

# Function-based Rehabilitation Model: An Initial Step towards Universal Health Coverage

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## ABSTRACT

**Objective.** As part of the thrust towards Universal Health Care, the Philippines has enhanced health insurance coverage for rehabilitation with recent introductions of benefits for disabilities in children, prostheses, and orthoses. The project aimed to develop a functionality-based framework to guide comprehensive benefits for rehabilitation services for adult Filipinos.

**Methods.** Scoping review was conducted to identify common rehabilitation conditions, frameworks for clinical assessment, and essential services for rehabilitation. Key informant interviews and focus group discussions were conducted with targeted rehabilitation service providers and experts to validate the information collected. A unified pathway of care and essential services for the provision of rehabilitation medicine services was developed through triangulation. The study was conducted from October 2018 to September 2019, with activities done in Metro Manila.

**Results.** The results summarized treatment pathways for four major disease categories: neurologic, musculoskeletal, chronic pain, and activities of daily living/ cardiopulmonary. Impairments were identified reflecting the principles from the International Classification of Function. Disabilities were categorized based on function: mobility, self-care, cognitive-behavioral, and communication. A unified care pathway was developed to harmonize rehabilitation assessment, management, and care. A framework to simplify financial coverage was likewise provided. The extent of management (e.g., duration of therapy) depends on the severity of the disability classified as mild, moderate, or severe. Based on this classification, essential management modalities included physiatry interventions, medications, and rehabilitation sessions, supported by outcomes evaluation.

**Conclusion.** A framework is proposed to guide the design and implementation of benefits and health insurance coverage. Awareness and application of this approach among rehabilitation practitioners and health facilities are essential steps for successful uptake and implementation of the upcoming expansion in PhilHealth coverage.

*Key Words: rehabilitation, disability, language and speech disorder rehabilitation, cognitive manifestations, cognitive behavior therapy, behavioral symptom, communication disability, comprehensive health insurance*

## INTRODUCTION

Individual-based health services, including ambulatory/ outpatient and inpatient care, medicines, laboratory tests, procedures, are included in the provisions of the Philippine Republic Act 11223 or the Universal Health Care Act (UHC) of 2019.<sup>1</sup> Furthermore, it includes rehabilitative care among the services to be covered through public, private, or mixed networks of primary care and hospitals. An essential component to this aspiration is for current diagnostic and therapeutic interventions to be transformed into packages that can easily be integrated into population-based services,

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whether in primary, secondary, or tertiary levels. Before the 2019 law, efforts on UHC started through the *Kalusugan Pangkalahatan* agenda of the Department of Health (DOH) in 2010-2016 to enhance financial risk protection through the Philippine Health Insurance Corporation (PhilHealth) improve access to quality services in health facilities.<sup>2</sup> Under this reform, PhilHealth has approved benefits that partly cover rehabilitation. These include children with disabilities, Z Benefits Rate for the Mobility, Orthosis, Rehabilitation, Prosthesis Help (Z MORPH), Expanded Z MORPH, and integration of cardiac rehabilitation in coronary artery bypass graft. The approval and limitations of these benefits have triggered PhilHealth and the DOH to support the development of more comprehensive coverage for rehabilitation.

The World Health Organization (WHO) defines rehabilitation as “a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions”.<sup>3</sup> What makes the services challenging from a policy perspective is that interventions are delivered by a multidisciplinary team with the psychiatrists leading patient care and complemented with physical therapists, occupational therapists, speech-language pathologists, psychologists, prosthetists, and orthotists, wheelchair service providers, and rehabilitation nursing staff.

### Burden of Illness Requiring Rehabilitation Services

The recent Philippine Burden of Disease study included diseases that result in a heavy burden of care, loss of economic productivity, and poor quality of life. These diseases include ischemic heart disease, hemorrhagic stroke, low back pain, and diabetes mellitus.<sup>4</sup> All these conditions require good rehabilitation services to hasten back productivity, improve quality of life, and manage complications.

By 2040, the Philippines' top 10 causes of death and disability will include ischemic heart disease, stroke, diabetes mellitus, tuberculosis, chronic obstructive pulmonary disease (COPD), low back pain, age-related hearing loss, and ischemic stroke. All these conditions can be improved with access to rehabilitation services.<sup>4</sup>

Ischemic heart disease, tuberculosis, COPD, and age-related hearing loss are conditions that may affect activities of daily living (ADL) despite the absence of an easily visible disability. Activities of daily living are a concept of functioning on basic activities necessary for independent living.<sup>5</sup> Katz has developed an index of essential activities, including bathing, dressing, toileting, transferring, continence, and feeding.<sup>6</sup> The severity of the diseases mentioned above would affect the degree of impairment to body functions and structures and limitations to activity.

The 2016 National Disability Prevalence Survey in the Philippines shows that 81% of the Filipino population aged 15 and above experience varying forms and degrees of disability.<sup>7</sup> Of the surveyed population, cost and affordability of the outpatient services were reported to be the primary reason why the health care services were not availed.

### Cost and Availability of Rehabilitation Services

The practice of rehabilitation medicine includes multidisciplinary interventions by allied health professionals: physical therapists, occupational therapists, speech-language pathologists (speech therapists), psychologists, prosthetists, orthotists, wheelchair service providers, and rehabilitation nursing staff. These professionals implement the recommendations of the psychiatrist after medical and functional evaluation. Considering the therapeutic skills of this multidisciplinary team, costs are expected to be high.

Crucial in rehabilitation medicine and patients accessing rehabilitative care is the availability and cost of rehabilitation services. The 2019 study by the Philippine Academy of Rehabilitation Medicine (PARM) and the Technical Working Group of the PARM PhilHealth package found out that there is sufficient capacity in the healthcare facilities, primarily hospitals, wherein psychiatrists practice. This was investigated in the context of stroke and low back pain rehabilitation. In this study, sufficient capability suggests offering several rehabilitation services, including in-house physical therapy, occupational therapy, psychological services, orthosis fabrication, and speech and language therapy. These healthcare facilities provided a few services to varying degrees, extents, and combinations.<sup>8</sup>

The cost of each rehabilitation session for physical therapy in the Philippines ranges from PhP 300 to 600, occupational therapy ranges from PhP 300 to 500, speech therapy ranges from PhP 700 to 1000, and psychology therapy ranges from PhP 300 to 1000.<sup>9</sup> These rates are based on a study conducted by the Philippine Academy of Rehabilitation Medicine published in late 2017 based on local practice patterns in the management of low back pain and stroke.

Currently, there are limited studies on the evaluation of the economic impact of rehabilitation interventions in the Philippines. However, there is mounting evidence of the economic benefit of supporting the rehabilitation needs. Economic evaluation for stroke rehabilitation in Thailand showed good value for the money in its cost-effectiveness acceptability curves.<sup>10</sup>

There is increasing evidence that good quality home care for stroke rehabilitation is cost-effective.<sup>11</sup> A review of the Canadian Community Stroke Rehabilitation Teams model showed that enrolled patients incur less cost and accumulate more quality-adjusted life years in the long term.<sup>12</sup> Rehabilitation may also reduce the economic burden of seemingly minor conditions such as low back pain.<sup>13</sup> Studies have shown that rehabilitation programs promote a reduction in other health resources and increase the return to work.<sup>3,14-17</sup>

### Initial Efforts to Cover Disabilities and Therapy

Under *Kalusugan Pangkalahatan* reforms, PhilHealth has developed several packages to address rehabilitation needs. These included: Cardiac rehabilitation through the Z Benefit Package for Open Heart Surgeries; Children with Disabilities through four packages addressing mobility, vision, hearing,

and developmental problems; and Outpatient packages for adults are Z-MORPH and Expanded Z-MORPH which are restricted to assistive technology for mobility impairment only.<sup>18</sup> The approval and limitations of these benefit packages have triggered comprehensive reviews to develop essential packages for rehabilitation, outlining services at different levels of care that would eventually guide the development of financial coverage and investments infrastructure.

The UHC Act and an earlier law, Republic Act 9442 or the Magna Carta for Disabled Persons, include health coverage by providing services in government hospitals and developing financing coverage under PhilHealth.<sup>19</sup> However, while international guidelines define essential services, service packages incorporating the latest scientific advances, inclusiveness, and relevance in the Philippine context have not yet been developed.

### OBJECTIVES

This study aimed to develop a framework to facilitate decision-making in designing the essential health benefits package for adults needing physical and rehabilitation medicine services.

Specifically, the study aimed to achieve the following objectives:

- To review rehabilitation service approaches in the management of common disabilities;
- To identify a general rehabilitation service pathway experienced by patients and implemented by care providers; and
- To determine essential packages for rehabilitation services for adult disabilities.

### METHODS

The following were the guiding questions used in this review:

- What are general categories of common disabilities seen in rehabilitation practice for adults based on function?
- What are the general functional impairments where care should be focused on?
- How are services for these patients usually provided?
- What are essential and cost-effective services that should be provided under UHC?
- How can these services be packaged into benefits based on functionality?

A qualitative methodology was used in data collection through phases that allowed analysis and validation. Initial data collection was done by rapid scoping of recent evidence, reviewing clinical practice guidelines, and consultations with rehabilitation experts. Data collected included common rehabilitation conditions, clinical assessment, and management frameworks, including diagnostic tests, medications, and therapy. The researchers reviewed literature online

using standard search terms for each rehabilitation category. Literature was collected from major online databases and local gray literature references in the Philippines. Aside from publications on clinical practice, references on public health management strategies and rehabilitation service delivery were also covered in the review. The researchers also covered the impact of the interventions and cost-effectiveness where data was available. The research team synthesized the output of the initial data collection for validation to stakeholders in rehabilitation services.

The next phase was to contextualize the results of the initial literature review and supplement the data gaps identified in the literature assessment. The research team mapped interviewees representing technical experts and representatives from relevant medical and allied medical professional societies, stakeholders from PhilHealth, the DOH, and other key government agencies involved in policies and standards of care development in the health sector. These interviews focused on the feasibility of different rehabilitation interventions and services in the Philippine setting and recommendations of the technical experts on essential services and the appropriate standards of care. The results were synthesized into care algorithms, the unified pathway of care, essential services, and components or menu of services. The unified pathway includes conditions, diagnostics, management, classification of impairments, and severity levels. Each disease category had a team of rehabilitation specialists that provided technical expertise throughout the study.

Having collected inputs from practitioners, the next phase was to validate the above framework through focus group discussions (FGDs) to appraise information from literature review and interviews. Participants included in FGDs were technical experts in rehabilitation medicine, professional societies, health service providers, hospital administrators, patient groups, and other health care workers.

The interviews and FGDs were transcribed. An informed consent form was accomplished before the interviews. Respondent validation was conducted during FGDs and stakeholder consultations, where discussion points and agreements were presented. Thematic analysis was performed through the coded responses.<sup>20</sup> The findings were validated through triangulation by comparing the results gathered from scoping and documents review, interviews, and FGDs. The research was conducted from October 2018 to September 2019, with activities done in Metro Manila. This was part of a bigger project entitled “Technical Assistance on the Development of Rehabilitation Packages for Adults (18 years and above) in the Philippines.”

### RESULTS

#### General Rehabilitation Categories

The evidence synthesis started with an initial review of the treatment pathway for rehabilitation services. The

rehabilitation services were classified into four major disease categories, namely, 1) Neurologic, 2) Musculoskeletal, 3) Chronic Pain, and 4) Activities of Daily Living/Cardiopulmonary. These categories correspond to the etiologies of conditions seen by rehabilitation medicine practitioners.

Top diseases for each category that require rehabilitation were identified to guide the technical experts in enumerating potential diagnostic tests, medications, and rehabilitation services. Typical conditions for neurologic include stroke, spinal cord injury, spinal cord infections, Parkinson's Disease, and spine metastases and tumors. Top diseases for musculoskeletal include fracture, arthritis/arthralgia, shoulder lesions, low back pain, and scoliosis. The most common chronic pain are chronic regional pain syndrome, fibromyalgia, and vascular pain. The most common cardio-pulmonary conditions are chronic kidney disease, heart failure, chronic obstructive pulmonary disease, deconditioning syndrome, and sarcopenia. The project team determined an initial entry criterion (e.g., who can utilize the package), and diagnostic and prognostic tests were used to assess functional impairment in patients.

For each category, major disability categories were identified to guide the physician in recommending rehabilitation treatment services for the patient. These four categories are mobility, self-care, cognitive/behavioral, and communications.

Based on discussions between the study team and the technical experts, a framework or "algorithm of care" was developed. The algorithm includes common disease conditions per category, a list of possible impairments caused by the disease conditions, and a list of potential assessment and diagnostic services. The lower part of the algorithm includes four functional impairment areas and appropriate management, including rehabilitation therapy, physiatry clinical interventions, and medications. Figure 1 illustrates the Algorithm of Care for Neurologic presentation. The project's full report includes algorithms of Care for musculoskeletal, chronic pain, and cardiopulmonary conditions.

### Developing the United Pathway of Care

The specific pathways were reviewed and synthesized during the consultation with experts on 19-20 January 2019

in Quezon City to develop the unified algorithm of care. From the top disease categories, impairments were identified as intellectual, psychological, language, aural, ocular, visceral, musculoskeletal, disfiguring, and sensory. The approach through impairment classification and disability categories reflected principles from the International Classification of Function and current practices through functional evaluation by physiatrists.<sup>17</sup> Initially, one algorithm of care was developed per category (neurologic, musculoskeletal, chronic pain, cardiopulmonary). The contents of the four initial pathways of care were integrated into a unified pathway of care (Figure 2). This pathway would harmonize rehabilitation assessment, management and care, and provide a framework to simplify financial coverage.

An impairment classification list was developed to identify the impairments seen in patients who will avail of this benefits package. The impairment classifications cover nine types of impairments: Intellectual, Psychological, Language, Aural, Ocular, Visceral, Musculoskeletal, Skin and External Structures, and Sensory. This classification is a Philippine adaptation of the Taxonomy of Body Functions or Impairments of Body Functions from the International Classification of Functioning, Disability and Health (ICF) 2001.<sup>21</sup>

A single disease entity may cause variable impairments on different patients, e.g., a stroke of similar etiology may cause intellectual and language impairments in one patient and cause only sensory impairments in another. Hence, other patients with the same disease condition may need different rehabilitation services. The impairments (i.e., intellectual, psychological, language, etc.) will have consequential effects on the patient's functional capacity, thereby causing some varying levels of disability.

A "Disability category and severity" matrix was developed to guide the extent of management and therapy services that should be covered by the prototype benefits package (Table 1).

### Identification of Components of Essential Packages

Several radiologic and laboratory diagnostic tests were identified as essential services. However, these tests are not aimed at diagnosing the disease but rather to help guide

**Table 1.** Severity guide according to the four areas of function

Disability category and severity	Mobility / Self-care	Cognitive / Behavioral	Communication
<b>Mild</b>	Independent with an assistive device to Standby assistance +/- verbal cueing in performing activity correctly and safely	Follows 3-step instruction and performs activity safely and correctly +/- standby assist or verbal cueing	Capacity for receptive and expressive communication is intact but with difficulty in articulation and prosody
<b>Moderate</b>	Assisted in preparing to initiate or completing activity correctly and safely	Has difficulty in following 2-3 step instruction and needs assistance in preparing, initiating, or completing activity correctly or safely	Capacity for receptive communication is intact, but the ability for expressive communication is limited to caregiver assistance and/or assistive technology
<b>Severe</b>	Unable to perform activity and dependent on a caregiver	Unable to follow 1-2 step instruction and needs a caregiver to perform activity correctly or safely	Capacity for receptive and expressive communication is limited to caregiver assistance and/or assistive technology

Function-based Rehabilitation Model for Universal Health Coverage

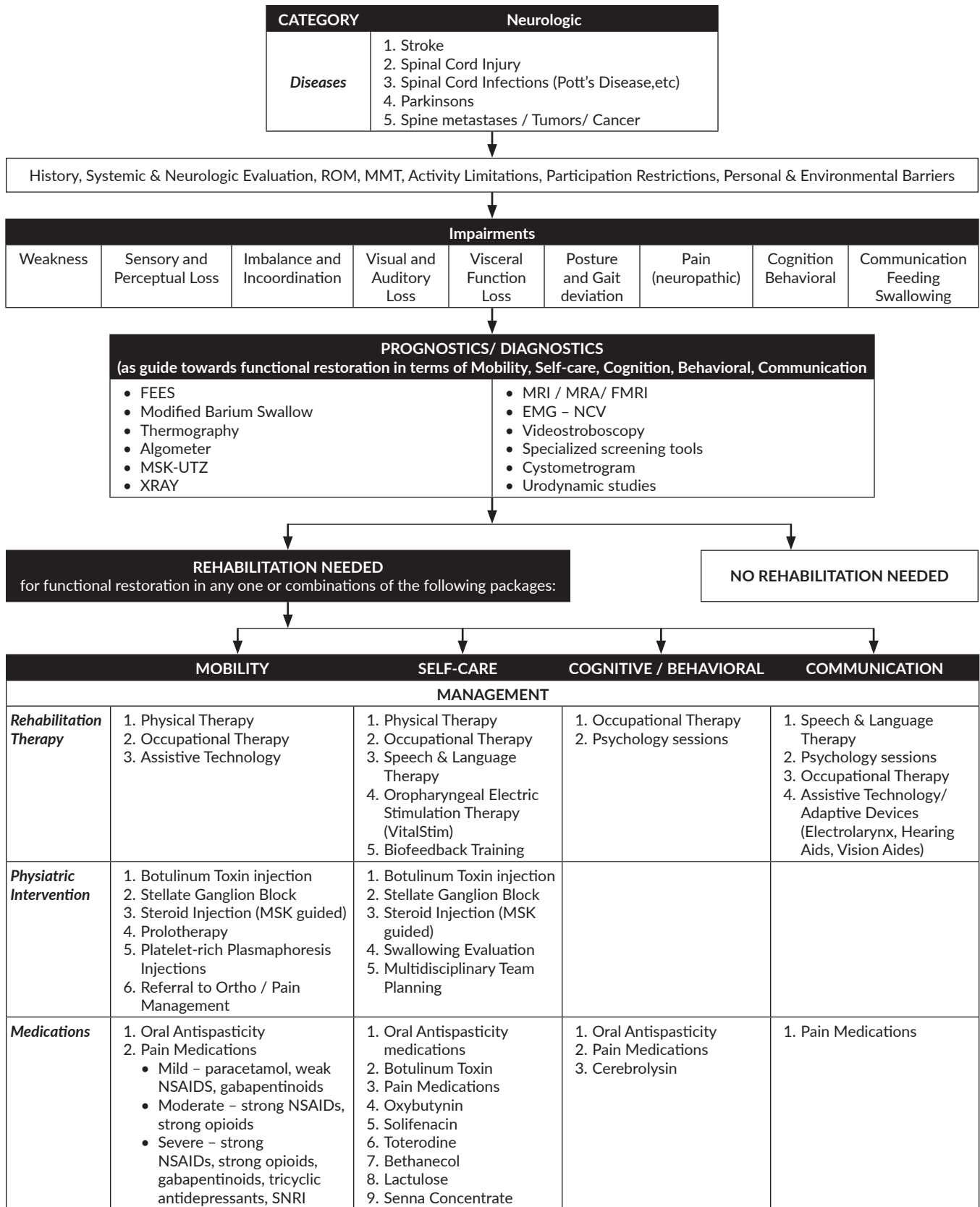


Figure 1. Algorithm of Care for Neurologic conditions.

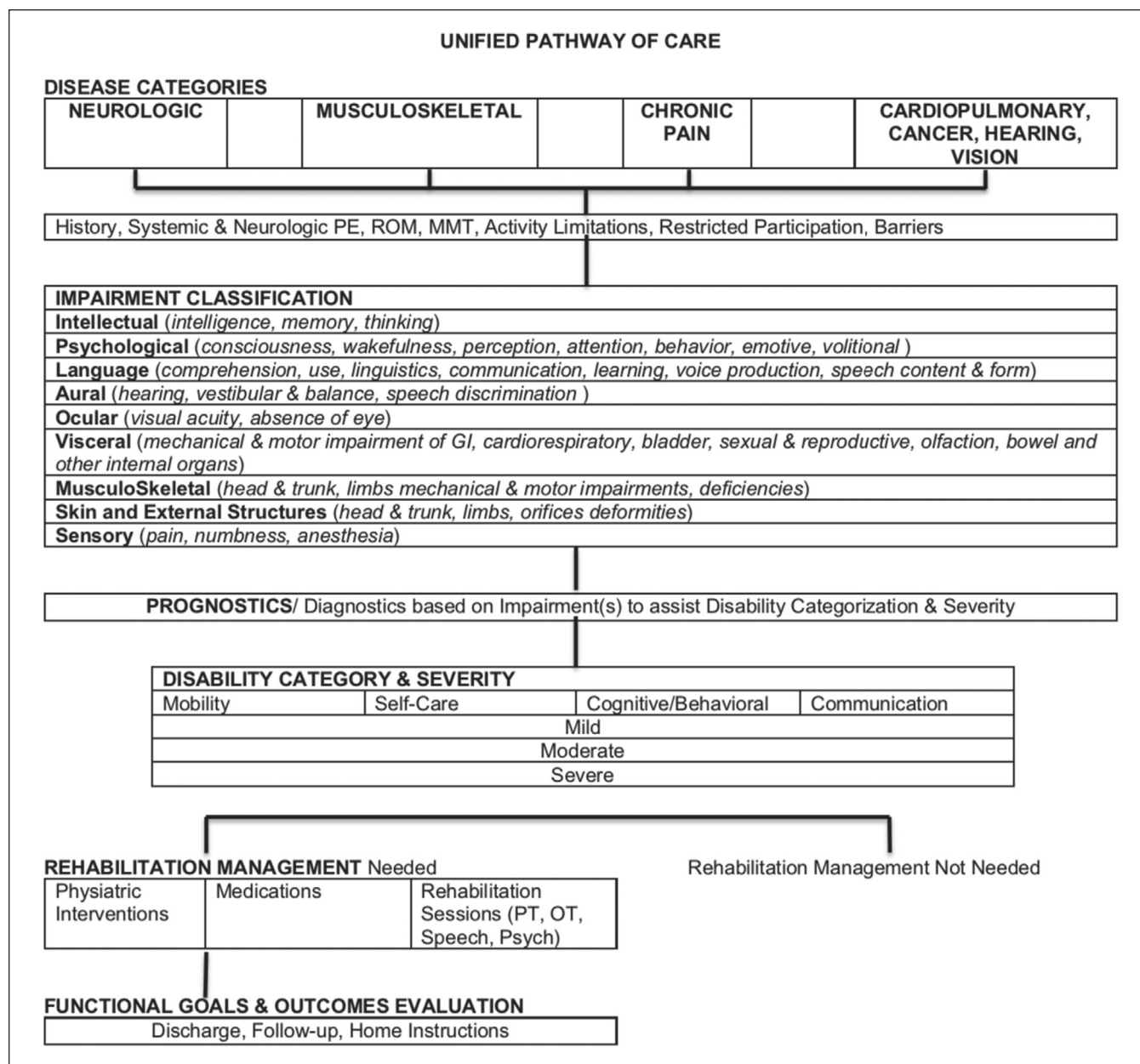


Figure 2. Unified Pathway of Care.

rehabilitation management and prognosticate functional outcomes. To avoid confusion, the proper terminology had to be used. A discussion on semantics was inherent. Initially, the study team and technical experts adopted the term “prognostics”. However, during the technical consultation with members of the Philippine Academy of Rehabilitation Medicine, it was decided that the term “Predictors of Functional Outcome” will be a more appropriate term to pertain to these diagnostic tests. These tests include X-ray (Body Segment or Skeletal Survey), Central Dual Energy X-ray absorptiometry (DEXA), Bone Scan, Musculoskeletal Ultrasound, Kidney-Ureters-Bladder Ultrasound (KUB UTZ) with or without post-void residuals, Other Ultrasound

(Chest, Doppler, Arterial, Venous), CT Scan, MRI and Angiography (or CT Angiography). Other studies include Videofluoroscopic Swallow Study (Modified Barium Swallow), Fiberoptic/Flexible Endoscopic Evaluation of Swallowing (FEES), Electromyography -Nerve Conduction of Velocity Studies (EMG-NCV), Urodynamic Studies, 12-Lead ECG, 2D ECHO, Pulmonary Function Test and Exercise Stress Test/Cardio Stress Test. Blood tests (Arterial Blood Glass, CBC, Immunochemistry, BUN, Creatinine, Carbon Dioxide, Glucose, Serum Chloride, Serum Potassium, Serum Sodium) and Urinalysis may further provide helpful information to predict outcomes.

Physiatry interventions, medications, and therapy services were identified as the proposed package inclusions. The four categories of disability will need different services. Table 2 below shows these services classified into which disability category they will be included in. This classification will further guide PhilHealth in developing the benefits package design.

Common medicines were identified for each category. Medications used for mobility include analgesics, muscle and nerve relaxants, anti-inflammatory drugs, steroids, and nutraceuticals. Self-care medicines are similar to mobility with the addition of antidepressants, anxiolytics, and topical preparations for skin problems, irritations, rashes, and pain. Medications used for cognitive-behavioral conditions include analgesics, muscle and nerve relaxants, anti-inflammatory drugs, steroids, antidepressants, and anxiolytics. Communication disabilities are usually managed only through speech therapy and psychology sessions, without medications.

The algorithm of care and the list of services enumerated for each impairment category from the initial set of proposed package inclusions for the benefits package for rehabilitation services. These were used to develop the survey tool for costing and identifying the diseases included in epidemiological analysis.

A unified pathway, impairment classification, matrix of disability severity, and essential services were described and put together into one framework following a function-based approach. This framework will guide the assessment, rehabilitation management, prognostication, and care monitoring. It is also envisioned simplifying hospital service packages, community programs, and health insurance coverage.

## DISCUSSION

### An Initial Step Towards UHC in Adult Rehabilitation

This study provides an application of a functionality-based approach into actual practice. The methodology has provided an analysis of how common conditions that cause

disability were grouped according to their consequent impairments for harmonized management. The four impairments can serve as major groups in designing the proposed PhilHealth Benefits Package. Each package already included diagnostic tests, clinical interventions, and therapy sessions based on functional prognosis and disability severity. The Philippines has pioneered this approach through the Z-Benefits for Children with Disabilities approved in 2017 and is already being implemented.<sup>18</sup>

### The International Classification of Functioning, Disability, and Health (ICF)

The ICF is a WHO framework to describe and measure health and disability. All 191 WHO Member States endorsed it in the Fifty-fourth World Health Assembly in 2001.<sup>22</sup> The ICF model is a paradigm shift from a purely medical model integrating health within a biopsychosocial model of human functioning and disability. As a system of classification, the ICF groups different domains through functioning and disability (body component, activities, and participation) and contextual factors (personal and environmental functions).<sup>21</sup> The body components include classifications for body functions and structures, which reflect the impairment classification described in this study.

While the ICF is a taxonomy, it is also a conceptual framework to understand disability. It understands how impairments can limit activities and restrict participation while promoting enabling activities through supportive infrastructures and environments.<sup>21</sup> The ICF belongs to the WHO family of international classifications, including the ICD-10, used by the PhilHealth to classify diseases.<sup>18</sup>

### Implications in Philippine Practice

The functionality-based approach has been taught in medical and allied health programs. However, its application is still primarily within rehabilitation medicine and allied health professionals' arenas. Using the functionality-based approach of the ICF, the suggested frameworks aim to

**Table 2.** Menu of Services for each Disability Category

Rehabilitation management of disability	Physiatric interventions	Rehabilitation sessions
<b>Mobility</b>	Injections (Botulinum Toxin, Steroid, Local Nerve Block) Assistive Technology Prescription Multi-specialty referral Home Instructions	PT, OT, Psych
<b>Self-care</b>	Assistive Technology Prescription Multi-specialty referral Referral/Instructions for Wound Care related to Pressure Sores/Insensate Extremity Home Instructions	PT, OT, Speech, Psych
<b>Cognitive / Behavioral</b>	Assistive Technology Prescription Multi-specialty referral Home Instructions	Psych
<b>Communication</b>	Assistive Technology Prescription Home Instructions	Speech, Psych

PT: Physical therapy, OT: Occupational therapy, Speech: Speech and language therapy, Psych: Psychology therapy

standardize and simplify procedures and services, thereby enhancing availability and access. It also emphasizes a more holistic and comprehensive approach to management, thus opening up the need for closer collaboration among rehabilitation medicine doctors and allied health professionals. The availability of allied health professionals remains a challenge as many find work outside the Philippines. The framework calls for public and private hospitals and health facilities to invest in physical therapy, occupational therapy, and speech and language pathologists.

### Essential Package for Rehabilitation Services: Development and Financing

The concept of essential packages has been promoted as a broad list of interventions in different types of health services covering preventive, promotive, curative, rehabilitative, and palliative care.<sup>23</sup> It cuts across varying levels of care and is usually endorsed by the national government identifying interventions that should be available to all. It applies for universal coverage by promoting safe, quality, and people-centered care. It can be a guiding principle for what should be covered under UHC in the Philippine context. Essential health packages support priority setting in terms of cost-effective interventions (cost-efficiency), effectiveness, and promote equity because it describes minimum services that should be available to all. WHO has recently outlined fundamental principles in priority setting through essential benefits packages. These include universality, inclusiveness, especially among disadvantaged populations, evidence-based and transparent, especially in trade-offs. In terms of implementation, essential packages should be linked to robust financing and service delivery mechanisms.<sup>24</sup>

Waddington reiterates that a country's financial capacity is a primary consideration when designing essential health packages.<sup>23</sup> Thus, essential packages in low-income countries have inclusions focused on public health and clinical interventions available at the primary and secondary levels of health care. The essential packages described in this study combine assessment, diagnostics, psychiatric interventions, and therapy sessions currently available at tertiary levels of care. The challenge of the Philippine system is to translate some of these services at primary and secondary levels, such as through basic therapy sessions and basic assessment.

This is one of the first published reports on developing essential services in the Philippines. A recent example in the Philippines was the DOH Administrative Order 2017-0007, or Guidelines in the Provision of the Essential Health Service Packages in Emergencies and Disasters.<sup>25</sup> This is an important concept for health policymakers, primary care, clinical researchers, and decision-makers to understand and develop because essential services can define what should be prioritized in public spending. Most interventions described as critical have been used for decades in many countries and are not innovative; these just need financial support and inclusion in current regulatory and public funding

mechanisms. While there are international recommendations, essential packages should be adapted to countries based on their resources, settings, and capacities.

While this Philippine study has produced four categories, another EPHS model for Rehabilitation Interventions uses the following intervention areas: 1) Musculoskeletal system, 2) Cardiopulmonary system, 3) Neurological systems and communication, 4) Mechanical stabilization and assistive products, and 5) Cross-cutting areas.<sup>26</sup> The interventions are assigned based on the community, primary care, and hospital platforms of delivery.

The PhilHealth Z-Benefits for children with disabilities approved in 2017 was a landmark policy as a functionality-based service package approach to financing individual-based services. These benefits are divided into children with developmental disabilities, mobility impairment, visual disabilities, and hearing impairment. Classification is not based on disease categories (e.g., autism or congenital hearing anomalies) but function. Developmental disabilities, cognitive-adaptive, sensorimotor, communication, social, emotional, or behavioral are assessed through various child development tools used and adapted in the Philippines. Mobility impairments are categorized through the Gross Motor Function Classification System (GMFCS), with visual and hearing impairments classified through categories based on severity. While certified specialists do assessments, therapy sessions are performed by allied health professionals. The benefits cover assessment, therapy sessions (developmental, physical therapy, occupational therapy, speech therapy), and assistive devices.<sup>18</sup>

The ultimate goal of developing essential packages for rehabilitation is to guide the PhilHealth in identifying minimum services for coverage at different levels of care. While the Philippine approach has established financing first through social health insurance (PhilHealth), other countries take different approaches.

They established 46 first-level rehabilitation units in Mexico to provide evaluation, therapy, and referral. These are staffed by psychiatrists, physiotherapists, social workers, and nurses. These rehabilitation units were established on top of the existing 1,444 community-based rehabilitation. It is assumed that these services are publicly funded.<sup>26</sup> This supply-side approach would meet the challenge of ensuring the availability of rehabilitation teams, including the occupational therapist and speech therapist. Currently, in the Philippines, only Level 3 public hospitals are required to have rehabilitation services, while a few city and municipality health offices employ physical therapists. Most services are in the private sector. This is a call for DOH to establish rehabilitation services in Level 2 public hospitals and local governments to provide basic physical therapy in their regional health offices. In theory, the development of PhilHealth financing would motivate public hospitals and local governments to provide such services.



A Brazilian experience integrated rehabilitation program into existing orthopedic and trauma services for sustained spinal cord injuries, amputations, and injuries.<sup>26</sup> This model is similar to the integrated approach used in cardiothoracic surgeries, where cardiac rehabilitation costs are integrated into the PhilHealth Z-benefit package for coronary artery bypass graft. Similar approaches may also be made for existing PhilHealth coverage, especially for post-trauma or surgical conditions, i.e., expansion by including rehabilitation.

The approach of the Philippines has been to provide financing opportunities through PhilHealth through robust identification of essential services and setting of rates based on cost analysis. On the other hand, the DOH offers directions and resources to public health facilities to invest in infrastructure, equipment, human resources, and supplies. The essential services identified can guide DOH in determining what services should be made available at different levels of care. The approach puts investment on the supply-side and financing-side. However, a big challenge that takes administrative and legal/ policy work to ensure regular staffing positions for rehabilitation staff at certain hospital levels.

## CONCLUSIONS AND RECOMMENDATIONS

This study provides a Philippine application of the International Classification of Function framework to harmonize rehabilitation services and provide a framework for UHC. The impairment classification forms a basis for services where patients can enter the health system and are provided care. Disabilities were categorized based on function, mainly mobility, self-care, cognitive-behavioral, and communication, while the extent of management depends on severity classified as mild, moderate, and severe. The model included essential management and interventions, including psychiatry interventions, medications, and rehabilitation sessions, supported by outcomes evaluation.

This study is only an initial step in a series of reviews required to develop robust, equitable, and sustainable support and financing for rehabilitation in adults. Other needed studies include epidemiology, costing review, and the assessment of readiness or capacity of the health sector to provide essential services. With this information, stakeholders can better design benefits, set the rates, and estimate utilization and costs. While the policy is being developed, individual professionals in rehabilitation care, hospitals, and health care networks must be familiar with this framework and approach to adjust services accordingly. Uptake and application of the framework by practitioners should be monitored and evaluated to influence future policy implementation.

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## Statement of Authorship

All authors contributed in the conceptualization of work, acquisition and analysis of data, drafting and revising and approved the final version submitted.

## Author Disclosure

All authors declared no conflicts of interest.

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