day hospital and ambulatory rehabilitation services are also suggested to be subdivided into specialized and general day care/outpatient rehabilitation services and will be rendered in post-acute care settings.

Day rehabilitation will provide low to moderate therapy, depending on individual patient needs in a non-inpatient setting. Patients are expected to attend the day rehabilitation program two to five times a week for approximately half a day at a time for a program of rehabilitation to maximize independence and function. The length of time a patient will attend a day rehabilitation program is time-limited and usually range between six to twelve weeks.

[24] Ward, AB, C Gutenbrunner, H Damjan, A Giustini, and Delarque A. 2010. "European Union of Medical Specialists (UEMS) Section of Physical & Rehabilitation Medicine: A Position Paper on Physical and Rehabilitation Medicine in Acute Settings." J Rehabil Med 42: 417-24

Patients reside at home when not attending the day rehabilitation program and, therefore, must have a minimally suitable environment and social support to facilitate this.

An interdisciplinary rehabilitation program – including medical, nursing and allied health input – will be provided to individuals attending a day rehabilitation program at the hospitals (both general hospitals with rehabilitation wards and standalone rehabilitation centers).

Day hospital specialized rehabilitation will normally be provided for individuals with the opportunity to access specialist medical assessment and review and therapy interventions to improve and maintain their independence and function. These clinics are usually most suited to individuals who only require a single discipline intervention or have a specific medical condition requiring intervention.

The lack of available transport options can often impact on an individual's ability to access ambulatory rehabilitation services. The availability of transport options that are accessible and cost-efficient will form a part of all ambulatory and community-based rehabilitation services.

4.1.4. Home rehabilitation services

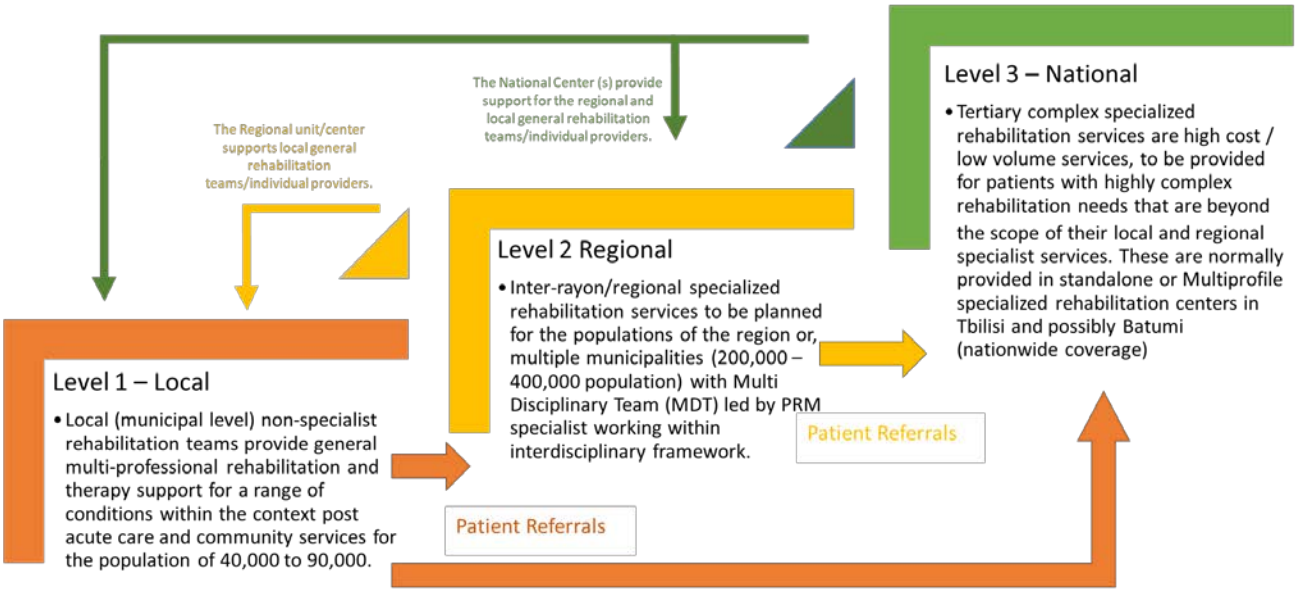
Home rehabilitation services, subdivided into specialized and general rehabilitation services will form part of the post-acute services provided in the future: Home rehabilitation will be provided in an individual's own home, with the goal of maximizing independence and function. A skilled multidisciplinary team provides therapy with intensity varying depending on individual need. Both medical specialists and social workers need to form part of this team and be available to undertake home-based assessments and interventions as needed and work closely with the individual's general practitioner. Adequate social support, suitable and safe environment and availability of required equipment are essential elements that must be considered if an individual is to receive rehabilitation at home. There will be multiple access points to rehabilitation in the home to minimize hospital inpatient stays and avoid admissions (see Figure 15). Access to the program needs to be coordinated by the PHC teams with referrals accepted from emergency, inpatient care and specialists.

The scope of services, anticipated outcomes for a patient journey and implications for implementing each of the six future rehabilitation settings are presented in **Annex 1**.

4.1.5. Tiered and integrated MCR design

Drawing on the current international best practice (UK, Australia, Canada), the general and specialized rehabilitation services are suggested to be tiered as networks with outreach and organized at three levels: Local, Regional and National (see Figure 3).

Figure 3: The proposed design for the future MCR service organization in Georgia



Source: Authors

<u>Level 1 – Local</u>

Local or municipal (rayon) level rehabilitation services should be planned for 40,000 to 90,000 population (the range commensurate to the population range for most municipalities in Georgia) and will be provided by a *"core" MDT*, including appropriately trained nursing and therapy staff: Physical and Rehabilitation Medicine[25] (PRM) specialist physician, rehabilitation nurse, physical or occupational therapist, speech therapist and psychologist or psychotherapist. The teams are expected to be based in the municipal level medical centers (hospitals) that provide secondary inpatient services (some of them also provide emergency and acute medical care). However, some team members (particularly the PRM specialists and occupational therapists[26]), particularly at the initial stages of the MCR implementation can be organizationally associated with municipal polyclinics or Family Medicine Centers (FMC) in urban centers of larger municipalities, or the level 2 Regional rehabilitation units or standalone centers. Yet, as it is desirable for all team members to have an exposure to both inpatient and outpatient cases, thus eventually to be employed or otherwise associated with the municipal level medical centers . The local rehabilitation services will develop and maintain strong outreach with PHC and upper-level rehabilitation services, a wide range of acute and community-based services, and eventually with the

[25] Medical specialty as defined by the Order #01-8/n of the Minister of Labor, Health and Social Protection of Georgia dated March 30, 2015 on the approval of professional competencies of medical specialties, is "Physical medicine, rehabilitation and balneology (spa therapy)".

[26] As currently an acute deficit of properly trained occupational therapists in the country (see also the section on workforce).

skilled nursing residential care services once such services become more widely available for patients requiring chronic care, including periodic rehabilitation interventions.

The *general* rehabilitation services provided by the Local (municipal) level will include rehabilitation for the priority health conditions identified for Georgia: brain and spinal cord injuries, neurologic conditions, fractures and orthopedics, and eventually cardio-pulmonary rehabilitation (see). The rehabilitation services will be provided as inpatient, ambulatory/day hospital and outpatient and home-based rehabilitation. The home-based rehabilitation services should have a significant focus on supporting early discharge home. Such changes to services provision will facilitate the services operating six to seven days a week at the municipal center. If needed, the local services, with the help of the regional services, should also provide multidisciplinary triage to acute services (including access to medical specialist assessment) at the regional or national level.

Level 2 - Regional

Regional specialized rehabilitation services will be organized/contracted at the regional or inter-rayon levels for the catchment population of ranging from 200,000 to 400,000. The services will be rendered by the extended MDT (s) led by the PRM specialist and will be provided in all care settings: inpatient, day-hospital/ambulatory and in exceptional cases at home. The main profile of the level 2 specialized rehabilitation services will be an acute inpatient rehabilitation in the dedicated ward, which implies 24-hour rehabilitation approach and a peer group of other patients undergoing similar programs (i.e. "rehabilitation milieu"). Because of this - as recommended by the WHO and UEMS – the level 2 rehabilitation services will be co-located and supported by wards providing acute medical services, including an ICU. In this way, the patients with complex rehabilitation needs remain in or near to high technology diagnostic and treatment facilities, where relevant medical expertise is readily available 24/7 in case of need (sudden exacerbation of the disease or deterioration of a patient's condition).

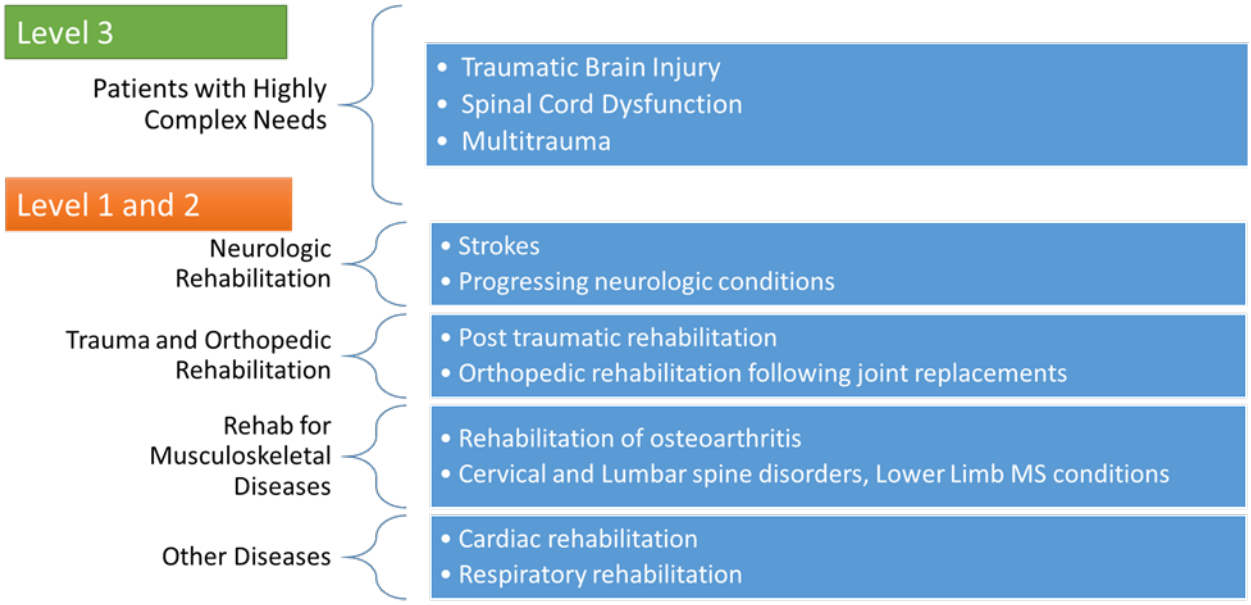
In accordance with the "Hub and Spoke" principle for organization of the rehabilitation services in the Georgia MCR, the Level 2 services will serve as a hub for the adjacent local/municipal, or level 1 general rehabilitation services by (a) assessing, organizing referral, and accepting patient with specialized or more complex rehabilitation needs from level 1 service points and (b) providing advice and peer support to the local rehabilitation teams, including on-site consultations and tele-rehabilitation.

Level 3 – National

Tertiary complex specialized rehabilitation services will be relatively high cost / low volume services, to be provided for patients with highly complex rehabilitation needs that are beyond the scope of the local general and regional specialized services. These will include severe brain and or spinal cord injury (of any origin), multi-trauma, low awareness states, challenging behavior or concurrent medical needs (see Figure 17). These services will be normally provided in the national standalone or co-located specialized rehabilitation centers in Tbilisi and possibly in Batumi (for the entire country population of 3.7 million) covering each priority health condition. The services will include both inpatient and hospital day/ambulatory services for the people with long term care needs within the scope of the level 3 specialized services. The highly specialized national level rehabilitation services will not be provided at home, beyond tele-rehabilitation sessions in exceptional cases.

Following the “Hub and Spoke” principle, the level 3 national services are suggested to be contracted through the National Health Agency to serve as national hubs for patients with highly complex rehabilitation of all relevant profiles referred from the regional and the local rehabilitation services. The highly professional rehabilitation teams from the tertiary level will also provide organizational and clinical advice and consultations (mainly through telecommunication means) to the regional and in certain cases to the local rehabilitation teams. The level 3 rehabilitation centers will also serve as centers of excellence and clinical bases providing teaching and postgraduate training for the rehabilitation specialists.

Figure 4: Priority health conditions and rehabilitation interventions to be provided at three levels



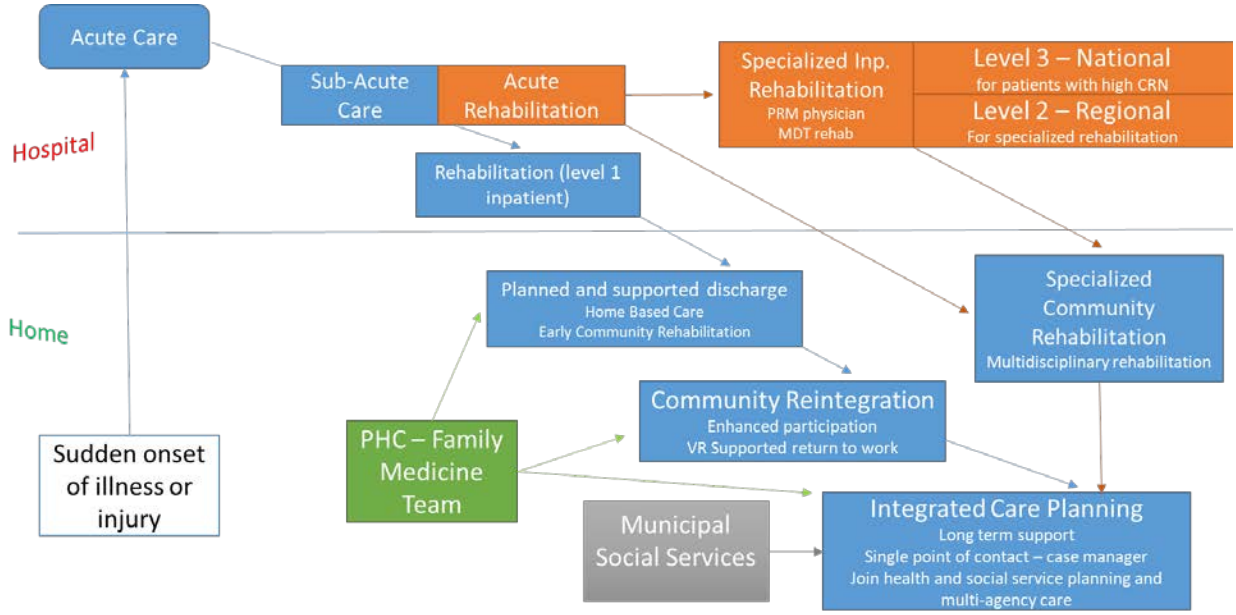
Source: Authors

Implementing this service design for MCR in Georgia is expected to be mainly facilitated through the regulatory levers (mandatory standards and licensing requirements for infrastructure and workforce for rehabilitation service providers) and strategic purchasing (selective contracting, activity- and outcome-based financing, etc.). This is the most realistic path forward considering the current dominance of private health providers in Georgia, which makes direct infrastructure and workforce planning almost impossible, especially in urban areas, with the exemption of the Georgian Medical Holding (GMH), a publicly owned subsidiary of the Ministry, which incorporates three national level hospitals, over 20 small municipal medical centers (with co-located nonacute care hospital and PHC facility) in the remote areas, and 1,200 rural PHC providers. The GMH provides an opportunity for the Ministry to better align regulation and purchasing, with direct investments in those rehabilitation services (e.g. highly specialized high-cost and low-frequency Level 3 services) and in those geographic areas that will be less attractive for the private health providers.

4.1.6. Patient Journey – critical care pathways for patients with rehabilitation needs

Critical care or integrated care pathway is a complex intervention for the mutual decision-making and organization of care for a well-defined group of patients during a well-defined period.[27] Critical care pathways in the future MCR in Georgia across the medical and rehabilitation care continuum, care settings and levels of care are presented in

Figure 5: Critical care pathways for patients with rehabilitation needs in the future MCR of Georgia



Source: Authors

The figure shows a journey of a patient with sudden onset or exacerbation of illness (neurologic disorders, musculoskeletal, etc.) or injury (including multi-trauma) across the medical and rehabilitation care continuum from acute care settings to return to the community and workplace, or long-term care settings in case if long term health conditions develop. The key pathways encompass a patient's transition from acute care in ICU to (a) either sub-acute care in a medical ward to planned discharge to a lower-level facility for general inpatient rehabilitation or community discharge; (b) or a collocated acute rehabilitation ward that in turn refers a patient to either level 2 co-located specialized rehabilitation ward or a level 3 specialized rehabilitation national center, or to specialized community rehabilitation service provided by the local MDTs.

The critical pathway for a rehabilitation patient emphasizes a need for Integration of levels of health care (primary, secondary and tertiary) and close inter-sectoral coordination between the health and social services - at every stage of care - for planned and early discharge, community reintegration and integrated care planning. The latter for the patients with long-term care needs will be led in the future by a case manager who will coordinate the joint care planning between health and social services and will steer the patient across the care continuum and care settings. A dedicated professional (preferably a

[27] European Pathway Association. About care pathways – E-P-A.org accessed on December 20, 2022

nurse with relevant training in case management) within the Family Doctor's team is suggested to fulfill this role.

The MCR service elements described in the previous section will be organized in a way to ensure a smooth transition of a patient from each stage, phase and care setting to another. New clinical pathways, well-defined referral processes and admission and discharge criteria, and utilization of internationally used patient assessment tools are critical preconditions for these transitions (see next sections for details).

4.1.7. Clinical pathways, guidelines, admission and discharge criteria for the priority health conditions for rehabilitation

While the critical care pathways presented in the previous section define the patient journey across the care continuum and identify the main phases and settings, the clinical pathways define the details of patient management at each phase and setting.

Clinical pathways and the national guidelines for the rehabilitation interventions for the priority health conditions in the future rehabilitation system in Georgia need to be eventually elaborated, adopted and later fine-tuned to the MCR once fully implemented. However, as a first step, we propose to use the WHO PIRs for the priority health condition and also start the adaptation of the key elements of the clinical pathway for patients with critical illness or injury elaborated by the UK National Institute of Health and Clinical Excellence (NICE) (see **Annex 2**) and the NICE guideline on "Rehabilitation After Traumatic Injury."[28] These resources can also be used as a "template" upon which the future national guidelines and clinical pathways will be developed for the rehabilitation interventions for the priority health conditions such as neurologic, fracture and orthopedic and other musculoskeletal, cardiopulmonary and cancer patients.

Implementing the proposed MCR in Georgia will also require the development of utilization management guidelines, including the preauthorization provisions for commissioning publicly financed priority rehabilitation interventions and services in the future. The examples of the utilization guidelines adapted from the United States Centers for Medicare and Medicaid (CMM) Services Policy Manuals and the guidelines of several US private health insurance companies are presented (see **Annex 3**). These guidelines include the description of the purpose, clinical indications (admission and discharge criteria), general information and references. Clinical utilization guideline examples are presented for acute and sub-acute inpatient rehabilitation. At a minimum, national guidelines must be developed for post-acute rehabilitation care, day hospitals and specialized outpatient rehabilitation care. Major clinical pathways and referral and utilization management guidelines should also be elaborated for PHC physicians. PHC and family medicine teams will represent a major link in the future MCR in Georgia.

These templates and examples of clinical and utilization guidelines can be used by the Ministerial Technical Working Group that will be working on developing the national rehabilitation standards and guidelines (see the section on Rehabilitation Service Integration Action Plan for 2022-2026).

[28] NICE guideline [NG211. Published on 18 January 2022. Recommendations | Rehabilitation after traumatic injury | Guidance | NICE accessed on December 3, 2022

4.1.8. Assessing and categorizing rehabilitation patient needs

Reliable tools for the assessment of a patient's rehabilitation needs and defining patient classification categories based on the assessed needs are required, to clearly define the processes and procedures for a patient's movement and referrals across the future medical and rehabilitation care continuum defined by the proposed MCR in Georgia.

Rehabilitation needs assessment tools

Identifying a patient's rehabilitation needs and assessing the complexity of the needs is a challenging task throughout the world. In the US, Canada, Australia, and many parts of Europe, classifications of rehabilitation complexity have relied on physical dependency (measured by the Functional Independence Measure – FIM, or Barthel index), as a surrogate for rehabilitation needs. Although these classifications may work reasonably well where patients are medically stable and physical independence is the main target of intervention, they do not capture the needs for medical or specialist nursing care, nor do they specifically address the need for cognitive, behavioral or other psychological interventions. The Rehabilitation Complexity Scales provide a simple measure of the complexity of rehabilitation needs, which take into account basic care, specialist nursing, therapy and medical interventions. The extended version may offer a more sensitive tool for detecting patients with highly complex needs for therapy and equipment in specialist rehabilitation settings.[29] Additional measurement tools suggested for patients with complex and specialized rehabilitation needs (stroke, brain injury, trauma) are: Rancho Los Amigos Cognitive Scale, Glasgow Coma Scale, Neurologic Impairment Scale and Disability Rating Scale.

Rehabilitation inputs are captured by the Northwick Park Dependency Scales and Care Needs Assessment are used in the UK and several European countries. These are used to identify the rehabilitation resources provided in relation to caseload complexity and activities for daily functioning. Needs & Provision Complexity Scale – UK are designed to assess the complexity of needs for health and social care and their provision and thus may be a potentially important assessment tool for the future integrated MCR in Georgia. The Community Integration Questionnaire is used for assessing the potential and status of home integration, social integration, and productive activities. The list of recommended assessment tools for review and consideration by the Ministerial Technical Working Group and their short descriptions are presented in Table 1

Table 1: Recommended assessment tools for rehabilitation patients in the future MCR in Georgia

Measures	Aspects Measured
Rehabilitation Needs and Complexity	
Functional Impairment Measure (FIM) and Barthel Index – US, Canada, Australia	Motor and cognitive disablement
Neurological Impairment Scale – UK	Major neurological impairments
Rehabilitation Complexity Scale and Extended version	The complexity of rehabilitation needs, which take account of basic care, specialist nursing, therapy and
Rancho Los Amigos Cognitive Scale, Glasgow Coma Scale, Neurologic Impairment Scale and Disability Rating Scale.	For patients with complex specialized rehabilitation needs (stroke, brain injury, multitrauma)

[29] Turner-Strokes, L, H Scott, H Williams, and R Siegert. 2012. "The Rehabilitation Complexity Scale − extended version: detection of patients with highly complex needs." Disability & Rehabilitation 34 (9) 715-20

Rehabilitation and nursing care needs for chronic patients	
Northwick Park Dependency Scale & Care Needs Assessment - UK	Activities needed for daily functioning. Nursing care needs and time taken
Needs & Provision Complexity Scale - UK	The complexity of needs for health and social care and their provision
Community Integration Questionnaire - UK	Home integration, social integration, productive activities

Source: Compiled by Authors

Classification of rehabilitation patients according to the assessed needs and complexity

The measurement tools for the rehabilitation patients presented in the previous section allow to classify them according to their care needs and the complexity of interventions required. This classification is important to ensure patients' transition to the most appropriate care setting and levels of care and to provide cost-effective services tailored to their needs. For these purposes, in the future MCR, we recommend considering the adaptation to the Georgia context of the patient categorization developed by the British Society of Rehabilitation Medicine (BSRM), where patient needs are grouped into four categories (A-D), with patients with more complex needs (category A or B) requiring specialized rehabilitation services.[30] The category of a patient will determine the level of rehabilitation services at which the patient should be referred for general or specialized rehabilitation – level 1, 2, or 3 (see also **Annex 4**).

The relation between the patient category and the rehabilitation service levels is presented in Table 2 for patients with neurologic disorders.

Table 2: Patient categories and levels of rehabilitation

Level of Rehabilitation Services	Patient Categories	Remarks
Local (municipal) general rehabilitation – Level 1	C and D	The majority of patients will have category C or D rehabilitation needs. These individuals will travel satisfactorily down the path from injury/illness to independence with the help of their level 1 local rehabilitation and support services: For example, a patient admitted following a moderate stroke may have acute treatment followed by 4-6 weeks rehabilitation in municipal medical center's rehabilitation unit may then transfer satisfactorily on to their local community rehabilitation services without the need for specialized rehabilitation. However, a small minority of patients will have more complex needs requiring specialized rehabilitation. A few will have very complex needs or profound disabilities, requiring a tertiary specialized rehabilitation service.

[30] British Society of Rehabilitation Medicine. Levels of specialisation in rehabilitation services (bsrm.org.uk) accessed on December 5, 2022

Regional Specialized Rehabilitation – Level 2	B	The type of patients who need a specialist rehabilitation service would typically be younger, previously fitter patients with more complex needs such as cognitive, communicative, perceptual, behavioral and social difficulties requiring the coordinated input of a PRM specialist-led team to manage difficult to treat symptoms and to coordinate on-going care. Category B patients typically require: 1. Coordinated interdisciplinary intervention from 2-4 or more therapy disciplines, in addition to specialist rehabilitation medicine/nursing care in a rehabilitative environment 2. Medium-Longer durations of stay, ie, usually >6 weeks – occasionally up to 6 months 3. Rehabilitation/support to return to productive roles, such as work or parenting. 4. Special facilities/ equipment or interventions 5. They may also have medical problems requiring ongoing investigation / treatment during rehabilitation.
National tertiary specialized rehabilitation – Level 3	A	Some patients will have very complex needs for rehabilitation that are beyond the resources of their local and regional services and require a tertiary specialized (Level 3) service will be available at the national level centers: 1. Intensive, coordinated interdisciplinary intervention from 4 or more therapy disciplines, in addition to specialist rehabilitation medicine/nursing care in a rehabilitative environment 2. Longer programs - typically 2-4 months, but occasionally up to 6-12 months 3. Very high-intensity input – e.g. 1:1 nurse "specialling", or 2-3 trained therapists at one time 4. Highly specialist clinical skills (see table 1 for details) 5. Neuropsychiatric care, including risk management, treatment under the Mental Health Act 6. Higher level facilities /equipment, such as bespoke assistive technology 7. Complex multi-agency vocational rehabilitation /support 8. Ongoing management of complex / unstable medical problems in an acute hospital setting

Source: BSRM 2019

5. Desired Rehabilitation Service Capabilities

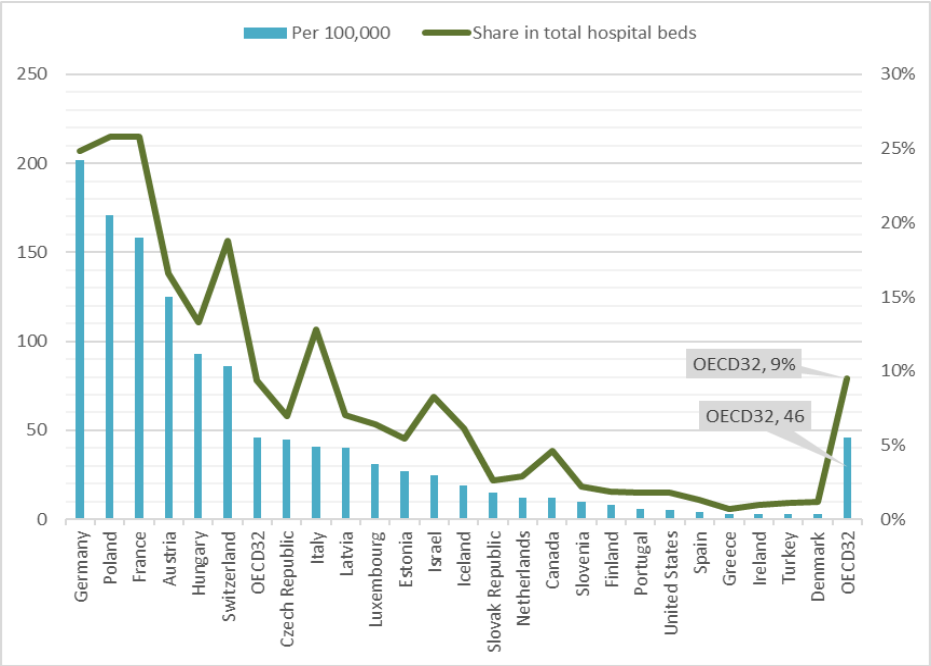
5.1. International benchmarks and desired bed capacity and workforce planning norms for Georgia

There is a wide variation in organizing the rehabilitation services globally that is stemmed by the distinct historical, economic, social and cultural circumstances of specific countries. The situation is further complicated by the differences in definitions and interpretation of the scope of the rehabilitation services among different nations. The resulting is a wide range in normative and/or average ratios and planning guidelines for these services.

5.1.1. Desired (target) bed capacity for the future MCR in Georgia

The optimal number of beds for rehabilitation is strongly affected by a several factors, the knowledge of which is important for the adaptation of the planning guidelines to the situation of the country. These factors include the total hospital bed capacity available and operational in the country, the health system capacity to treat patients in acute care, the ability of the primary health care sector to prevent avoidable admissions, the availability of post-acute care settings to provide rehabilitation and long-term services, and the coordination between the levels of care (primary health care, secondary/tertiary health care) to transfer the patient in the most appropriate setting. As a result, the number of rehabilitation beds per population varies widely internationally. Among countries of the Organization of Economic Cooperation and Development (OECD) this variation ranges from 3 beds per 100,000 population accounting for 1% of the total hospital bed capacity in Denmark, Turkey, Ireland and Greece to respectively 158, 171 and 202 rehabilitation beds per 100,000 population respectively in France, Poland and Germany accounting for over 25% of the total hospital bed capacity, with OECD average at 46 beds per 100,000 population and 9% of the total hospital beds available (see Figure 6).

Figure 6: Hospital beds for rehabilitation in OECD countries, 2015 or the nearest year



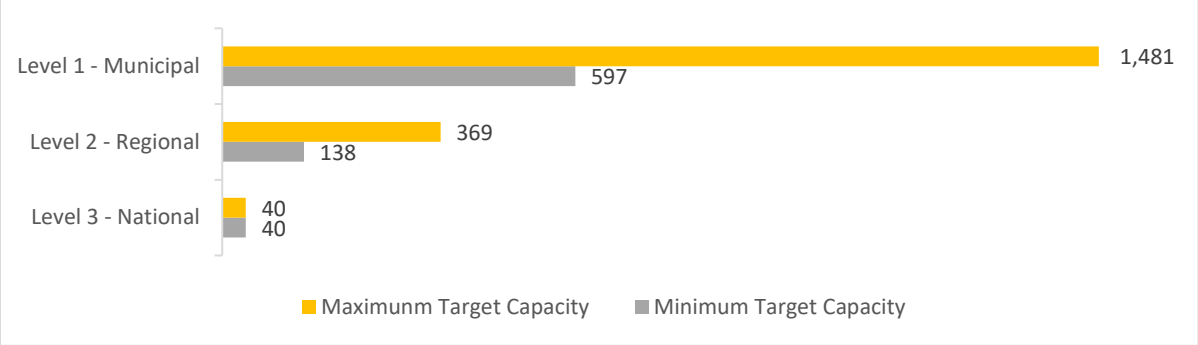
Source: OECD Health Statistics 2017.

Based on the analysis of domestic and international experience, the health authorities in Australia[31] and UK[32] have defined 21 beds per 100,000 as the desired target bed capacity for specialized rehabilitation. **Considering that the proposed MCR in Georgia is largely based on the concepts, principles and model of care for rehabilitation of these two countries, the same bed ratio (21 per 100,000), or total of 775 rehabilitation beds, is recommended as a minimum desired bed capacity for the future MCR in Georgia.**

At the same time, in our opinion there is a need to regulate the future supply of the hospital beds for specialized rehabilitation to avoid their oversupply and fragmentation of rehabilitation care, as it happened with acute care hospital beds in the recent past in Georgia, resulting in fragmentation and underutilization of the total inpatient capacity (with less than 50% of the nationwide bed occupancy rate) in the country prior the pandemic.[33] The need for proper and timely regulation of the rehabilitation bed supply is underscored by a high probability of a rapid growth in their numbers when private owners decide to reprofile currently underutilized general hospital beds into the rehabilitation beds. The start of the public financing of the priority rehabilitation services that is announced to include the inpatient component starting from the year 2023, will serve as a strong incentive to trigger this reprofiling process in anticipation of the rapidly increasing revenues for inpatient rehabilitation services from the public sources considering the current large unmet demand for such services due to the financial barriers for majority of the Georgia citizens. Hence, we recommend also to define the maximum target capacity of rehabilitation beds, beyond which the supply of the rehabilitation beds will be restrained through the licensing process. **We recommend limiting the maximum rehabilitation bed capacity to not to exceed the 10% of the total hospital beds available in the country** (currently 21,000[34]).

The recommended composition of the target bed capacities by levels of rehabilitation care defined by the size of population they will serve (two national centers with 20 beds in both scenarios) are presented in Table 7

Figure 7: Recommended composition of minimum and maximum target bed capacity by levels of rehabilitation care



Source: Authors

[31] Statewide Rehabilitation Service Plan 2009–2017. Government of South Australia. serviceplan09-17-clinicalnetworks-sahealth-0911.pdf accessed on December 12, 2022.
[32] Commissioning guidance for Rehabilitation. NHS England. Commissioning guidance for rehabilitation (england.nhs.uk) accessed on December 14, 2022.
[33] CIF Barometer_XIV_25 03 2021-CIFGT - ENG (curatiofoundation.org)
[34] Geostat 2022. Healthcare - National Statistics Office of Georgia (geostat.ge) accessed on December 14, 2022.

5.1.2. Desired human resource capacity for the future MCR in Georgia

Ensuring adequate numbers and skill mix of health workforce for the rehabilitation services in Georgia is a key challenge for the implementation of the proposed MCR. This challenge is not unique for Georgia - WHO reports that many countries, developing and developed, report inadequate, unstable, or non-existent supplies, or unequal geographical distribution of, rehabilitation professionals "that present a major challenge to achieving universal health coverage."[35] Although many services are sub-optimal in countries with constrained resources, services such as rehabilitation are particularly affected as it is often under-recognized and not prioritized in countries with limited resources for healthcare delivery.[36] Moreover, insufficient numbers of qualified rehabilitation specialist are observed in more affluent Central and Eastern European Countries as well, including the members of the EU.[37]

As in the case of the rehabilitation bed capacity there are no widely accepted international benchmarks for defining the optimal rehabilitation workforce capacity, as high variations are observed across countries (see Figure 7).[37,38] Definitions of the rehabilitation workforce vary across countries due to differences in the classification of rehabilitation professionals. The WHO Rehabilitation Competency Framework highlights the diversity in the rehabilitation workforce between WHO regions. WHO defines a rehabilitation worker as "a person delivering or supporting the delivery of rehabilitation, whether interacting directly or indirectly with a person, their family or service-user groups".[39] In many countries, rehabilitation professionals are also referred to as "allied health workers" and could also encompass different professionals such as radiographers.[40] The WHO classification of a "rehabilitation worker" also includes other professionals such as nurses and psychologists who specialize in rehabilitation. However, the core professionals classified as rehabilitation professionals in LMICs include occupational therapists, audiologists, speech-language therapists and physiotherapists (physical therapists).[41]

The draft "Strategy for the Development of the Rehabilitation Services in Georgia 2022-2026" (Strategy) defines the rehabilitation workforce in Georgia as consisting from the physician/specialist in Physical and Rehabilitation Medicine (PRM), Physical Therapist (PT), Occupational Therapist (OT), Speech and Language Therapist (SLT), and Prosthetist and Orthotist (P&O) and sets specific staffing targets for the rehabilitation workforce based on the "internationally recommended" ratios for OTs (7.5 per 10,000) and P&O (0.05 per 10,000) and the ratios "observed" in HICs for PRM (0.25 per 10,000), PT (9 per 10,000) and SLT (3 per 10,000).

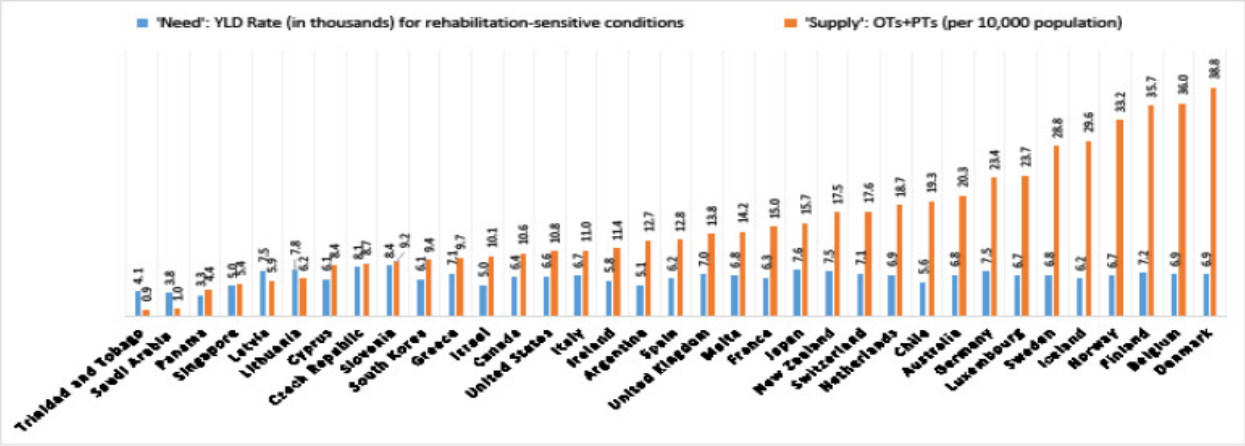
[35] Rehabilitation workforce (who.int) accessed on December 22, 2022.
[36] Larsen PD. Rehabilitation 2030: A Call for Action. Rehabil Nurs. 2017;44:129.
[37] Jesus TS, Landry MD, Hoenig H, Dussault G, Koh GC, Fronteira I. Is Physical Rehabilitation Need Associated With the Rehabilitation Workforce Supply? An Ecological Study Across 35 High-Income Countries. Int J Heal Policy Manag. 2020;2017 x:1–9.
[38] Gupta, N., Castillo-Laborde, C. & Landry, M.D. Health-related rehabilitation services: assessing the global supply of and need for human resources. BMC Health Serv Res 11, 276 (2011).
[39] WHO. Rehabilitation Competency Framework. 2020. Rehabilitation Competency Framework (who.int) accessed on December 3, 2022.
[40] Jesus TS, Landry MD, Dussault G, Fronteira I. Human resources for health (and rehabilitation): Six Rehab-Workforce Challenges for the century. Hum Resour Health. 2017;15:8.
[41] WHO. Rehabilitation Competency Framework. 2020. Rehabilitation Competency Framework (who.int) accessed on December 3, 2022.

Table 3: Ratios for core rehabilitation workers in Georgia as recommended by the Strategy

Rehabilitation workers	Recommended ratio	Ratio in high-income countries	Georgia
Physical and rehabilitation medicine (PRM) (medical specialty - physical medicine, rehabilitation and Balneology)		25/million, or 0.25/10,000	~ 90 total need
Physical therapist (PT)		900/million, or 9/10,000	~ 3,150 total need
Occupational therapist (OT)	750/ million, or 7.5/10,000		~ 2,625 total need
Speech and Language (SLT) therapist		300/million, or 3/10,000	~ 1,050 total need
Prosthetics and orthotics (P&O)	5/ million		~ 17 total need

Yet, as will be discussed in the section describing the current rehabilitation workforce capabilities in Georgia, it will be impossible to bridge the capacity gaps in current and desired capabilities for certain rehabilitation workers (OTs and SLTs) in the coming decades, if the Strategy-recommended target ratios will be adopted. Moreover, as noted earlier, there is high variation in rehabilitation workforce capacity even among HICs and as shown in Figure 7, these large supply disparities for such "core" rehabilitation workers, as physical therapist and occupational therapists in the HICs are not determined by the rehabilitation need, but rather by the financial factors (GNI per capita and the share of the current health expenditures in the GDP) and population size and thus are more flexible for adapting to a country context.

Figure 8: Physical rehabilitation need and supply in 35 High Income Countries (HIC)



Abbreviations: PTs, physical therapists; OTs, occupational therapists; YLD, year lived with disability.
Source: Jesus et al., 2020

According to another systematic study, there is less variability in rehabilitation worker to population ratios if only our "reference" country (UK) along with several other HICs with similar organization of the rehabilitation services are considered and their ratios are lower for most rehabilitation workers than the Strategy-recommended ones (see Table 4).

Table 4: rehabilitation workforce ratios per 10,000 population for selected countries and Georgia (as recommended by the national strategy)

	Canada	UK	US	Portugal	Ireland	Brazil	Georgia
PRM specialist		0.06					0.25
Physical therapist (physiotherapist)	4.8	4	6.8	7.8	6.8	5	9
Occupational therapist	5.4	4	3.6	1.9	4.4	0.2	7.5
Speech and Language therapist			0.35			0.2	3
Prosthetist and orthotist							0.05

Source: compiled from Conradie et al, 2022 and the Strategy

Thus, we propose to revisit the issue with target ratios for the future rehabilitation workforce in Georgia and reopen stakeholder consultations on the subject and define new, reduced targets at least interim - for the next 5 years. Also, considering the international experience and UEMS and BSRM recommendations we propose to include the clinical psychologist or psychotherapist in the "core" MDT in the Georgia context and define normative staffing ratios for this professionals as well to ensure that all the future mandatory requirements for staffing levels in inpatient and outpatient rehabilitation facilities ensure that MDTs have all the needed competences and are able to deliver high quality rehabilitation care.

The staff to the specialized rehabilitation bed ratios recommended by the UEMS and health authorities in our "reference" countries Australia and UK for the rehabilitation workers is less variable for inpatient rehabilitation services (see Table 3) **and we are recommending target ratios for inpatient rehabilitation workforce in Georgia based on the lowest (from the three listed for each position) accounting for the current staff shortages in the country and a time it takes to bridge the human resources gaps**.

Table 5: Rehabilitation staffing norms for specialized inpatient rehabilitation Australia, UK, UEMS

	Specialized Unit per 20 beds			
Rehabilitation Workforce	Australia	UK	UEMS	Georgia
PRM specialist	1.25	1.2	1.6	1.2
PRM trainee	1	2	0.8	0.8
Physical therapist (physiotherapist)		4	2	2
Occupational therapist	3	4	2	2
Speech and Language therapist	3	2	0.6	0.6
Clinical psychologist	1	1.5	0.8	0.8
Nursing staff (var. qualifications)	23.5	24		23.5
Social Worker	1.2	1.5	0.2	0.2
Dietician/Nutritionist	0.8	0.75		0.75

6. Current capabilities for providing rehabilitation services

The current capabilities are described based on the findings of the rehabilitation situation assessment in Georgia conducted by the WHO team in 2020[42], a qualitative formative research of beneficiaries and providers of rehabilitation services commissioned by the CIF in Summer 2022, interviews and regular consultations with the subject matter experts, representatives of the Ministry, rehabilitation service providers, academia, professional associations, and NGOs active in the rehabilitation sphere. The key capacity and respectively capability gaps were identified in rehabilitation workforce and thus are presented in more detail in the human resources section.

6.1. Current bed capacity and capability to provide inpatient rehabilitation of adequate scope and quality

There is no specific registry or data on facilities providing rehabilitation services, including the inpatient rehabilitation. The WHO situation assessment team in 2020 identified four centers and wards providing inpatient specialized rehabilitation services from the visited nine standalone centers or units/wards that "have focus on rehabilitation". There are two public (with narrow specialization and target population), one university and one private facility – with total of 134 beds (see Table 6), which account for little over half percent of the total national bed capacity in Georgia, which is inadequate by any international comparison and almost six times lower than the recommended minimal target for the specialized rehabilitation beds in Georgia (see Table 7).

Table 6: List of rehabilitation service providers identified in WHO Rehabilitation Situation Assessment 2020

No.	Name	Location	Public/ private	Beds	Rehabilitation staff				
					MD	PT	OT	ST	Psy
1.	Lung Diseases Rehabilitation Centre	Abastumani	Public (MoIDPLHSA)	100*	2	1	0	0	0
2.	The National Hero of Georgia Mariam (Maro) Makashvili Military Rehabilitation Centre	Tserovani	Public (MoD)	17**	1	4	2	0	3
3.	David Tatishvili Medical Centre (Health Palace) Rehabilitation Department	Tbilisi	Private	0	2	26	0	1	?
4.	PSP-New Hospitals Inpatient Rehabilitation Department	Tbilisi	Private	5***	1	6	0	0	0
5.	Ken Walker University Clinic for Medical Rehabilitation LLC	Batumi	Private	0	3	3	0	1	2
6.	Ken Walker University Clinic for Medical Rehabilitation LLC	Tbilisi	Private	12****	8	35	7	7	3
7.	Aversi Rehabilitation Centre	Tbilisi	Private	0	2	6	0	0	0
8.	Chakvi Neurorehabilitation Centre (Evex)	Batumi	Private	0	2	9	0	5	15
9.	Neurodevelopment Centre	Tbilisi	Private	0	4	15	2	8	?

* 100 bed capacity, but in three months the center has had a total of 60 patients.** 17 patient beds, plus equal number for caregivers; plans to expand to 50 beds in the future. *** Five patient beds plus an equal number for caregivers; can increase patient beds to nine if needed. **** 12 beds for adults planned for March 2020 but plans for a total of 48 beds for children and adults in the future.

Source: WHO, 2021

[42] Situation assessment of rehabilitation in Georgia: February 2020. Copenhagen: WHO Regional Office for Europe; 2021. Licence: CC BY-NC-SA 3.0 IGO.

Table 7: Current and the recommended specialized rehabilitation bed numbers, ratios and shares of the total hospital beds in Georgia

# Rehabilitation Beds		Beds per 100,000	Share of total	# Total beds (2021)	population (mil, 2022)
Current	134	3.6	0.6%	21,000	3.69
Recommended minimal target	775	21	3.7%		
Recommended maximum target	1,890	51	9.0%		

Source: WHO, 2021 and Authors

According to the WHO, there are also concerns regarding the scope and quality of both inpatient and outpatient rehabilitation services provided by these institutions and other establishments that advertise to provide rehabilitation and *claim* using MDTs in the process.[43] Further assessments and consultations undertaken by the CIF team in 2022, has confirmed persistence of most of the identified challenges and related capability gaps, some of which most likely have widened since WHO's 2020 assessment, due to the pandemic. More specifically:

- *Lung Disease Rehabilitation Center in Abastumani* opened in 2019 as the first stand-alone 100 bed rehabilitation hospital owned and fully funded through the public sources in Georgia. The institution provides the limited scope of rehabilitation services (only pulmonary rehabilitation) for the limited beneficiary groups (persons with disability with lung disease, IDPs, war veterans, socially vulnerable people and people working in dangerous occupations) and is severely understaffed to adequately care for any complex rehabilitation cases: only two PRM specialists, one PT and four nurses for 100 beds at the time of the WHO assessment.[44] The facility continues to be underutilized and used most likely as a spa center. No consistent plans for addressing the understaffing or widening the scope of rehabilitation services were identified.

- Seventeen inpatient beds were added with the US Government's financial support to the Ministry of Defense's *Military Rehabilitation Center in Tserovani* in 2020. While the center is appeared to be adequately staffed with properly trained core rehabilitation workers (four case managers, one PRM specialist, four PTs, two OTs, three psychologist) and has the potential to expand its capacity to 50 beds, the services are available strictly only for the military personnel and the scope of services provided is relatively limited - only post-acute inpatient, day-hospital and outpatient rehabilitation for military wounds and injuries, including for amputees. The potential to widen scope of services and to integrate the center with the national health and the future rehabilitation system is very low due to a highly specific ownership and funding status of the institution.

- Established in 2019, the privately owned *PSP-New Hospitals inpatient rehabilitation department* in Tbilisi for the neurologic patients is the only co-located inpatient ward for specialized rehabilitation in Georgia. There are five dedicated rooms (with an additional bed for a caregiver), and four additional beds available in the acute neurological unit of the same hospital,

[43] Situation assessment of rehabilitation in Georgia: February 2020. Copenhagen: WHO Regional Office for Europe; 2021. Licence: CC BY-NC-SA 3.0 IGO.

[44] According to the information obtained by CIF from interviews, due to the Pandemic restrictions in 2020-2021 influencing the demand and supply of rehabilitation services, no significant changes in capacity or services provided have occurred up to date.

if needed. Outpatient care is also offered. The adequately trained staff of two neurologists, one nurse, one assistant nurse, six PTs (that other departments can use) and 27/7 access to acute medical care and spectrum of medical specialists in case of need, allows to provide inreach, acute and sub-acute rehabilitation care. The limitations include limited space, and absence of the two out of five core rehabilitation MDT members (no OT or SLT is on the staff), lower than recommended number of nurses and resulting low capacity to care for highly complex cases (e.g., category A spinal injury patients) and potentially to serve as a level 3 rehabilitation center for neurologic conditions.

- *Ken Walker University Clinic for Medical Rehabilitation in Tbilisi* is the only standalone multiprofile rehabilitation center capable of providing general and wider spectrum of rehabilitation services for both adults and children, constructed, equipped and staffed (seven physicians trained in PRM, 35-40 PTs, seven OTs, three psychologists and nursing staff) in accordance with the international (US) standards and norms. The clinic is owned by the Tbilisi State Medical University. The US Government has contributed to its construction, equipment and the staff capacity development. Currently the clinic operates 17 inpatient beds but has a potential to expand its capacity up to 50 rehabilitation beds. The clinic is also located in close proximity (on the same campus) with TSMU's multiprofile hospital that has 24/7 acute medical care provisions capabilities, thus making the clinic potential candidate for the Level 3 multiprofile rehabilitation center for priority health conditions in Georgia. The reliance on private out-of-pocket payments for funding the bulk of the provided services, particularly for the inpatient care, in the absence of the systematic public funding of rehabilitation programs – is a key constrain for this and other rehabilitation centers in realizing their potential for successfully integrating the rehabilitation services in the health system of Georgia.

6.2. Current status of standards and guidelines for the rehabilitation services

As noted earlier, the development of standards, national guidelines and clinical pathways for the rehabilitation services for the priority health conditions are key instruments for the implementation of the proposed MCR in Georgia. Beyond the standard requirements for general hospitals that are also applicable to the rehabilitation inpatient facilities, currently only one mandatory standard – *"Permit conditions for the rehabilitation-convalescent hospital"*[45] is in place, which stipulates mandatory requirements (mainly infrastructure) for rehabilitation inpatient care facilities. The requirements set forward by this standard are minimal compared to the international standards reviewed or mentioned in the previous sections of this document. As a result, they are less likely to achieve the objectives of both (1) quality assurance of rehabilitation services provided and (2) preventing the oversupply of rehabilitation beds and fragmentation of the inpatient rehabilitation services.

There are currently no mandatory standards for licensing the outpatient rehabilitation facilities. Moreover, there are no mandatory requirements (beyond infection control stipulations enforced through the normative ministerial decree) for entering the general outpatient health services market in the country. Absence of the regulatory levers to assure quality and patient safety and control the market entry in such important segment of the medical and rehabilitation care continuum – ambulatory

[45] Resolution of the Government of Georgia # 229 from 2019

rehabilitation care – is a major gap that needs to be addressed to ensure the integration of rehabilitation services in the health system of Georgia.

Three *national guidelines* with associated *protocols* ("state standards"): for rehabilitation of (1) diseases of the respiratory system, (2) cerebral palsy and (3) stroke[46] have been developed and adopted in the last three years in Georgia. The protocols also contain the requirements for infrastructure, equipment and workforce necessary for the provision of the rehabilitation services in accordance with the national guideline and protocol for these three priority health conditions for the rehabilitation. These requirements can be used to elaborate the mandatory standards for commissioning and eventually licensing rehabilitation services in all relevant care settings (inpatient acute/post-acute, ambulatory day hospital/outpatient/home) and all three levels of care proposed for the MCR in Georgia. Thus, it is even more important to timely develop the national guidelines and protocols for all priority health conditions for rehabilitation that are currently missing.

6.3. Current human resources capacity

6.3.1. Physical medicine, rehabilitation and balneology

Education, Competencies and Skills

Physical medicine, rehabilitation and balneology (spa therapy) has existed as a medical specialty since 2003 and is the only regulated profession related to rehabilitation services. Mastering the profession is possible for a qualified physician after completing a 3.5-year residency program, as well as for a specialist in internal medicine - as a result of training in an adjacent specialty program.[47] The residency institution - Tbilisi State Medical University currently has a quota of 4 residents, which is fully filled with residents.[48]

The competences of the specialty are detailed and approved by the Minister of Labor, Health and Social Protection of Georgia.[49] According to the definition of a specialist in the field, a doctor of physical medicine, rehabilitation and balneology is considered as a permanent member of a multidisciplinary team, like a neurologist. They participate in the assessment and management of the patient's condition for which they collaborate with orthopedist-traumatologist and/or other consultant doctor-specialists.

The number of physicians certified in the field can be considered a strength of the system, which can be used as a resource for geographic access and training opportunities in scarce specialties (physical therapy, occupational therapy, speech therapy), although specialists in other fields do not agree with this opinion.

According to the list of medical specialties, mastering the specialty of physical medicine, rehabilitation and balneology in a simplified manner (by the principle of affinity) is possible only for a doctor of internal medicine. This opportunity does not exist for neurologists, children's neurologists and traumatologists-orthopedics. In order to provide qualified rehabilitation services to neurological and traumatological-orthopedic profile patients, it would be justified to consider international practice and develop combined narrow specialties such as neurorehabilitation and traumatology-rehabilitation.

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[46] https://www.moh.gov.ge/ka/guidelines/ accessed on December 3, 2022

[47] Order of the Minister of Labor, Health and Social Protection of Georgia dated April 18, 2007 #136/N on determining the list of specialties corresponding to medical specialties, adjacent medical specialties and subspecialties

48 Interview with a field specialist, September 1, 2022.

49 Order #01-8/n of the Minister of Labor, Health and Social Protection of Georgia dated March 30, 2015 on the approval of professional competencies of medical specialties; Appendix 18

Also, there are no short-term training and professional development programs that would allow both rehabilitation doctors and other relevant field doctors (including family doctors) to acquire specific rehabilitation knowledge and skills, and would facilitate the integration of rehabilitation services into the healthcare system.

Employment

According to the data of the state registry of doctors' certification, as of 2020, there were 300 certified doctors of the mentioned specialty in the country,[50] which is almost 3.5 times higher than the international recommendation, however, due to the lack of data, it is not possible to identify the level and area of their employment, and it is likely that the number of doctors employed in this specialty in Georgia is small.[51] However, as a result of the interviews, it was revealed that the majority of graduates of the last decade are actively involved in the provision of rehabilitation services. Some of the doctors-rehabilitators conduct practice and/or academic activities in physical therapy.

6.3.2. Physical therapy and rehabilitation[52]

Education, Competencies and Skills

Academic education in physical therapy and rehabilitation is currently two-level and includes bachelor's and master's programs, most of which are accredited by the Council for Accreditation of Higher Education Programs of the Ministry of Education and Science. However, some of them are compiled taking into account international programs and World Confederation for Physical Therapy recommendations. Bachelor's programs are implemented by 7 higher educational institutions, and master's programs are implemented in 3 universities. Tbilisi State Medical University is a leading institution in matters of implementing international standards of programs and teaching. At this stage, doctoral programs are not implemented in Georgia.

The undergraduate curriculum is 4 years long, includes general subjects and gives the qualification of a general rehabilitologist. The threshold for national entrance exams is high (especially for Tbilisi State Medical University program - 35%) and includes 4 exams, however, the competition is high and the quota is filled every year. The similarity of the exam profile allows for mobility at the Faculty of Medicine, due to which the placement of enrolled students is high.

The master's program envisages raising the qualification of general rehabilitation or specialization (eg Tbilisi State Medical University's master's programs, see Table 1), which provides the prospect of employment in a specific direction (pediatric or sports profile). There is a New Vision English-language program in neurorehabilitation, although its graduates and those of other English-language programs are mostly foreigners and are rarely employed in Georgia. Representatives of related fields can complete the master's degree: qualified doctors, physical therapists and public health specialists.

By 2022, a total of 288 places have been announced for undergraduate programs in physical medicine and rehabilitation.[53] "In previous years, the number of places would be less. In the last 3 years (taking into account the placement), probably 250-300 students would have graduated"; accordingly, the "set

[50] STARS 2020 Report; 2022-2026 national strategy for the development of rehabilitation services in Georgia.
[51] 2022-2026 national strategy for the development of rehabilitation services in Georgia.
[52] Interviews with specialists in the field: Lela Maskhulia (15.08.2022), Valery Akhalkatsi (21.08.2022) and Ketevan Sivsivadze (31.08.2022)
[53] Information for applicants 2022,

number" of 500 physical therapists in the strategy document for 2020 is likely to increase to 800-850 with graduate students.[54] Due to the difficult teaching and the high placement rate (e.g. due to the possibility of mobility in the Faculty of Medicine) only 60-70% of enrolled applicants complete their studies.

In 2017-2022, the process of intensive training of specialists was implemented with the financial support of USAID. In cooperation with Tbilisi State Medical University and CIL, PFID organized the development and teaching of postgraduate rehabilitation education and professional development programs by Emory University experts. More than 300 physical therapy, occupational therapy, speech therapy and orthotics-prosthetics specialists were trained within the training cycle. One of the main directions of the course was the study of the work of the multidisciplinary team and their competencies (including overlapping) in the workplace, with practice on patients in real situations. Nurses employed in rehabilitation also underwent preparations. In addition, 25 specialists were trained in a 3-month clinical instructor (ToT) program, during which they assisted American instructors and participated in co-teaching. Currently, they are actively involved in the process of academic teaching.

Due to the lack of doctoral programs, the issue of academic staff production is a problem, especially for the master's level. To ensure compliance with the law, in some cases, training is provided by medical specialists with a doctorate degree, however, according to international recommendations, physical therapy should be taught by physical therapists with appropriate education and skills. In the long run, the issue needs to be resolved.

The attrition rate in medical specialties is high because of the mobility and difficulty of learning. The main problem of teaching is the lack of clinical bases, which hinders the main task - quality study of practical skills.

In Georgia, physical therapy is not a regulated profession. Accordingly, there is no register of specialists, approved unified standard of the profession and list of competencies. The characteristics of the specialty are reflected only in the program curricula developed individually by the educational institutions, and the separation of competencies for the bachelor's and master's levels is vague and non-uniform. A unified, need-based system of continuing education and professional development is not functioning. The trainings are episodic and their quality is not regulated. The scope of employment of physical therapists is differentiated for bachelor's and master's degrees and is established by the order of the Minister of Health.[55]

The parties interested in the professional development of the field are represented by:

1. Association of Physical Therapy and Rehabilitation of Georgia - was established in 2017, is a member of WCPT and unites students, bachelor's and master's specialists, several doctors-rehabilitation specialists;

2. Association of Sports Medicine of Georgia - joins physical therapy specialists and rehabilitation doctors;

[54] Interview with a field specialist, 15.08.2022,
[55] Order #244 of the Minister of Labor, Health and Social Protection of July 16, 2009

3. A. Kakulia Association of Physiotherapists - represented by rehabilitation doctors. Tbilisi State Medical University is the main partner of associations in educational matters.

Employment

According to the 2022-2026 national strategy for the development of rehabilitation services in Georgia, taking into account international standards and population density, Georgia needs 3150 physical therapists, which is almost 4 times less than the current number. However, due to the capacity of institutions providing rehabilitation services, such a sharp shortage of specialists is not observed in practice. After graduation, many physical therapists, especially those who have not received enough practice to develop skills due to insufficient resources of clinical facilities, remain unemployed, and some leave the field altogether. Due to the absence of the register, access to the said contingent is not possible.[56]

It is expected that the increase in the need for rehabilitation services and the financial contribution of the state will increase the demand for specialists. According to professionals in the field, in the long-term (8-10 years) perspective, the production of specialists will more or less balance the demand. In addition, in the case of an increase in infrastructure and financial resources, the number of specialists in the field will be less. Moreover, if the production of specialists continues at the current pace, which cannot be followed by the development process of clinical bases, it is expected that there will be a problem of employment.[57] In the short term, in the event of a sudden increase in demand, there is a risk of exacerbating the shortage of human resources.

Tbilisi State Medical University annually conducts an electronic survey of employers to identify the quality of education, needs and employment prospects. In 2018-2019, the results of a survey of more than 20 clinics showed that 157 (83%) of the 190 persons employed in physical medicine and rehabilitation at these institutions were graduates of the Faculty of Physical Medicine and Rehabilitation of Tbilisi State Medical University; Moreover, most of them have been employed in these clinics for the last 5 years. Employers were mostly satisfied with the theoretical, practical, communication and teamwork skills of the graduates of the faculty, although they requested that more emphasis be placed on teaching practical skills. The Faculty of Tbilisi State Medical University took into account the received feedback and in the following years implemented a number of changes in the clinical practice component of the undergraduate program and in the direction of teaching practical skills.[58] Increasing opportunities for practical activities is relevant for all educational institutions, which is manifested by the introduction of intensive and adequate duration internship programs, especially for students in their final year.

In a survey conducted by the Tbilisi State Medical University, most of the clinics indicated that they plan to increase the number of specialists in the field of physical medicine and rehabilitation in the next 2-3 years, by a total of 28%, which will increase the employment opportunities of graduates.[59]

The geographical distribution of personnel does not meet the needs. Although the educational process takes place in the regions (Adjara and Imereti), the graduates mostly stay in Tbilisi, where there is a

[56] Interview with a field specialist, 15.08.2022,
[57] Interviews with a field specialist, 15.08.2022 and 31.08.2022,
[58] Interviews with a field specialist, 15.08.2022 and 31.08.2022,
[59] Interview with a field specialist, 15.08.2022,

prospect of employment in clinics and private practice. In some cases, the lack of specialists is "compensated" by "practicing" specialists without academic education (bachelor's degree, master's degree). Some of them were included in the preparation cycle of Emory and received the corresponding certificate.

Table 8: Education institutions with PRM undergraduate and postgraduate degree programs and current student capacity

N	institution	Undergraduate	Master studies	A number of students,[60] 2022.	Comment
1	Tbilisi State Medical University	✓	✓	90	Georgian and English undergraduate programs; Master's programs in 3 directions: • Pediatric rehabilitation • Rehabilitation in sports • Rehabilitation counselor
2	University of Physical Education and Sports	✓	✓	50	
3	Geomed	✓	✓	90	
4	King Tamar University (non-accredited program)	✓		18	
5	Akaki Tsereteli State University of Kutaisi	✓		30	
6	Batumi State University	✓		10	
7	New Vision	✓	✓		English-only programs (including a master's program in neurorehabilitation) focused on training foreign students

6.3.3. Occupational therapy

Education, Competencies and Skills

Occupational therapy is the most deficient among rehabilitation specialties in Georgia. According to international standards, in accordance with the population density, Georgia has 3150 occupational therapists, while by 2020, only 25 certified occupational therapists were registered in the country.[61] Today, their number is up to 40, and in 10 years it is expected to increase to 200.[62] The first cohort of

[60] Directory of entrants, 2022.

[61] 2022-2026 national strategy for the development of rehabilitation services in Georgia,

[62] nterview with a field specialist, 16.08.2022

specialists (8 graduates) is associated with the 3-year program of Tempus, which contributed to the training of the first trainers in the country and the introduction of academic training.

Academic education in occupational therapy is one-level and is carried out at the bachelor's level only by Tbilisi State University, whose annual quota is 20 places. Because of this, the production of the profession is going on at a slow pace. Due to the lack of a master's degree, the training of interested specialists of other profiles is also limited. In addition, it is a completely new specialty, its predecessor specialties are not found in the country.

Although occupational therapy also belongs to the social field, in previous years it was integrated with the Faculty of Medicine, which increased the mobility of enrolled students to medical specialties. After the transfer to the Faculty of Psychology, the situation improved, however, to enroll in the program, the applicant still needs 4 exams similar to the Faculty of Medicine, which reduces the number of applicants. As a result, despite the high demand, the quota cannot be filled. In addition, for students of other (including psychology) faculties, transfer is limited if they have not passed the fourth national exam. If the current trend continues, the number of occupational therapists will increase by an average of only 10 per year.

Due to the absence of master's and doctoral degrees, there is a shortage of pedagogical resources and the specialty cannot develop academically. Teachers do not have the opportunity to participate in exchange programs and learn about foreign examples. The solution may be to go through distance programs and invite foreign teachers as ToT-supervisors.[63]

As alternatives for the development of the profession, it is possible to consider increasing the number of profession aspirants and the quota of the program (eg up to 25), supervision of employed students -. However, these interventions will only be successful if they contribute to the strengthening of practical skills (especially in the services of the adult contingent), which can be achieved by parallel improvement of clinical bases and the resources of trainers/supervisors.[64]

Occupational therapy in Georgia does not belong to the regulated professions, therefore the human resources and training quality assessment and management system does not function. There is no approved specialty standard and competencies, separate thematic training modules for improving specific skills do not function. "Occupational therapy" as a service is not covered by the CPT coding system. The Georgian Association of Occupational Therapists is actively interested in the development of the field.

Employment

In Georgia, the employment of occupational specialists is regulated by the order of the Minister of Health.[65] Initially, the scope of work of occupational therapy specialists was mostly limited to the children's contingent, but in recent years it has expanded to include services for adults and the elderly. Their involvement is required of the service providers of the state programs of child rehabilitation, day care centers and provision of wheelchairs for disabled persons. The number of certified occupational therapy specialists is sometimes used as a "locking" lever for participation in state programs, which

[63] Interview with a field specialist, 1.09.2022,
[64] Interview with a field specialist, 1.09.2022,
[65] Order #244 of the Minister of Labor, Health and Social Protection of July 16, 2009

significantly complicates the involvement of institutions in the regions, and also opens the way to employment of the same person in several places and other inappropriate decisions. In order to effectively plan and use scarce resources, it is important that service buyers and providers consider the use of group and community work methods along with individual services. The issue of remuneration should also be considered. Private practice and working with a pediatric population are associated with greater financial benefits, which may make it more challenging to provide services to adults in clinics.

After completing the bachelor's degree, specialists are actively employed, they are not placed. Due to the high demand, people who have undergone short-term training in this specialty also work in the position of occupational therapy, however, it is difficult to find accurate data on this subject due to the lack of a register of employed persons. Students of the 4th year are also actively employed under the supervision, who are simultaneously completing the educational practice modules. However, there are cases when employed students (6 students) continue indefinitely. Taking into account the subject of the training program, it is possible to consider the prospects of employment under supervision for the students of the 2nd year (pediatric practice) and the 3rd year (practice with the adult contingent). This approach will increase the number of employees by 37. It is important that the right to employment of students is reflected in the relevant order of the Minister of Health.

6.3.4. Speech and language therapy

Education, Competencies and Skills

Academic training in speech therapy in Georgia is single-level and is represented by the 2-year master's program in communication, language and speech therapy, which since 2017 has been implemented only by Ilia State University. The program was developed within the framework of the Erasmus project in cooperation with Israeli, Dutch and Croatian universities, which also provided for the training of Georgian trainers by foreign teachers. The program is in demand, the competition for the 15 places determined by the quota is high (1:3) and mainly occupied by psychologists and occupational therapists.[66]

In order to develop the capacity of the field, the challenge remains to improve practical skills and increase the resource of clinical bases, especially if the number of students increases. Also noteworthy is the lack of knowledge of the English language at a high level among students and specialists, which prevents the assimilation of educational materials and modern approaches. State contribution can have a positive effect in both directions.[67] It should also be taken into account that due to the lack of a doctoral level, the production of pedagogical resources is a problem.

In Georgia, language and speech therapy is not a regulated profession. There is no register of specialists and employees. The professional standard and competencies are not approved and are reflected only in the Master's program accredited by Ilia State University. On the one hand, the current short-term training courses and the absence of regulations help to fill the shortage of human resources and employment in low-paying conditions, but on the other hand, they have a negative impact on the quality of services and the progress of the field.

The Georgian Language and Speech Association works on the professional development of the field in the country, which cooperates with international authorities in the field: the Australian Speech

[66] Interview with a field specialist, 17.08.2022,

[67] Interview with a field specialist, 17.08.2022,

Therapists Association, the American Speech, Language and Hearing Association (ASHA), as well as the Standing Liaison Committee of Speech and Language Therapists/Logopedists in the European Union (CPLOL).

Employment

The area of employment of speech therapists is established by the order of the Minister of Health.[68] Due to the absence of the register, the number of employees in the field is not known as of today, although 3 graduates of the master's degree continue to work with their profile.[69]

According to the international recommendation, taking into account the population density, Georgia needs 1050 speech therapists, while by 2020, only 30 masters of speech therapy were registered.[70] The master's course is more flexible than the bachelor's in terms of attracting and producing specialists, but additional interventions will be needed to reduce the shortage and maintain quality. To date, most of the employees have completed 3-6 month certification programs and are working in educational institutions. Also, the graduates of the "corrective pedagogy program", the predecessor of language and speech therapy, whose last graduation took place in 2002-2003, continue to work in the field.

It is necessary to take into account the lack of personnel and a sharp shortage of competences in the short areas. For example, today there are only 2 audiology specialists in the country, and the audiology modules are superficially integrated into the master's curriculum and do not prevent the full mastery of competence. Also, there is a problem of staff qualified in aphasiology competence to work with adult patients.

6.3.5. Prosthetics - orthoses

Education, Competencies and Skills

Access to assistive devices is one of the main components of the field of rehabilitation and the state program of rehabilitation and child care, however, there is currently no accredited educational program in prosthetics and orthotics in Georgia, and it does not provide staff training-retraining courses. Consequently, there is a shortage of teacher resources. The physical rehabilitation undergraduate program of Tbilisi State Medical University is the only academic course where students study a basic theoretical module. There is no unified base on certified and trained, as well as employed personnel.

The training of the first specialists in prosthetics and orthotics was started in 1993-1994 by the International Committee of the Red Cross (ICRC) according to the standard of the International Society for Prosthetics and Orthotics (ISPO). 7-8 persons with higher technical education passed the 3-year training program and received the corresponding certificate of the second degree of ISPO, which gives the right to work independently with the patient. However, there was an outflow of personnel and 1 person from the retrained contingent is employed in the country. Training with a long-term program was not resumed, until 2003-2004 the ICRC conducted only short-term training and continuing education programs. Another 3 employed specialists have completed a 3-year program abroad and hold the certificate of the leading German orthotic-prosthetic center "Ottobock" along with the certificate of specialization in electronic lower limb prosthetics (Cleg Genium-X3). In addition, 2 certified specialists work in myoelectric prosthetics. According to the representatives of the field, only 4 (1+3) of the

[68]

[69] Interview with a field specialist, 17.08.2022,

[70] 2022-2026 national strategy for the development of rehabilitation services in Georgia

resources employed in the country have an international or equivalent bachelor's level certificate, and 3 people have a vocational education diploma (Table 7).

Table 9: P&O Service providers and their human resources

#	Service provider institution	Number of specialists	Program
1.	"Georgian Foundation for Prosthetic and Orthopedic Rehabilitation	1 specialist with an international certificate + 2 specialists certified in myoelectric prosthetics	IRC program with ISPO international standards certificate; Ottobock specialization course (certificate)
2.	National Rehabilitation-Adaptation Center	3 specialist international (equalized) certificates and Cleg Genium-X3 certificate; 3 specialists with professional education received in Georgia	Ottobock Certificate and Specialization Course (Certificate)
3.	Orthopedic workshop of the Ghudushauri Hospital	does not have a certified staff	
4.	Kutaisi Prosthetics and Orthotics Center	does not have a certified staff	
5.	Orthotic Service Providers: Ken Walker Clinic, Home of Physical Therapy.	does not have a certified staff	only provide orthotic services

According to the law,[71] the prosthetist belongs to the field/specialty of the physical medicine and rehabilitation professional education program, which can be employed as a prosthetic production technologist, however, his professional standard/competencies have not been developed. In this regard, the resource of the International Society of Prosthetists and Orthotists (ISPO) - educational programs, competencies and guidelines focused on capacity building in low-income countries can be used as a resource.

Currently, the two main providers of services in Georgia "National Rehabilitation-Adaptation Center" and "Georgian Foundation for Prosthetic-Orthopedic Rehabilitation" actively cooperate with the leading German orthotic-prosthetic center "Ottobock" and periodically organize study visits abroad for the staff to study modern technologies and approaches. As a result, modern prostheses, except robotic prostheses, are made in Georgia.

Prosthetics-prosthetics is an expensive service both in terms of staff remuneration and material and technical equipment. However, along with the introduction of modern technologies in the world, the field is intensively developing and requires more investments. The challenge for Georgia will be, on the one hand, to develop and update training programs/training courses, and on the other hand, to develop the resources of trainers and bases for practical training without proper financial resources. As funding from government programs is the main source of this resource, cooperation between service providers and the government is even more important.

[71] Order #244 of the Minister of Labor, Health and Social Protection of Georgia dated April 30, 2009 "On the right to employment in a medical institution and the list of medical personnel with relevant education"

Employment

The main part of service recipients belong to the beneficiaries of the social rehabilitation and child care state program's component of provision of aids. Some of the patients are financed by municipal programs, and about 10% pay out of pocket. There is no unified database of service users in the country. According to international standards, taking into account the population density, Georgia needs 17 prosthetics and orthotics specialists.[72] Currently, a clinic providing a full profile and load rehabilitation service needs 3-4 prosthetists and orthotists.[73]

At this point, the labor market is still tight. Due to scarce funding, supply and demand are more or less balanced and there is no acute shortage of specialists, apart from the problem of geographic availability. Staffing shortages are expected to worsen over time due to aging staff, lack of quality management mechanisms, and increased funding of services from the state.

The introduction of higher education - bachelor's and master's programs will not be relevant in the near term. However, inclusion of the profession in the national qualification framework and recognition of competencies will contribute to the establishment of a long-term vision of the field. For service providers, it will cost up to EUR 40-50,000 to invest in the training of personnel abroad with a 3-year bachelor's degree education program, and due to low wages in Georgia and demand in developing countries, the risk of their outflow will be high.

From a long-term perspective, it is possible to justify focusing on the regional, developing an English-language academic program and creating a high-tech training base. Until then, it is recommended to jointly introduce with foreign partners a training certification program/programs focused on international approaches, which will allow people with basic medical education (basic knowledge in anatomy-physiology) to pass skills in prosthetics and orthotics. Priority will be given to the training of specialists (doctor-rehabilitators and physical therapists) and students related to the field of rehabilitation. The duration of training courses will depend on the level of competences to be achieved, however, taking into account foreign practice, an average of 1-2 year programs are recommended, which may include online modules for more flexibility.

In case of renewal of the professional program, a P&O assistant will be trained, who mostly learns the craft on the spot and is already a part of the workforce. The program will be able to be completed by persons who already have work practice and/or professional education in a related field.

6.3.6. Specialties in the field of psychology

Education, Competencies and Skills

Due to the variety of specialties/specializations in the field of psychology, it is important to decide which ones are relevant for inclusion in the multidisciplinary team of rehabilitation services. In addition to general knowledge, a rehabilitation psychologist needs special competencies and practical experience working with patients, which can be achieved through the following master's degree programs[74]:

[72] 2022-2026 national strategy for the development of rehabilitation services in Georgia,

[73] Interview with field specialists (31.08.2022; 10.09.2022)

[74] Interview with a field specialist, 01.09.2022

1. Clinical Neuropsychology - taught at TSU and includes services for both children and adults. Since 1998, 50 specialists have been released. 10-15 students graduate every 2 years. At this stage, 30 active neuropsychologists.
2. Clinical psychology/psychological counseling - the program is implemented by Ilia University, Caucasus University and University of Georgia. There are currently 40 active specialists in child and adolescent counseling and psychology and they work in high-income jobs.

A psychotherapist with at least three years of academic or similar education, which is confirmed by a diploma/certificate issued by an international association, can also be considered as a member of a multidisciplinary rehabilitation team. As the issue of recognition and regulation of psychotherapy is unclear at present, it is desirable to write down professional criteria when selecting service providers.

Psychology is not a regulated profession in Georgia; There is no uniform standard for the profession and its specialized areas. Competencies of specialties are reflected only in educational programs.

Employment

The number of specialists is not the main obstacle for the provision of psychological services in the rehabilitation team. In this regard, the main challenges are:
1. Low interest in working in a clinic - the services of a qualified psychologist are highly paid and in demand, so they often prefer private practice or work in the academic space;
2. Low access to services due to the number and qualifications of personnel in the regions - Batumi and Kutaisi are less affected by this, however, there is an acute shortage of specialists in Kakheti, Shida Kartli, Samegrelo, Guria, even though the resources of 2-3 psychologists in the region would be sufficient. In Kvemo Kartli, the language barrier is added to the problem of qualification and quantity;
3. Low interest of clinics in psychological services - clinics sometimes fail to properly assess the need for a psychologist.
The mentioned issue will be influenced by the state's decision on what service it will finance with the rehabilitation package and what requirements it will impose on the providing institutions. It is important to regulate the working procedure of the multidisciplinary team with an appropriate protocol. In order to plan human resources, the specifics of the service should also be taken into account, namely: a psychologist can receive 4 rehabilitation profile patients per day, and 3 hours per week will be required for each patient (1 hour for diagnosis and 2 hours for psychological service). It is possible to conduct group rehabilitation sessions in cases of aphasia.

Staffing shortages in regions can be alleviated in the short term by involving students in service delivery under the supervision of a supervisor; Also interested in financing their studies from the clinic or the state. A long-term vision of a partial solution to the problem may be related to expanding the competencies of clinical psychology programs and integrating neuropsychology modules into them.

SWOT analysis of human resource development related to rehabilitation

Advantages	Disadvantages
1. There is a political will to develop the field of rehabilitation, the state finances a number of rehabilitation services and aids; 2. There are specialists in all necessary fields to provide a multidisciplinary rehabilitation service; 3. University education is available in most specialties and the demand for them is high; 4. There are master's programs in 3 specialties, which provide the necessary field specialization and practice opportunities; 5. There is a regulated medical specialty in the field of rehabilitation for which professional standards and competences have been approved. 6. Professional associations function in all specialties of rehabilitation and cooperate with international associations. There is also student involvement; 7. Academic programs of some educational institutions are based on international standards; 8. There are clinical training resources, including databases based on international standards; 9. In a number of specialties, there are specialists trained in the past through international certification programs and retrained in short-term courses, including pedagogical resources; 10. In the last period, the majority of graduated specialists are actively employed in the field 11. Students' resources are used in a number of specialties; 12. Employment rights for rehabilitation specialists are regulated	1. There is no unified vision of the development of the field and there is no coordination of the system, including in the direction of human resources; 2. The number of rehabilitation specialists is insufficient, especially in the regions. The number of professionals is high, including mobility abroad; 3. Students' resources are insufficiently used, especially in the regions; 4. Activities in rehabilitation clinics and limited state funding are less attractive for highly paid qualified specialists; 5. Most rehabilitation specialties are not regulated. There are no unified standards and competencies of specialties; 6. In the case of most specialties, education policy is not aligned with the needs of the field. The outflow of students and graduates is frequent; 7. Specializations lack the possibility of a full-fledged, 3-level educational process; - Pedagogical resources are not produced; The shortage is compensated by trained personnel of other specialties, which affects the quality; - the possibilities of specialization and retraining of specialists in related fields are limited (for example, in the absence of a master's degree); 8. Prosthetics - in orthotics, academic educational programs do not function, the specialty is aging, there is a problem of following modern approaches. Compared to other specialties, it depends more on the quality of training bases and technical capabilities; 9. The continuous education and professional development system does not function; Specialization courses and short-term trainings are chaotic and episodic; There are no preparation courses in a number of deficient areas (eg audiology, aphasiology); Due to government funding, there is more emphasis on children's services; 10. There is a shortage of practical skills of students and staff: - Scarce clinical practice due to lack of clinical bases, practice financing and/or shortage of supervisors' resources; - Dependence of service providers and, therefore, clinical bases on scarce state funding; 11. The state does not/cannot use opportunities to introduce management tools to encourage education and quality services;

	12. Data and statistics on rehabilitation services, number and qualifications of specialists, capacity of institutions and employed human resources are incomplete
Possibilities	Threats
1. Increasing state funding and donors' interest in the field of rehabilitation; 2. Investing in clinical training bases and supervision, which results in strengthening the practical skills of specialists/students and reducing attrition; 3. Availability of assistance from international associations and educational institutions to improve regulation and education programs; 4. Cooperation of state and private sectors; 5. Strengthening the sustainability of the field and establishing Georgia as a regional center of rehabilitation; 6. Introduction of cluster accreditation (by 2026 - in healthcare sectors);	1. Reduction of the state's interest, competing priorities; 2. Low sustainability of the industry and low investment motivation; 2. Asynchrony of state funding and investment, development of clinical bases and education policy; 3. Aging of some specialties, lagging behind in the assimilation of modern technologies; 4. Excessive or insufficient, ineffective regulation; 5. Chaotic interventions to fill the shortage of specialists and competences; 6. The outflow of specialists to other countries; 7. Maintaining the status quo; 8. Pandemic/other force majeure;

7. Key tasks for developing desired capability of rehabilitation services in Georgia

In this section we recommend key tasks necessary to bridge the identified gaps and achieve the desired capability for the provision of rehabilitation services for priority health conditions in Georgia. These tasks are outlined in subsections below with brief commentaries and then presented with more details as an action plan for the first two years (2023-2024) containing all proposed activities to fulfill these tasks, responsible bodies/partners, implementation timelines with initial, intermediate and final results, along with the associated risks and assumptions in the next section.

7.1. Building Rehabilitation service infrastructure

There are two key tasks proposed:

1. **Ensuring adequate inpatient capacity for rehabilitation services** through designing and implementing (a) a public investment program for establishing tiered system of rehabilitation centers at national, regional and local levels directly investing in the publicly owned national, regional and local level hospitals networked and managed by the GHM and (b) incentivizing privately owned inpatient service providers to develop co-located or standalone rehabilitation units at regional or local/municipal levels through strategic purchasing.

2. **Developing local PHC and community-based rehabilitation services** by defining the package of the rehabilitation interventions to be provided by the PHC teams in outpatient and home settings and ensuring its implementation as part of the comprehensive PHC reform planned for the years 2023-2027.

3. **Developing and adopting national standards and guidelines for quality assurance and optimal provision of rehabilitation services** through (a) developing the missing national guidelines and protocols for the priority rehabilitation services and using them for performance monitoring and payment of rehabilitation service providers and (b) based on these protocols, - elaborating and approving the quality and safety standards for rehabilitation services that initially will be used as a criteria for participation in the publicly funded rehabilitation program. Eventually, the refined standards are recommended to be used as mandatory licensing requirements for *any* providers of rehabilitation services for priority health conditions even if they do not participate in the publicly funded programs.

7.2. Developing human resources for rehabilitation

Three key tasks are proposed:

1. **Improving the competency framework and skill mix of the rehabilitation workforce in Georgia** through establishing multisectoral coordination mechanism and process engaging all the relevant governmental, nongovernmental, professional associations and academic institutions in the revision/adaptation of the rehabilitation workforce competency framework, multidisciplinary teamwork standards, national guidelines, protocols and institutionalizing the professional development instruments.

2. **Perfecting the system of academic education in rehabilitation specialties** through adapting the undergraduate and postgraduate curricula to the revised rehabilitation workforce competency framework, building the capacities of faculties and clinical basis for academic institutions

3. **Promoting the deficient rehabilitation specialties** through well-thought incentive mechanisms for potential students and future employers, introducing the targeted and timebound retraining programs to address the current major deficit in specific specialties and fostering international cooperation to identify and adopt the international best practices that worked in addressing the human resources gaps in rehabilitation without compromising the qualification and competency requirements for the workforce.

7.3. Ensuring necessary funding for integration of rehabilitation in the national health system

Two key tasks should be considered:

1. **Mobilizing funding for the multi-year public investment plan** to develop the rehabilitation services capabilities at all levels. The estimated cost may vary from 25 million to 41 million euros depending which options will be available and selected (construction of the new facility or reprofiling of the exiting inpatient beds in the GHM facilities) after the design and planning phase (see Table 10).

2. **Reviewing and adopting the multi-year plan for a phased expansion of the publicly financed rehabilitation services** broadening the scope of the priority health conditions and rehabilitation interventions financed for those conditions. The funding requirements with detailed budget projections are elaborated in a separate document submitted with this report: “Report on Rehabilitation Service Costing and Budgeting. For the first year, the maximum budget for the ambulatory, sub-acute, and acute rehabilitation for all selected priority conditions was estimated at about 30 mln. GEL. The budget estimates consider the country’s current capacity related to the provision of rehabilitation services. As the capacity develops, the required financial needs for the second and third years are expected to increase and may reach 38 million for the year 2024 with annual 15% increase in parallel with the rehabilitation service capacity expansion.

Table 10: Projected Capital expenditure costs per bed and space per bed (sq. m) by bed profiles for the minimal target of the rehabilitation beds[75]

Bed Profile	Construction Cost Sq. m.	Refurbishment Cost Sq. m.	Sq. m. per Bed	Equipment Cost per Bed	Total Cost per Bed	Estimated cost for construction	Estimated total cost for refurbishment
Specialized Rehab (level 3)	€ 1,300	€ 350	110	€ 28,600	€ 171,600	€ 6,864,000	€ 2,684,000
Specialized Rehab (level 2)	€ 1,200	€ 300	90	€ 21,600	€ 129,600	€ 17,933,400	€ 6,725,025
Inpatient Rehab (municipal- level 1)	€ 960	€ 200	80	€ 11,520	€ 27,520	€ 16,416,368	€ 16,416,368
Total						**€ 41,213,768**	**€ 25,825,393**

[75] The investment costs for construction and refurbishment by type of rehabilitation beds were derived from the local construction market assessment and international construction cost surveys (Turner & Townsend). The space per bed ratios by the bed profile and equipment were derived from the review of the international health facility planning guidelines (Australian Health Facility Guidelines and Cost Benchmarks for the Australian States 2017, Ontario Functional Planning and Capital Expenditure Benchmarks 2019, USA Veterans Affairs CLC 2020, New Zealand Health Facility Planning Guidelines 2020, South Africa Hospital Planning Guidelines)

8. Rehabilitation Service Integration Action Plan for 2023-2026.

Building Rehabilitation service infrastructure

Task/Activity	Responsible person/partner	Short term result (0-12 months)	Intermediate result (up to 12-24 months)	Final result (24-48 months)	Risks and assumptions
Task 1: 1. Ensuring adequate inpatient capacity for rehabilitation services					
1.1. Establishing the Ministerial working group for developing the public investment multi-year program	Ministry of Infrastructure and Regional Development; Ministry of IDPs from the occupied territories of Georgia, Labor, Health and Social Protection (hereinafter "Ministry"); Georgian Medical Holding; National Health Agency CIF, WHO	The working group steers master planning exercise and develops options for the public investment program for establishing tiered system of rehabilitation centers at national, regional and local levels directly investing in the publicly owned national, regional and local level hospitals networked and managed by the GHM; The working group develops the proposal for the rehabilitation component of the Universal Health Care Program on how to incentivize the private inpatient and outpatient health providers to develop rehabilitation capacities.	The working group elaborates the proposals for the refinement of the public investment plan and incentive package for the development of the rehabilitation capacity in the private sector.	The working group may continue to function, depending on the need and pace of integration of the rehabilitation services in the national health system.	*Risk: Unwillingness from the Ministry leadership to consider public investments in the rehabilitation infrastructure or for this purpose to establish such group;* *Possibilities: the establishment of such group may help to facilitate such process in participatory manner, with each partner brining relevant expertise and competence.*
1.2. the public investment program for tiered system of rehabilitation centers at national, regional and local levels is developed and approved	Ministry; Ministry of Finance; GMH		The detailed and costed public investment plan is developed and is reflected in the BDD for 2024-2026	The implementation of the plan is underway.	Lack of expertise and resources available to the working group to finalize the investment plan. Unwillingness of the Ministry of Finance to consider the budgetary

					investments in the rehabilitation services development.
Task 2: Developing local PHC and community-based rehabilitation services					
2.1. Developing minimum package of the rehabilitation interventions that can be provided at PHC level in Georgia	Ministry; WHO working group on PHC reform; Professional associations GMH CIF	The proposal for such package is developed by CIF and submitted to the Ministry and the WHO working group for consideration for integration in the four-year PHC Roadmap for the implementation of the new PHC model in Georgia	Consensus reached and timeline is defined for the integration of the rehabilitation care in the revised package of PHC services to be financed through the performance-based financing.	Rehabilitation services are routinely provided by the PHC teams at all levels.	Risk: reluctance from the stakeholders to prioritize the rehabilitation services for the inclusion in the new package of essential PHC services Opportunity to support the provision of the full care continuum with inclusion of the rehabilitation services at the PHC level, considering the PHC reform's current emphasis on management of the chronic conditions
2.2. Strengthening the capacity of PHC teams in the provision of the rehabilitation services.	Ministry GMH Professional Associations	Responsible bodies agree and additional partners identified for supporting capacity building efforts. The Training of Trainers recruited with the help of professional associations is completed	The resource of practical teaching supervisors has been increased; On job training through the supportive supervision is conducted at least in the pilot regions.	The capacity building in rehabilitation is institutionalized in the routine PHC system.	Risk: lack of interest from key stakeholders; lack of necessary funding; Reluctance from PHC providers to be trained in the new field (including the time deficit) Opportunity for PHC providers to expand the scope of services provided to their patients leading to increased income and patient trust.
2.3. Strengthening coordination between the levels of care to create the tiered system of rehabilitation	GMH Professional associations;		The rehabilitation patient journey's critical and clinical pathways are developed and approved. The referral and discharge criteria are developed and	The PHC teams nationwide provide care coordination for rehabilitation patients across levels of care.	Risk: Reluctance of PHC teams to assume the care coordination role for rehabilitation services

			approved for outpatient and home care The PHC doctors and managers are trained in the referral procedures and rehabilitation care coordination across levels of car		
Task 3: 3. Developing and adopting national standards and guidelines for quality assurance and optimal provision of rehabilitation services					
3.1. Developing the standards for quality assurance of rehabilitation services provided and preventing the oversupply of rehabilitation beds and fragmentation of the inpatient rehabilitation services	Ministry; Professional Associations CIF WHO	Based on the review of the international experience the Project proposes basic standards for inpatient and outpatient rehabilitation providers to be agreed with the Ministry and other key stakeholders and partners. The Standards are used to define the provider eligibility criteria for the rehabilitation component of the UHCP	Standards are further elaborated and refined based on the implementation experience and are used for selective contracting of publicly funded rehabilitation services.	Standards are further elaborated and refined based on the implementation experience and present mandatory requirements for licensing rehabilitation service providers nationwide.	Reluctance from the government to adopt selective contracting or tightened licensing requirements for rehabilitation providers. Better regulated rehabilitation sector Improved provider performance and quality of rehabilitation services.
3.2. Refining the existing and developing new national guidelines and protocols for the priority rehabilitation services	Ministry; Professional Associations CIF WHO	The national guidelines development working group is established with Project's coordination and the process is launched.	The national guidelines and protocols are developed and adopted through the defined procedure for such health conditions as spinal cord injury, multi trauma, fractures and orthopedics, cardiac conditions, etc. The approved national protocols are used to refine the service planning and licensing standards.	The approved national protocols are implemented and are used for rehabilitation service performance monitoring and payment and also to refine the service planning and licensing standards	Risks: Delays in the development of standards and guidelines Improved provider performance and quality of rehabilitation services.

Developing human resources for rehabilitation

Task/**Activity**	**Responsible person/partner**	**Short term result (0-12 months)**	**Intermediate result (up to 12-24 months)**	**Final result (24-48 months)**	**Risks and assumptions**
Task 1: Improving the competency framework and skill mix of the rehabilitation workforce in Georgia					
1.1. Establishing a formal multisectoral coordination group for the development of the rehabilitation workforce in Georgia	Ministry of Education and Science; Ministry of IDPs from the occupied territories of Georgia, Ministry of Labor, Health and Social Protection (hereinafter "Ministry"); Professional associations	A coordinating working group has been created and a normative act on the rights and duties of the group has been approved	By the working group: 1. The coordination scheme of the field of rehabilitation has been developed; 2. A multidisciplinary teamwork protocol has been developed; 3. Professional standards and competencies are discussed and recommendations on the minimum standard of competencies are prepared; 4. Recommendations on industry characteristics have been prepared;	The task force continues to work on industry priorities and advocate for issues	*Risk: lack of time of group members; sustainability problem;* *Possibilities: the existence of common sectoral characteristics contributes to the possibility of cluster accreditation;* *Educational institutions take into account sectoral characteristics in the process of preparing for the new wave of accreditation (2026); Industry specifics can be integrated into quality management tools;*
1.2. Creating a list of standards and competencies of specialties	Ministry. Ministry of Education and Science; professional associations; Quality and Coordination Group; service providers/clinical bases;	Specialty standards (PT, OT, SLT, P&O, psychology/psychotherapy) and competency lists are developed and discussed with stakeholders; Competencies of a PRM specialist (bachelor's and master's) are clearly established; The principles of teamwork are provided; Basic principles and transition period schemes have been developed and agreed upon with stakeholders regarding the separation of	The standards of specialties and the list of competencies are approved by the Ministry of Education and Science and are reflected in the relevant normative acts of the Ministry	The standards and competencies of specialties are provided for: 1. During the preparation and accreditation of academic educational programs; 2. In developing training-retraining and qualification improvement courses; 3. When developing criteria for state program	Due to the limited capacity of educational programs, a dilemma when choosing competencies, a problem of consensus; Integration into practice depends on changes in educational processes; Consensus problem for defining the standard of competencies for practitioners with non-academic education; the difficulty of implementing it in practice;

		competencies between individuals with academic education and practitioners without academic education, as well as mechanisms for recognizing the qualifications of the latter;		planning and rehabilitation service providers; 4. When developing a multidisciplinary team protocol; 5. Documents are periodically revised and updated;	
1.3. Creating a multidisciplinary teamwork protocol	Quality and Coordination Group; Ministry; Ministry of Education and Science; professional associations; service providers/clinical bases;	Defined the scheme of diagnosis, treatment and monitoring of the patient by the team of specialists (PT, OT, SLT, P&O, psychologist/psychotherapist) and the role/competence of each participant; A draft ministerial order on the protocol has been developed;	The draft order of the Ministry on the protocol is approved; The protocol is considered during the planning, procurement and monitoring of rehabilitation services (applies to both state and other services); Rehabilitation services are provided following protocol;	monitoring of protocol practice and periodic review-updating of documents; If necessary, an updated version of the document is approved;	Risk: unable to adapt to non-standard cases; to limit activities in conditions of shortage of specialists, especially in regions;
1.4. Implementation of continuous education and professional development system for rehabilitation specialists (PT, OT, SLT, P&O, psychologist/psychotherapist)	Ministry of Education and Science; Ministry; Quality and Coordination Group; service providers/clinical bases;	The procedure for development and recognition of programs has been developed; The structure/group responsible for recognition and its duties are defined; issued by the normative act of the Minister of Education and Science;	Programs have been developed to strengthen the priority areas and competencies; (e.g. audiology, adult rehabilitation, etc.);	Specialists in priority directions are trained; The range of service delivery has increased;	lack of political will; Greater range of rehabilitation services/competencies delivered in regions; low motivation of staff; low interest from the state and employers, low financing; consideration in the criteria of suppliers in state programs; Emphasis on quantity may detract from quality;
1.5. Strengthening of rehabilitation competencies in relevant medical specialties	Ministry; professional associations;	Recommendations for studying/improving rehabilitation competencies	Prepared and accredited training programs in	The training course in rehabilitation is	Increased demand and funding for integrated rehabilitation services,

	Quality and Coordination Group; service providers/clinical bases;	for relevant medical specialties have been prepared;	rehabilitation competencies	available for neurologists, orthopedic traumatologists, family doctors, rheumatologists	especially for multidisciplinary team work; The state promotes the integration of rehabilitation into other health services;
1.6. Creating a registration system	Ministry; Ministry of Education and Science; professional associations;	The concept of registration has been developed and resources have been allocated for its creation; Information about the resource of specialists in the field of rehabilitation is consolidated;	A constantly updated portal has been created; The information is accessible and allows for multi-faceted analysis	Improved health and education policy and program planning capabilities; The decision-making process of service providers and industry associations is improved;	low political interest; Difficulty in finding information, outflow of personnel; Low interest in constant renewal, lack of sustainability;
Task 2: Perfecting the system of academic education in rehabilitation specialties					
2.1. Integrating the qualifications of 3-level training programs in the national qualifications framework in each specialty	National Center for Education Quality Development; professional associations; Quality and Coordination Group;	Consensus is reached among the stakeholders on the optimal model; International experience is considered; The rules of student mobility between faculties have been revised;	Recommendations regarding program projects in each specialty have been developed; Existing programs have been revised in accordance with the qualification framework;	Draft programs are developed (taking into account the policy needs of the sector);	Low interest due to the small scale of the market and demand strengthening of rehabilitation services and clinical bases; Growing investments and interest in the emergence of Georgia as a rehabilitation hub in the region; The number of students and graduates in occupational therapy and other deficient specialties has increased as a result of the possibility of mobility between faculties and incentive mechanisms;

2.2. Strengthening of pedagogical resources	Ministry of Education and Science; professional associations;	With the ToT-training program, specialists in the field are trained, who graduated from the relevant academic programs; The resource of foreign professors is sought; distance co-learning methods are used; Exchange programs have been launched;	Pedagogical resources consisting of specialists in the field have been increased; The resource of practical teaching supervisors has been increased;	Pedagogical resources are sufficient to introduce 3-level academic teaching	political interest; increased clinical base resources and demand for services; Funding of distance learning by donors/state helps to take a doctoral course in parallel mode abroad; Master's and Ph.D. programs in the framework of classifications and development of programs show more motivation;
2.3. Strengthening the resource of clinical bases	Ministry; service providers; Quality and Coordination Group; professional associations;	A document for assessing the needs of clinical bases has been developed; A standard of arrangement and equipment and a standard of clinical practice has been prepared; Recommendations have been developed on the availability of resources, as well as geographical accessibility;	The number of bases supplied to full rehabilitation services has increased; Memorandums of cooperation between educational institutions and clinical bases have been developed;	Practical skills of specialists and students have improved; The work of a multidisciplinary team has improved; Clinical base equipment, clinical practice production procedures and monitoring are improved;	Increased state and donor investment; Private-state cooperation; Deficiency of the rehabilitation sector;
2.4. Strengthening practical skills	Ministry of Education and Science; Ministry; Quality and Coordination Group; Professional associations;	The volume and quality of clinical practice is revised and increased in each program; The practice of working with a multidisciplinary team is envisaged;	Students' involvement in practical activities has increased; In all relevant schools, at all stages of the program, practicing monitoring of clinical bases has been introduced;	Students and graduates successfully work in clinics; Improved quality of service;	Deficiency of study bases and supervisors’;

Task 3: Promoting deficient specialties					
3.1. Retraining in deficient specialties	Quality and Coordination Group; professional associations; Ministry of Education and Science; Ministry;	The concept of retraining in scarce specialties has been created by the quality and coordination group and agreed with stakeholders; The concept of retraining is approved by a normative act; The changes are provided for in Ministerial Order #244;	retraining programs have been developed; Discrepancies in employment and education issues, rights and duties of retrained persons are regulated; Transitional provisions for the inclusion of retrained persons in the legal educational space have been written; Preparation programs have been started; relevant normative documents have been prepared;	The number of deficient specialists has increased, especially in the regions; access to rehabilitation services is improved;	Specialist qualification criteria are required for the service provider to participate in state programs. Risk of quality deterioration, employment and education/skills mismatch. The problem of transition: maintaining regularity and balance. A motivation has been created for persons actively involved in the practice of rehabilitation to enter the legal educational space
3.2. Development of updated approaches and implementation of incentive mechanisms	Quality and Coordination Group; Ministry; Ministry of Education and Science; professional associations;	The quality and coordination group has developed recommendations on the promotion of study and employment in scarce specialties, which include issues and opportunities for teaching/clinical practice financing, employment in regions, recognition mechanisms, participation in international projects and training abroad; Recommendations for changing the scheme of national entrance exams in relevant specialties have been developed; The document is approved by a joint order of two ministers or by a government decree;	The number of students who want to pass the national exams has increased; The number of students/specialists enrolled in joint/international certified programs has increased; The number of specialists/students participating in research and international projects has increased; The number of interested students/specialists from the regions has increased; The number of students employed under supervision and their practical skills have increased;	More students graduate from the program and are employed in the field; The number of deficient specialists has increased, especially in the regions; The number of professionals, educated abroad, has been increased; access to rehabilitation services is improved;	The mobility of students and outflow of specialists is reduced; In case of increased competition, program quotas are revised/increased; Delay in the development of educational clinical bases or the status quo State, international and private investments in the field have increased; Remuneration is increased; cooperation with international institutions is improved;

3.3 Promotion of international cooperation	professional associations; Ministry; Ministry of Education and Science;	Memorandums of cooperation between the private-state and educational sectors on the development and promotion of fields have been signed; The procedure for recognition of international and foreign educational programs, continuous education courses, diplomas and certificates in the field has been adopted; Joint international conferences and projects are planned to share international evidence and best practices;	Foreign specialists are involved in the process of developing industry guidelines, standards and programs or in their supervision; Georgian specialists participate in the events of leading foreign institutions, in researches and implement the acquired experience in the country; Joint scientific-research projects are underway	The international evidence is available to decision-makers in Georgia	International experience is taken into account when making decisions; Georgia is interesting for local and foreign students

Annex 1: Key characteristics of the six care settings for the future MCR in Georgia

Care Setting	Scope of services	Outcomes for the patient journey	Implications for the model implementation
Inreach to acute	• Early intervention - potential to maintain and improve function • Integrated medical and rehabilitation multidisciplinary team • Comprehensive assessment • Shared care model between medical specialist groups • Can treat acute illness and provide rehabilitation services in parallel	• Enables early discharge planning • Patient independence and an enablement model of care in the acute setting • Prevention of functional decline during acute hospitalization • Integrated assessment of patients in an interdisciplinary environment • Enhanced effectiveness in the patient journey as measured by: - reduction in readmissions - decrease in the average length of stay - decrease in patients requiring a sub-acute inpatient stay • Reduction in discharge delays due to early assessment and discharge planning	• Admission and discharge criteria will be required to describe eligible patients in the acute sector who require and will benefit from inreach rehabilitation services • Protocols regarding adequate workforce provision to rehabilitation services to ensure patient care and intensity of therapy aligns with best practice • Good communication, collaboration and teamwork between the rehabilitation service and the acute care service will need to be developed • Evolving this new model of rehabilitation will require that acute services (including health managers) are educated in the role of rehabilitation services, and the importance of appropriate and early recognition of relevant patients. The concept of informing / educating/ liaising with acute services must be one of the earliest steps taken. There is a high degree of dependence on the acute services to identifying patients who are relevant for rehabilitation
Sub-acute inpatient	• Access to a core multidisciplinary care team (medical, nursing and	• Intensive multidisciplinary care leading to the functional ability to be	• Admission and discharge criteria refinement will be required to

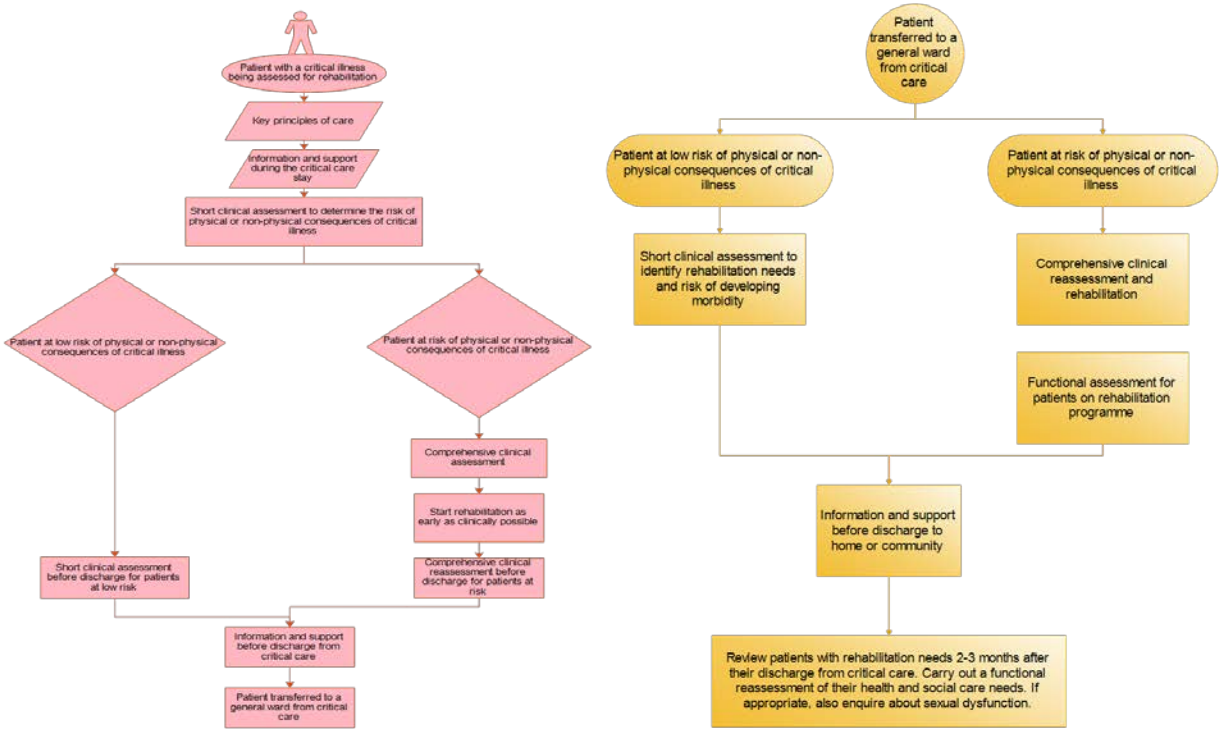
	therapist) and access to other specialized services as required in an inpatient setting • Intensive multidisciplinary inpatient program for patients that can tolerate an intense rehabilitation program or who require the structured environment for safety reasons • Provision of one-on-one therapy, group therapy and client self management /family involvement in the therapy program • Depending on the capacity and capability of the unit: - streaming of care, where patients are grouped according to a health condition - Integrated care types for example, acute care and rehabilitation care (i.e., inreach teams and multi-profile beds)	transferred to ambulatory care settings • Streaming of care leads to specialization and education of staff • Integrated care promotes care coordination and improved flow of patients across the continuum of care.	describe eligible patients in the acute sector who require and will benefit from inpatient subacute rehabilitation services 1) *Standalone sub-acute facilities* • Clear processes to be defined for the management and admission of patients requiring a higher level of care back to the inpatient acute wards or facilities • Availability of 24 hours (on-call or onsite) physician care and intensive care coverage in case of need • Access to clinical services (eg X-ray, pathology, specialist appointments) not available on site. 2) *Co-located sub-acute facilities* • Protocols regarding adequate workforce provision to rehabilitation services will assist in ensuring patient care and intensity of therapy aligns with best practice • It will be possible to transfer patients directly to acute wards if required.
Ambulatory care – day hospital	• Intensive multi-disciplinary outpatient program for patients that requires two or more therapy appointments • One-on-one therapy and/or group therapy treatment session	• Access to intensive treatment across numerous disciplines in one outpatient session over a half-day or one-day therapy session. Many day hospitals internationally (Australia, Ireland, US) operate half-day sessions. This contributes to the efficiency of the model and patient satisfaction • Motivating social environment while the patient continues to remain in usual place of residence	• Admission and discharge criteria need to be developed/refined for eligible patients who require and will benefit from Day Hospital rehabilitation services • Standards regarding adequate workforce provision to rehabilitation services will assist to ensure patient care and intensity of therapy aligns with best practice • Infrastructure: adequate space and equipment for a day hospital will be

		• Facilitates earlier discharge from a hospital	required to provide rehabilitation services • Support to patient transport is required to facilitate program uptake and continuation • Ambulatory care services should work in concert across settings to promote continuity of care for patients and avoid siloed care
Ambulatory care – outpatient	• One-on-one or group therapy - discipline specific outpatient therapy • Access to a multidisciplinary team as required	• Provides a structured program and continued care following a stay in acute/ sub-acute settings. • Enables transfer of care at an earlier date from the sub-acute rehabilitation unit. • Facilitates earlier discharge from hospital. • Enables access to rehabilitation services including timely medical review to prevent an admission to hospital. • Patient continues to remain in the usual place of residence	• Admission and discharge criteria will be required to describe eligible patients who require and will benefit from outpatient rehabilitation services • Standards regarding adequate workforce provision to rehabilitation services will assist in ensuring patient care and intensity of therapy aligns with best practice • Standards stipulating adequate space and equipment for multidisciplinary outpatient clinics will be required to provide rehabilitation services • Patient transport and/or parking is required to facilitate patient attendance • Linkage with outpatient clinics and addressing ways to communicate well where a patient attends two or more outpatient services
Ambulatory care – home	• Provision of rehabilitation therapy within the home (usual place of residence) environment • Individualized and task-specific therapy	• Enhanced focus on targeted functional independence goals associated with a usual place of residence including patients participating in therapy with the support of their family/caregiver.	• Admission and discharge criteria will be required to describe eligible patients who require and will benefit from home-based rehabilitation services; for example, the patient is “homebound” and unable to tolerate transport to outpatient services

		• Therapy available to those who cannot access centralized services • Enables patients to access therapy who are not safe to access community transport to day hospital/outpatient therapy or where participation in day hospital therapy is too fatiguing or where goals are best met in the home setting, for example, due to cognitive issues	• Standards regarding adequate workforce provision to rehabilitation services will assist in facilitating patient care and ensure that the intensity of therapy aligns with best practice • Planning and funding for staff travel and distances.
Outreach through networking	• "Hub and Spoke" model between national and regional hospitals and smaller municipal level medical centers not providing acute care through collaboration or consultation approach. • On-job training, peer support, supportive supervision and telemedicine support for municipal medical centers and PHC facilities providing rehabilitation services • Involvement of the retrained PHC providers/FDs as rehabilitation care coordinators in areas with limited access to rehabilitation specialists.	• Enhanced access to rehabilitation services (including goals and rehabilitation plan) closer to patients' homes. • Greater likelihood of family/caregiver involvement in rehabilitation care	• Good communication, collaboration and program or contractual linkages between the hub and spoke hospitals, centers and PHC facilities will need to be developed. For example, the Georgian Medical Holding establishing an integrated network at the national, regional and local levels using the hub and spoke principle for the continuum of care, including rehabilitation services. • Service planning for resources (staffing and equipment) at municipal centers and PHC facilities to enable rehabilitation service provision • Admission and discharge criteria will be required to describe eligible patients at each level of care. • Peer support, supportive supervision, teleconsultations between the rehabilitation professionals at higher levels and local FDs and specialists regarding the service and referral of appropriate rehabilitation patients

Source: adapted from NSW Health Australia, 2011.

Annex 2: Clinical pathway for rehabilitation of a patient after critical illness



Source: Adapted from NICE 2009

Annex 3: Examples of Clinical Utilization Management Guidelines for Rehabilitation Patients by Care Settings of the MCR proposed for Georgia

Acute and Sub-Acute Specialised Inpatient Rehabilitation

Subject: Acute and Sub-Acute Specialised Inpatient Rehabilitation

Guideline #: **Current Effective Date:**

Status: **Last Review Date:**

Purpose

Inpatient rehabilitation hospitals/units are facilities, which primarily promote specialised rehabilitative health care services rather than general medical and surgical services. Rehabilitation is defined as restoration of a disabled person to self-sufficiency or maximal possible functional independence. An inpatient rehabilitation program utilises an multidisciplinary coordinated team approach that involves a minimum of three (3) hours rehabilitation services daily for *acute* and *specialised* rehabilitation and minimum of two (2) hours of sub-acute and general rehabilitation. These services may include physical therapy, occupational therapy, speech therapy, cognitive therapy, respiratory therapy, psychology services, prosthetic/orthotic services, or a combination thereof.

Inpatient rehabilitation may be provided in an acute care hospital, a chronic care centre, a standalone rehabilitation facility or skilled nursing facility. The setting for inpatient rehabilitation is principally determined by the individual's medical and functional status and the ability of the rehabilitation facility to provide the necessary level of care. Acute and sub-acute inpatient rehabilitation is required when an individual's medical status is such that the intensity of services required could not reasonably be provided in an alternative setting (post-acute facilities, outpatient rehabilitation department or at home). Examples of conditions requiring acute inpatient rehabilitation include, but are not limited to, individuals with significant functional disabilities associated with stroke, spinal cord injuries, acquired brain injuries, major trauma and burns. Examples of sub-acute services less complex functional disabilities associated with stroke, chronic neurologic disorders, musculoskeletal, orthopaedic, etc.

This document addresses rehabilitation services provided in the inpatient hospital setting and includes the following acute and sub-acute inpatient rehabilitation tools:

Appendix 1 Inpatient Rehabilitation For Central Nervous System Insult

- Cerebrovascular Accident (CVA)
- Acquired Brain Injury
- Spinal Cord Injury

Appendix 2 Inpatient Rehabilitation for Neurological Disorders

- Peripheral Nerve Injury
  - Focal Neurologic Disorders
  - Diffuse Neurologic Disorders (Guillain-Barré)
- Central Nervous System Disorders
  - Multiple Sclerosis
- Nerve Root Injury
- Postoperative Deficits

Appendix 3 Inpatient Rehabilitation for Musculoskeletal/Orthopedic Disorders

- Major Joint Replacement
- Back Surgery
- Amputations
  - Loss of more than one body part (excluding digits)
  - Single foot amputation

    - Single leg amputation
- Major/Multiple Trauma
- Severe Arthritis and Lupus Erythematosus
    - Rheumatoid arthritis
    - Osteoarthritis
    - Polyarthritis
- Other Conditions
    - Simple fractures
    - Single extremity deficits
    - Simple (minor) trauma
    - Generalized weakness or general debility

Appendix 4 Additional Clinical Considerations for Review

- Motor Functional Impairment Status
- Cognitive Status
- Multidisciplinary Team Support

Appendix 5 Determination of Levels of Care: Acute Vs. Sub-acute rehabilitation

CLINICAL INDICATIONS

Admission Criteria

Medically Necessary:

Acute and sub-acute inpatient rehabilitation services are **medically necessary** when all of the following are present:

1. Individual has a new (acute) medical condition or an acute exacerbation of a chronic condition that has resulted in a significant decrease in functional ability such that they cannot adequately recover in a less intensive setting; AND
2. Individual's overall medical condition and medical needs either identify a risk for medical instability or a requirement for physician and other personnel involvement generally not available outside the hospital inpatient setting; AND
3. Individual requires an intensive inter-disciplinary, coordinated rehabilitation program (as defined in the description of service) with a minimum of three (3) hours active participation daily for acute rehabilitation and minimum two (2) hours active participation daily for sub-acute rehabilitation; AND
4. Individual is medically stable enough to no longer require the services of a medical/surgical inpatient setting; AND
5. The individual is capable of actively participating in a rehabilitation program, as evidenced by a mental status demonstrating responsiveness to verbal, visual, and/or tactile stimuli and ability to follow simple commands. For additional information regarding cognitive status, please refer to the Rancho Los Amigos Cognitive Scale (Appendix B); AND
6. Individual's mental and physical condition prior to the illness or injury indicates there is significant potential for improvement; (See *Note* below) AND
7. Individual is expected to show measurable functional improvement within a maximum of seven (7) to fourteen (14) days (depending on the underlying diagnosis/medical condition) for acute rehabilitation and within maximum of (14) to (28 days) for sub-acute general rehabilitation of admission to the inpatient rehabilitation program; AND
8. The necessary rehabilitation services will be prescribed by a physician, and require close medical supervision and skilled nursing care with the 24-hour availability of a nurse and physician who are skilled in the area of rehabilitation medicine for acute rehabilitation and with the 24-hour availability of a nurse and possibility to mobilise a physician ; AND
9. Therapy includes discharge plan.

Note: It is not necessary that there is an expectation of complete independence in the activities of daily living; but there should be a reasonable expectation of improvement that is of practical value to the individual, measured

against his condition at the start of the rehabilitation program. Additionally, the individual must have no lasting or major treatment impediment that prevents progress. (For example severe dementia).

Not Medically Necessary:
Acute inpatient rehabilitation services are considered **not medically necessary** for individuals who do not meet the medical necessity criteria set forth above and the following:

1. Coma stimulation;
2. Educational training related to specific employment requirements;
3. Care is custodial.

Regarding major joint replacements:
If a single joint is replaced, typically postoperative acute inpatient rehabilitation is considered **not medically necessary** unless the individual has significant comorbidity(ies) resulting in functional deficits which would necessitate an acute inpatient level of rehabilitation in order to achieve a satisfactory outcome within a reasonable time period. Of note, postoperative acute inpatient rehabilitation may be medically necessary for individuals undergoing more than one major joint replacement during a single hospitalization.

Regarding back surgery and compression fractures:
Acute inpatient rehabilitation is considered **not medically necessary** for the following:

- Uncomplicated back surgery without other concomitant diseases;
- Uncomplicated compression fractures without neurologic involvement.

Continuation of Services Criteria

Acute and sub-acute inpatient rehabilitation requires evidence of an inter-disciplinary, coordinated rehabilitation team review at least **once weekly** for acute inpatient rehabilitation and at least once in two weeks for sub-acute inpatient rehabilitation**,** which should document ALL of the following:

- Evidence of active participation in a multidisciplinary rehabilitation program; AND
- Evidence of progress toward stated goals documented by objective functional measurements; AND
- Identification of range and severity of the individual's problems, including medical status and stability, self-care, mobility, psychological status, communication status, etc.; AND
- Consideration of special equipment needs when appropriate; AND
- Goal modification based on current status, progress, and potential for improvement; AND
- Projected length of stay and discharge/disposition planning; AND
- Status of education of the individual and family members/caregivers regarding post discharge care; AND
- Identification of barriers to progress, including any medical complications likely to impair progress; AND
- Information regarding the status of the underlying medical condition.

In general the documentation should provide evidence that the individual is benefiting from the program, that there is progress towards reasonable goals, and that acute inpatient rehabilitation continues to be the most appropriate level of care.

Discharge Criteria

Discharge from acute and sub-acute inpatient rehabilitation is appropriate if one or more of the following is present*:*

1. Treatment goals necessitating the inpatient setting were achieved; OR
2. Absence of participation in an interdisciplinary rehabilitation program; OR
3. The individual has limited potential for recovery (e.g. The individual's functional status has remained unchanged or additional functional improvement appears unlikely within a reasonable time frame ([7 to 14 days)]); OR
4. Individual is unable to actively participate in at least 3 (or 2 hours for sub-acute) hours of intensive therapies per day, at least 5 days per week; OR

5. The level of rehabilitative/restorative care required could be safely and effectively rendered in an alternate, less intensive setting, e.g., post-acute, outpatient, or home health, (still may require 24 hour supervision).
6. The overall medical status is such that no further progress is anticipated or only minimal gains that could be expected to be attained with either less intensive therapy program or regular daily activities.

Additional Clinical Review
Additional clinical consideration to determine if the individual is a suitable candidate for acute inpatient rehabilitation services may be necessary when any of the following occur:

- Overnight and 24-hour passes are generally appropriate only for short periods of time if required to evaluate the individual's ability to function at home or in the community before discharge; OR
- All medical/rehabilitation issues have been adequately met but the transfer is delayed for non-medical reasons; OR
- A request is made for direct admission from home

Notes:

- *In general, individuals are admitted to an inpatient rehabilitation facility, for acute inpatient rehabilitation from acute care hospitals, sub-acute units or facilities, or chronic care centres), rather than directly from the home. Direct admission from the home may require additional review.*
- *When the illness or injury leading to the need for rehabilitation is one affecting the central nervous system, concomitant cognitive and physical issues may exist. Cognitive issues are routinely addressed as part of acute inpatient rehabilitation. When physical rehabilitation needs no longer exist, the cognitive issues may be addressed either as part of a formal cognitive rehabilitation program, or if there are continuing speech therapy or occupational therapy needs, with the continuation of these services.*

PLACE OF SERVICE/GOAL LENGTH OF STAY

Place of Service: Inpatient
Goal Length of Stay: Varies depending on the cause and severity of the original injury. Please refer to the following Appendices for additional information:

- Appendix 1 - Inpatient Rehabilitation for Central Nervous System Insult
- Appendix 2 - Inpatient Rehabilitation for Neurological Disorders
- Appendix 3 - Inpatient Rehabilitation for Musculoskeletal/Orthopaedic Disorders

CASE MANAGEMENT

Individuals with more complex cases may require specific case management. A discharge plan of care should be developed with input from the individual, caregiver, physician, therapists, social worker and other involved providers. Discharge planning should be an integral part of all rehabilitation stays and should be an ongoing activity throughout the entirety of the confinement. It is recognized that, in some circumstances lay family members and friends can be trained to safely and effectively provide chronic services that are typically considered skilled, e.g., pharyngeal suctioning, or gastrostomy feedings.

DISCHARGE PLAN

Usual: Home Health Care, or outpatient therapy setting
Alternate: Chronic Care Centre, aged home

General Information

Acute and Sub-Acute Inpatient Rehabilitation refers to a rehabilitation program provided in an acute or sub-acute care institution (or a distinct part of an institution) which provides an intensive multidisciplinary, coordinated team approach to rehabilitation services for the injured or disabled to restore lost function following an acute illness or accidental injury. The aim of the treatment is achieving the maximum level of function possible.

Comprehensive acute and sub-acute inpatient rehabilitation programs offer a wide range of therapeutic services provided by certified, or degreed professionals utilizing a multidisciplinary, goal oriented, team approach with treatment plans designed specifically for the individual's needs. Acute and sub-acute inpatient rehabilitation programmes must follow a multidisciplinary, coordinated team approach by providing services not available in the outpatient setting or skilled nursing facilities. Acute inpatient rehabilitation programmes should be led by the certified PRM specialist – Doctor Rehabilitologist. Sub-acute inpatient rehabilitation programmes may be led by physicians of other specialties (neurologist, cardiologist, traumatology/orthopaedics specialist, etc. trained in rehabilitation) with a possibility to mobilise the advice of the PRM specialist within a reasonable time-frame.

Examples of Inpatient Rehabilitation Disciplines/Services Provided as Part of an Multidisciplinary Team Program:

1. Skilled Rehabilitation Nursing:
    A. Bowel/bladder management;
    B. Skin & wound assessment/care/treatment;
    C. Medication management;
    D. Individual/family/caregiver training;
    E. 24-hour reinforcement of therapy goals/objectives;
    F. Ongoing assessment of individual's status.
2. Physical Therapy
    A. Treatment of limited mobility; e.g., inability to transfer, impaired coordination/truncal balance, functional ambulation less than 100 feet, passive and active range of motion of lower extremities;
    B. Instruction in use of durable medical equipment (DME);
    C. Fitting of prosthetic or orthotic device(s);
    D. Individual/family/caregiver training.
3. Occupational Therapy
    A. ADL training; e.g., toileting, grooming, dressing, feeding;
    B. Perceptual motor training (spatial orientation, depth or distance perception) directly impacting ability to initiate or maintain freedom of movement in a safe environment;
    C. Individual/family/caregiver training;
    D. Safety skills or problem-solving techniques; e.g., emergency procedures and injury prevention;
    E. Splinting of upper body extremities.
4. Speech Therapy
    A. Treatment of communication disorders (expressive or receptive dysphasia or aphasia) resulting in less than basic communication levels;
    B. Treatment of swallowing dysfunction (dysphagia);
    C. Teaching simple, problem-solving techniques or safety skills;
    D. Individual/family/caregiver training.
5. Case Manager and Social Services represented by a Social Worker
    A. Integrates the individual's and the family's social needs into the plan of care;
    B. Coordinates discharge planning activities;
    C. Makes community referrals and consults with other agency personnel.
6. Neuropsychological Services
    A. Cognitive screening and neuropsychological testing.
7. PRM Specialist – Doctor Rehabilitologist
    A. Daily medical supervision of the individual's rehabilitation treatment plan for acute rehabilitation.
    B. Overall coordination of the individual’s rehabilitation treatment plan for sub-acute rehabilitation in case of need as assessed by an individual’s treating physician

Examples of Services that Typically Do Not Require Admission to an Inpatient Rehabilitation Program

The following services are examples of services that do not require the skills of a licensed nurse or rehabilitation personnel and are therefore considered **not medically necessary** in the acute inpatient rehabilitation or skilled nursing facility settings unless there is documentation of comorbidities and complications that require individual consideration.

1. Routine services directed toward the prevention of injury or illness;
2. Routine or maintenance medication administration. Admissions solely for the administration of routine or maintenance medications, including daily IV, IM and SQ medications are not considered skilled. Parenteral

medication administration in medically stable individuals is most often managed in the home setting by a home health or home infusion therapy provider;
3. Care solely for the administration of oxygen, and nebulizer treatments;
4. Routine enteral feedings;
5. Routine colostomy care;
6. Ongoing intermittent straight catheterization for chronic conditions;
7. Custodial care;
8. Emotional support or counseling;
9. Suctioning of the nasopharynx or nasotrachea. Suctioning daily or PRN less frequently than every four hours PRN is not considered skilled;
10. Administration of suppositories or enema;
11. Routine foot and nail care;
12. Individuals on established levels of ventilatory support (excludes teaching of care to caregivers);
13. Urinary catheters. The presence of a stable indwelling or suprapubic catheter, the need for routine intermittent straight catheterization, catheter replacement or routine catheter irrigation does not qualify a individual for acute inpatient rehabilitation or sub-acute care placement unless other skilled needs exist;
14. Heat treatment – wet or dry:
    A. Whirlpool baths, paraffin baths or heat lamp treatments do not qualify an individual for care in an acute inpatient rehabilitation;
    B. There may be a rare instance when a severely compromised individual with desensitizing neuropathies or sever burns requires skilled observation during the above treatments. These cases are to be reviewed on an individual consideration basis. Documentation must support the medical necessity for such observation.

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Appendix 1 - ACUTE and Sub-Acute INPATIENT REHABILITATION FOR CENTRAL NERVOUS SYSTEM INSULT

(Cerebrovascular Accident [CVA], Acquired Brain Injury and Spinal Cord Injury)

The information provided in this Appendix does not supersede the criteria set forth in the clinical indications section of this document. Candidates for acute inpatient rehabilitation must meet the criteria set forth in the clinical indications section of this document. Please refer to the clinical indications section for additional criteria.

Clinical Considerations

Regarding cerebrovascular accident

Acute and in certain cases sub-acute inpatient rehabilitation is considered **medically necessary** for individuals who have suffered a cerebrovascular accident (stroke) that results in a significant impairment (contracture, paralysis, severe ataxia or paresis) in at least two extremities or at least one extremity in addition to higher central nervous system functions, including both mentation and autonomic nervous functions such as speech, swallowing and control of secretions.

Regarding acquired brain injury

Acute inpatient rehabilitation is considered **medically necessary** for individuals who have suffered an acquired brain injury that results in a significant impairment (contracture, paralysis, severe ataxia or paresis) in at least two extremities or at least one extremity in addition to higher central nervous system functions, including both mentation and autonomic nervous functions such as speech, swallowing and control of secretions.

Sub-acute inpatient rehabilitation is considered medically necessary for individuals who have suffered an acquired brain injury that results in a significant impairment in one or two extremities without significant impairment of higher central nervous system functions

Regarding spinal cord injury

Acute and sub-acute inpatient rehabilitation is considered **medically necessary** if a spinal cord injury leads to a significant impairment (contracture, paralysis or severe paresis) of at least two extremities.

Length of Stay - Acute and Sub-acute Inpatient Rehabilitation Setting for Individuals with Central Nervous System Insult

This is variable and generally related to the severity of the original injury and the duration of coma or loss of consciousness. Those with longer periods of coma will generally recover more slowly. This is also applicable to CNS injury related to non-traumatic intracranial insults (stroke, intracranial hemorrhage, metabolic insult).

Length of stay for spinal cord injuries is related to the level of the injury. Injuries occurring higher in the spinal cord result in more profound loss of function and generally require longer periods of rehabilitation for adaptation.

Routine (typically weekly for acute and bi-weekly for sub-acute rehabilitation) reviews are completed to assess how the individual is progressing and to determine the expected length of time inpatient rehabilitation will be required.

Please refer to the appendices for additional information regarding the following:

- **Appendix 4** Additional Clinical Considerations for Review
  - Motor Functional Impairment Status
  - Cognitive Status
  - Multidisciplinary Team Support
- **Frequently Used Assessment Tools** (Annex II)
  - Rancho Los Amigos Cognitive Scale
  - Glasgow Coma Scale
  - Functional Independence Measurement

- Disability Rating Scale

Appendix 2 - ACUTE and Sub-acute INPATIENT REHABILITATION FOR NEUROLOGICAL DISORDERS

(Peripheral Nerve Injury, Multiple Sclerosis, Nerve Root Injury and Postoperative Deficits)

The information provided in this Appendix does not supersede the criteria set forth in the clinical indications section of this document. Candidates for acute inpatient rehabilitation must meet the criteria set forth in the clinical indications section of this document. Please refer to the clinical indications section for additional criteria.

Clinical Considerations

Regarding peripheral nerve injury
Acute and sub-acute inpatient rehabilitation is considered **medically necessary** for individuals with focal neurologic disorders which involve the peripheral nerves provided there are multiple injuries that result in a significant impairment (contracture, paralysis, or severe paresis) in at least two extremities.

Acute and sub-acute inpatient rehabilitation is considered **medically necessary** for individuals with diffuse peripheral nervous system disorders (e.g., Guillain-Barré), which involve at least two extremities and result in significant impairment (contracture, paralysis, or severe paresis) AND the weakness is not limited to a qualitative difference since a prior inpatient admission.

Regarding multiple sclerosis
Acute and sub-acute inpatient rehabilitation is considered **medically necessary** for individuals with central nervous system disorders (e.g. multiple sclerosis) that result in generalized weakness provided:

- There has been a significant decline in the individual's functional status; AND
- The functional decline is such that it will not self correct without treatment; AND
- Compensatory training is needed in addition to physical therapy.

Regarding nerve root injury
Acute and sub-acute inpatient rehabilitation is considered **medically necessary** following nerve root injury when the individual experiences a persistent significant impairment (contracture, paralysis, or severe paresis) in at least two extremities and the deficit is not expected to be self-limited after surgical intervention (e.g. decompression).

Regarding postoperative deficits
Acute inpatient rehabilitation is considered **medically necessary** for individuals recovering from neurosurgical procedures provided there are neurological deficits as a result of the surgery and there is significant impairment such that it involves at least one extremity in addition to higher central nervous system functions.

Sub-acute inpatient rehabilitation is considered **medically necessary** for individuals recovering from neurosurgical procedures provided there are neurological deficits as a result of the surgery and there is significant impairment such that it involves at least one extremity **without** impairment to higher central nervous system functions

Length of Stay - Acute Rehabilitation Setting for Individuals with Neurological Disorders
This is variable and generally related to the severity of the original injury or surgical procedure. Progress may be slower in members of the geriatric population as well as in individuals with co-morbidities, complications, or decreased cognitive status.

Because the length of stay varies depending on the complexity of the individual's condition, it is not unusual that routine (typically weekly) reviews are completed to assess how the individual is progressing and to determine the expected length of time inpatient rehabilitation will be required.

Please refer to the appendices for additional information regarding the following:

- **Appendix 4** Additional Clinical Considerations for Review
    - Motor Functional Impairment Status
    - Cognitive Status
    - Multidisciplinary Team Support
- **Frequently Used Assessment Tools** (Annex II)
    - Rancho Los Amigos Cognitive Scale
    - Glasgow Coma Scale
    - Functional Independence Measurement
    - Disability Rating Scale

Appendix 3 - ACUTE and Sub-acute INPATIENT REHABILITATION FOR MUSCULOSKELETAL and ORTHOPEDIC DISORDERS

(Major Joint Replacement, Amputations, Major/Multiple Trauma, and Other Conditions)

The information provided in this Appendix does not supersede the criteria set forth in the clinical indications section of this document. Candidates for acute inpatient rehabilitation must meet the criteria set forth in the clinical indications section of this document. Please refer to the clinical indications section for additional criteria.

Clinical Considerations

Regarding major joint replacements
If a single joint is replaced, typically postoperative acute and/or sub-acute inpatient rehabilitation is considered **not medically necessary** unless the individual has significant comorbidity(ies) resulting in functional deficits which would necessitate an inpatient level of rehabilitation in order to achieve a satisfactory outcome within a reasonable time period. Of note, acute and sub-acute postoperative inpatient rehabilitation may be **medically necessary** for individuals undergoing more than one major joint replacement during a single hospitalization.

Regarding back surgery and compression fractures
Acute and sub-acute inpatient rehabilitation is considered not medically necessary for the following:

- Uncomplicated back surgery without other concomitant diseases;
- Uncomplicated compression fractures without neurologic involvement.

Regarding amputations
Acute and/or sub-acute inpatient rehabilitation is considered **medically necessary** for individuals who have experienced the loss of more than one body part (with the exception of digits).

Rehabilitation after a single foot or leg amputation may occur in an acute inpatient or less intensive outpatient setting. This determination is dependent upon: (1) the individual's ability to actively participate in an intensive rehabilitation program; (2) the functional deficit caused by the amputation itself; and (3) the individual's underlying medical condition.

Acute inpatient rehabilitation is considered **not medically necessary** for individuals who have suffered the loss of fingers, toes or a single hand because they do not require the intensive level of constant care provided in the inpatient setting. These individuals typically undergo rehabilitation in a less intensive, outpatient setting.

Regarding major/multiple trauma
Acute and sub-acute inpatient rehabilitation is considered **medically necessary** for individuals who have:

- Suffered massive injuries to a single extremity, OR
- Experienced functional impairments of more than one extremity; OR
- Experienced functional impairment such that it involves at least one extremity in addition to higher central nervous system functions. Only acute inpatient rehabilitation is indicated in this case.

Regarding arthritis and lupus erythematosus
Acute or sub-acute inpatient rehabilitation is considered **medically necessary** for individuals with severe arthritis (e.g., rheumatoid arthritis, osteoarthritis, polyarthritis, and lupus erythematosus) provided joint pathology involvement has progressed to the extent that the individual has experienced a significant functional decline in range of motion in the joint or related contractures in at least two extremities.

Regarding other conditions
Acute and sub-acute inpatient rehabilitation is considered **not medically necessary** for individuals with the following musculoskeletal/orthopedic disorders because they do not require the intensive level of constant care provided in the inpatient setting. These individuals typically undergo rehabilitation in a less intensive, outpatient setting.

- Simple fractures;
- Single extremity deficits;
- Simple (minor) trauma;
- Generalized weakness or general debility.

Length of Stay - Acute and Sub-acute Rehabilitation Setting for Individuals with Musculoskeletal/Orthopedic Disorders

This is variable and generally related to the severity of the original injury or surgical procedure. Progress may be slower in members of the geriatric population as well as in individuals with co-morbidities, complications, or decreased cognitive status.

Because the length of varies depending on the complexity of the individual's condition, it is not unusual that routine (typically weekly) reviews are completed to assess how the individual is progressing and determine the expected length of time inpatient rehabilitation will be required.

Please refer to the appendices for additional information regarding the following:

- **Appendix 4** Additional Clinical Considerations for Review
  - Motor Functional Impairment Status
  - Cognitive Status
  - Multidisciplinary Team Support
- **Frequently Used Assessment Tools** (Annex II)
  - Rancho Los Amigos Cognitive Scale
  - Glasgow Coma Scale
  - Functional Independence Measurement
  - Disability Rating Scale

APPENDIX 4 - ADDITIONAL CLINICAL CONSIDERATIONS FOR REVIEW

The information provided in this Appendix does not supersede the criteria set forth in the clinical indications section of this document. Candidates for acute inpatient rehabilitation must meet the criteria set forth in the clinical indications section of this document. Please refer to the clinical indications section for additional criteria.

Motor Functional Impairment Status
The motor functional status of individuals in this category is characterized by:

- Requires moderate to maximum assistance of another person to perform most self-care activities (i.e. feeding, grooming, dressing, bathing); AND
- Requires moderate to maximum assistance of another person to perform mobility skills, i.e. bed activities (rolling, rise to sitting position), wheelchair locomotion and transfers; AND
- Able to tolerate two or more hours per day of therapy services within the first week on the rehabilitation unit; AND
- Able to actively participate in therapies every day, at least 5 days per week; AND

- Requires an intensive level of constant care which cannot be adequately delivered in a less intensive setting (post-acute setting, outpatient rehabilitative setting or individual's home).

Note: See Annex II for the Functional Independence Measurement and the Disability Rating Scale.

Cognitive Status Required to Benefit from Inpatient Rehabilitation
The individual must be able to follow simple command (verbal or demonstrated) with reasonable consistency (e.g. 50% of the time). Individuals who have experienced a head injury, multiple traumas, cerebrovascular (CV) or central nervous system (CNS) insult may start at a lesser level but must show some potential for progressive improvement in following commands during the first 2 weeks of the rehabilitation programme for acute rehabilitation and during the first 4 weeks of the rehabilitation programme for sub-acute rehabilitation.

Notes:

- *When the illness or injury leading to the need for rehabilitation is one affecting the central nervous system, concomitant cognitive, and physical issues may exist. Cognitive issues are routinely addressed as part of acute inpatient rehabilitation. When physical rehabilitation needs no longer exist, the cognitive issues may be addressed either as part of a formal cognitive rehabilitation program, or if there are continuing speech therapy or occupational therapy needs, with the continuation of these services.*
- *See Annex II for the Rancho Los Amigos Cognitive Scale.*

Multidisciplinary Team Support
The specific needs of an individual will vary, however, care frequently required for individuals and which cannot be achieved at less acute levels of care such as post-acute, home health care, or outpatient therapy setting, may include the following:

- Nursing care;
- Physical therapy;
- Occupational therapy;
- Social services;
- Psychological services
- Neuropsychological services (as required);
- Speech therapy (may or may not be required).

Please refer to the Annex II for additional information regarding the following:

- Frequently Used Assessment Tools
    - Levels of Care
    - Rancho Los Amigos Cognitive Scale
    - Glasgow Coma Scale
    - Functional Independence Measurement
    - Disability Rating Scale

Note: Individuals discharged from the inpatient rehabilitation setting are frequently transferred to an environment where a lesser degree of skilled medical care is required such as to a Skilled Nursing Facility, a Custodial Care setting or home.

APPENDIX 5 DETERMINATION OF LEVELS OF CARE: ACUTE VS. SUB-ACUTE

Rehabilitative care in both acute and sub-acute inpatient setting is appropriate for individuals who require a more coordinated, intensive program of multiple services than is generally found in a post-acute or outpatient setting. Individuals are likely to require an inpatient level of rehabilitation if they have one or more conditions requiring intensive and multidisciplinary rehabilitation care, or a medical complication in addition to their primary condition which requires the continuing availability of a physician to ensure safe and effective treatment.

Whether an individual is admitted to an acute inpatient rehabilitation unit/centre or an sub-acute inpatient rehabilitation unit is principally determined by the individual's degree of disability, his/her ability to actively participate in therapy, and the intensity of the program. This table is provided as a tool to help the user distinguish acute rehabilitative care from the sub-acute rehabilitation care provided in the relevant facilities (e.g. chronic care centres).

Acute Inpatient Rehabilitation	**Chronic Care Centre**
Rehabilitation therapy averages a minimum of 3 hours per day, one or more disciplines (PT, OT, ST), at least 5 days per week.	Rehabilitation therapy averages a minimum of 0.5 – 2.0 hours per day, at least 5 days per week.
Physicians are actively coordinating multi-disciplinary care and are typically available 24 hours/day. Doctor- rehabilitologist is leading the multidisciplinary team.	Doctor- rehabilitologist and some other physicians are typically available intermittently.
Rehabilitation nurses, as part of the integrated team, provide direct, skilled care, assessments and teaching every shift. Direct nursing care averages 5 hours/day.	Nurses provide direct, skilled care assessments at least once per day.
Management of complicated surgical wound requires care and assessments several times per day, if applicable.	Management of stable wound requires care and assessments at least once per day, if applicable.
Individual may have a medical or surgical condition that is stable enough to allow the individual to fully participate in therapies.	Individual may have a medical or surgical condition that does not require hospitalization but is not be stable enough to allow the individual to fully participate in therapies.

Subject: Inpatient sub-acute care

Guideline #: **Current Effective Date:**

Status: **Last Review Date:**

Purpose

The American Health Care Association (AHCA) have defined sub-acute care as "comprehensive inpatient care designed for someone who has an acute illness, injury, or exacerbation of a disease process. It is goal-oriented treatment rendered immediately after, or instead of, acute hospitalization to treat one or more specific active complex medical conditions or to administer one or more technically complex treatments, in the context of a person's underlying long-term conditions and overall situation."(American Health Care Association, 1996)

Sub-acute care is a distinct form of health care service that focuses on providing the skilled medical care needed to transition individuals from the acute care setting (UB Foundation Activities, Inc, 2001-2004). Sub-acute care may be rendered in a freestanding facility (chronic care centre) or in a designated unit of a general or rehabilitation hospital. Sub-acute care requires a treatment plan with specific goals attained through the provision of skilled nursing, rehabilitative and medical services by licensed professionals. Specifically, sub-acute care should not be confused with custodial care which is designed to assist medically stable individuals with their activities of daily living, (ambulating, exercising, bathing and dressing). Custodial care does not require the skills of a trained professional or supervision of a physician.

Inpatient sub-acute level of care along with the medical treatment may be used specifically for rehabilitation purposes for any number of conditions. In general, the rehabilitation needs of these individuals require less than three modalities, most often physical therapy. The overall functional deficit for these individuals is such that complex adaptive equipment and modifications are not needed.

CLINICAL INDICATIONS

Medically Necessary:

Inpatient sub-acute care is considered **medically necessary** for individuals who meet the following criteria (A and B): Individuals requiring inpatient rehabilitative services should meet the following criteria in A, B and C below:

A. Individuals must meet ALL of the following (1 - 4):
    1. Do not require acute inpatient hospital or acute rehabilitative care but still require physician involvement, highly skilled nursing and access to more technologically advanced therapies; AND
    2. Have medical needs greater than that which could be met in a home setting; AND
    3. Though stable, require diagnostics or invasive procedures or rehabilitation, but not intensive procedures requiring an acute level of care; AND
    4. Have a determined course of treatment.
B. Individuals must meet ALL of the following (1 - 4):
    The severity of the individual's condition requires:
    1. Active physician direction with frequent on-site visits; AND
    2. Professional nursing care; AND
    3. Significant ancillary and rehabilitation services; AND
    4. An outcomes-focused interdisciplinary approach utilizing a professional team.
C. Individuals requiring rehabilitative services in the sub-acute setting should meet the criteria above (A-B) in addition to the following (1-6):
    1. Individual requires one or two rehabilitative services daily with a duration of 0.5-2 hours; AND
    2. Individual's mental and physical condition prior to the illness or injury indicates there is significant potential for improvement (See *Note* below); AND

3. Individual should be medically stable enough to no longer require the services of a medical/surgical inpatient setting and to actively participate in an moderately intensive rehabilitation program; AND
4. Individual is capable of actively participating in a rehabilitation program, as evidenced by a mental status demonstrating responsiveness to verbal or visual stimuli and ability to follow simple commands. For additional information regarding cognitive status, please refer to the Rancho Los Amigos Scale of Cognitive Functioning (Annex II); AND
5. Individual is expected to show measurable functional improvement within a maximum of fourteen (14) to twenty eight (28) days (depending on underlying diagnosis/medical condition) of admission to the inpatient rehabilitation program; AND
6. Therapy includes a discharge plan.

Note: It is not necessary that there is an expectation of complete independence in the activities of daily living; there should be a reasonable expectation of improvement that is of practical value to the individual, measured against his condition at the start of the rehabilitation program. Additionally, the individual must have no lasting or major treatment impediment such as severe dementia that prevents progress.

Conditions that may be appropriate for inpatient sub-acute care include but are not limited to:

- Cardiac Recovery;
- Oncology Recovery – may be receiving chemotherapy and radiation;
- Pulmonary conditions;
- Musculoskeletal conditions;
- Psychogeriatric conditions;
- Urologic conditions;
- Orthopedic Rehabilitation;
- Neurological disorders/CVA;
- Complex wound management; and
- Intravenous Therapy (more than two times per day).

Not Medically Necessary:

The individual's inpatient stay becomes not **medically necessary** when ANY ONE of the following occurs:

- The individual's condition has changed such that skilled medical or rehabilitative care is no longer needed; OR
- The individual has met the goals established at or modified following admission and a medically appropriate alternative discharge setting exists; OR
- The individual has failed to make progress towards treatment goals during a medically reasonable (typically one [1] week) period; OR
- There is a lack of a consistent individualized therapy program; OR
- The individual is unwilling to be actively involved in the care as demonstrated by a refusal to participate in the recommended treatment plan; OR
- The individual's activities or behavior prevents attainment of a successful outcome; OR
- The individual's primary need becomes psychiatric in nature in which case care should be transitioned to the appropriate setting; OR
- The individual has only one (1) skilled need and that need can be met in a less intensive medical care setting; OR
- When the discharge to a lesser level of care is documented as appropriate and safe, but there were delays in formulating the discharge plan; OR
- It has been determined that the established goals are not realistic or appropriate; OR
- Care has become custodial.

GENERAL INFORMATION

Sub-acute care requires the coordinated services of an interdisciplinary team including physicians, nurses, and other relevant professional disciplines sufficiently trained and knowledgeable to assess and manage these specific conditions and perform the necessary procedures. According to the "sub-acute care is generally more intensive than traditional nursing facility care and less than acute care. It requires frequent (daily to weekly) recurrent individual

assessment and review of the clinical course and treatment plan for a limited (several days to several months) time period, until the condition is stabilized or a predetermined treatment course is completed." (American Health Care Association, 1996) The goal of inpatient sub-acute care is to match an individual's needs with the medically appropriate level of health care services.

References

1. American Health Care Association. Nursing facility sub-acute care: the quality and cost-effective alternative to hospital care, 1996.
2. UB Foundation Activities, Inc. The inpatient rehabilitation facility – patient assessment instrument (IRF-PAI) training manual. 2001 – 2004. Available at: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/InpatientRehabFacPPS/IRFPAI.html. Accessed on September 26, 2013

Annex 4: Four categories of patient need for rehabilitation services (BSRM, 2019)

Patients with Category A rehabilitation needs

- Patient goals for rehabilitation may include:
  - Improved physical, cognitive, social and psychological function / independence in activities in and around the home;
  - Participation in societal roles (e.g. work / parenting / relationships);
  - Disability management e.g. to maintain existing function; manage unwanted behaviors / facilitate adjustment to change
  - Improved quality of life and living including symptom management, complex care planning, and support for family and caregivers, including neuropalliative rehabilitation
- Patients have complex or profound disabilities e.g. severe physical, cognitive communicative disabilities or challenging behaviors.
- Patients have highly complex rehabilitation needs and require specialized facilities and a higher level of input from more skilled staff than provided in the local specialist rehabilitation unit. In particular rehabilitation will usually include one or more of the following:
  - intensive, coordinated interdisciplinary intervention from 4 or more therapy* disciplines, in addition to specialist rehabilitation medicine/nursing care in a rehabilitative environment
  - medium length to long term rehabilitation program required to achieve rehabilitation goals – typically 2-4 months, but up 6 months or more, providing this can be justified by measurable outcomes
  - very high intensity staffing ratios e.g. 24 hour 1:1 nurse “specialling”, or individual patient therapy sessions involving 2-3 trained therapists at any one time
  - highest level facilities /equipment e.g. bespoke assistive technology / seating systems, orthotics, environmental control systems/computers or communication aids, ventilators.
  - complex vocational rehabilitation including inter-disciplinary assessment / multi-agency intervention to support return to work , vocational retraining, or withdrawal from work / financial planning as appropriate
- Patients may also require:
  - Highly specialist clinical input e.g. for tracheostomy weaning, cognitive and/or behavioral management, low awareness states, or dealing with families in extreme distress
  - ongoing investigation / treatment of complex / unstable medical problems in the context of an acute hospital setting
  - neuro-psychiatric care including: risk management, treatment
  - support for medico-legal matters including mental capacity and consent issues
- Patients are treated in a national specialized rehabilitation unit (i.e. a Level 3 unit).
- Patients may on occasion be treated in a Level 2 unit depending on the availability of expert staff and specialist facilities as well as appropriate staffing ratios

Patients with Category B rehabilitation needs

- Patient goals for rehabilitation may be as for category A patients
- Patients have moderate to severe physical, cognitive and/or communicative disabilities which may include mild-moderate behavioral problems.
- Patients require rehabilitation from expert staff in a dedicated rehabilitation unit with appropriate specialist facilities.
- In particular rehabilitation will usually include one or more of the following:
- Intensive coordinated interdisciplinary intervention from 2-4 therapy disciplines in addition to specialist rehabilitation medicine/nursing care in a rehabilitative environment
- medium length rehabilitation program required to achieve rehabilitation goals – typically 1-3 months, but up to a maximum of 6 months, providing this can be justified by measurable outcomes • special facilities/ equipment (e.g. specialist mobility/ training aids, orthotics, assistive technology) or interventions (e.g. spasticity management with botulinum toxin or intrathecal baclofen)
- interventions to support goals such as return to work, or resumption of other extended activities of daily living, eg home-making, managing personal finances etc.
- Patients may also have medical problems requiring ongoing investigation / treatment.
- Patients are treated in a Regional specialist rehabilitation unit (i.e. a Level 2 unit).

Patients with Category C rehabilitation needs

- Patient goals are typically focused in restoration of function / independence and co-ordinated discharge planning with a view to continuing rehabilitation in the community.
- Patients require rehabilitation in the context of their specialist treatment as part of a specific diagnostic group (e.g. stroke).
- Patients may be medically unstable or require specialist medical investigation / procedures for the specific condition.
- Patients usually require less intensive rehabilitation intervention from 1-3 therapy disciplines in relatively short rehabilitation programs (i.e. up to 6 weeks).
- Patients are treated by a local general team (i.e. Level 1 service) which may be led by physicians in specialties other than Rehabilitative Medicine (e.g. neurology / stroke medicine) and staffed by therapy and nursing teams with specialist expertise in the target condition.

Patients with Category D rehabilitation needs

- Patient goals are typically focused in restoration of function / independence and coordinated discharge planning with a view to continuing rehabilitation in the community if necessary.
- Patients have a wide range of conditions but are usually medically stable.
- Patients require less intensive rehabilitation intervention from 1-3 therapy disciplines in relatively short rehabilitation programs (i.e. 6-12 weeks)
- Patients receive an in-patient local non-specialist rehabilitation service (i.e. Level 1) which can be led by non-medical staff.