

APPENDIX 7: DISABILITY MEDICAL  
ASSESSMENT AND CATEGORIZATION  
GUIDELINES, 2022



REPUBLIC OF KENYA



MINISTRY OF HEALTH

# DISABILITY MEDICAL ASSESSMENT AND CATEGORIZATION GUIDELINES

2022



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## **DISABILITY MEDICAL ASSESSMENT AND CATEGORIZATION GUIDELINES**

2022

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### Recommended citation:

Disability Medical Assessment and Categorization Guidelines. MINISTRY OF HEALTH. 2022

Published by: Ministry of Health  
Afya House, Cathedral Road  
P.O. Box 30016 – 00100, City Square  
Nairobi, Kenya  
Email: ps@health.go.ke  
Website : <http://www.health.go.ke>

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## ACRONYMS AND ABBREVIATIONS

A/E	Above Elbow
A/K	Above Knee
AAC	Aphasia Categories of Communicators
ABR	Auditory Brainstem Response
ACC	Aphasia Categories of Communication
ACE	Assessment of Compression and Expression
ACT	Air Condition Thresholds
ADD	Attention Deficit Disorder
ADHD	Attention Deficit Hyperactivity Disorder
ADLs	Activities of Daily Living
ADOS	Autism Diagnostic Observation Schedule
AGPO	Access to Governmental Procurement Opportunities
AIDS	Acquired Immunodeficiency Syndrome
ALS	Amyotrophic Lateral Sclerosis
ASLTK	Association of Speech and Language Therapists of Kenya
B/E	Below Elbow
B/K	Below Knee
BERA	Brainstem Response Auditory Test
BSA	Body Site Area
CAT	Comprehensive Aphasia Test
CELF	Clinical Evaluation of Language Fundamentals
CFS	Chronic Fatigue Syndrome
CHD	Congenital Hip Dislocation
CLD	Congenital Language Disorder
CMC	Carpo Metacarpal
COPD	Chronic Obstructive Pulmonary Disease
CS	Cabinet Secretary
dB	Decibel
dBHL	Decibel Hearing Loss
DG	Director General for Health
DIP	Distal Inter Phalangeal
DLA	Daily Living Activities
DLCO	Diffusion Capacity of the lungs for Carbon Monoxide
DLD	Development Language Delay
DOB	Date of Birth
DRS	Disability Rating Scale
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, 5th Edition
EARC	Educational Assessment and Resource Centre
EEG	Electroencephalogram
ENT	Ear Nose and Throat
FEES	Fiber-optic Endoscopic Evaluation Swallowing
FEV	Forced Expiratory Volume
FVC	Forced Vital Capacity
GAF	Global Assessment of Function

GCS	Glasgow Coma Scale
GRBAS	Grade Roughness breathiness Asthenia Strain
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
ICF	International Classification of Function
ICP	International Communication Project
IP	Inter Phalangeal
IQ	Intelligent Quotient
JROM	Joint Range of Motion
KRA	Kenya Revenue Authority
LEFS	Lower Extremity Functional Scale
LL	Limb Length
LSD	Lysergic Acid Diethylamide
MC	Metacarpal
M-CHAT	Modified Check List for Autism in Toddler
MCP	Metacarpal Phalangeal
MGUS	Monoclonal Gammopathy of Undermined Significance
MMS	Manual Muscle Strength
MMSF	Mini Mental State Examination
MMT	Manual Muscle Testing
MOH	Ministry of Health
MOVES	Mobility Varied Environment Score
NCPWDs	National Council for Persons with Disabilities
N-DAT	Newcastle Dysarthria Assessment Tool
NHL	Non-Hodgkin Lymphoma
NPL	No Perception of Light
NZAT	New Zealand Articulation Test
OMSE	Oral Speech Mechanism Screening
PFT	Pulmonary Function Tests
PIP	Proximal Inter Phalangeal
PLS-3	Pre-School Language Scale-3
PPI	Permanent Physical Impairment
PS	Principal Secretary
PSC	Paediatric Symptoms Checklist
PTA	Pure Tone Audiometry Test
PWDs	Persons with Disabilities
QAB	Quick Aphasia Battery
QOL	Quality of Life
RPwD	Rights of the Person with Disability
SDGs	Sustainable Development Goals
SLI	Specific language Impairment
SLT	Speech and Language Therapist
SNHL	Sensory Neural Hearing Loss
SSI	Stuttering Severity Instrument
STAP	South Tyneside Assessment of Phonology

TACL-3 Test for Auditory Comprehension of Language, 3rd edition  
TMJ Temporal - Mandibular Joint  
TOMS Therapy Outcome Measure  
TUG Timed Up and Go  
UMNL Upper Motor Neuron Lesion  
VFSS Video Fluoroscopic Swallowing Study  
WBC White Blood Count  
WHO World Health Organization  
WNL Within Normal Limits  
Y-PSC Youth Paediatric Symptom Check list

## Working Definitions

**Activities of Daily Living:** (ADLs) are basic tasks that must be accomplished every day for an individual to thrive. They are used as a measurement of a person's functional status.

**Audiologist and Speech Therapist:** are therapists that evaluate, manage and treat physical disorders affecting human hearing, speech communication and swallowing. They prescribe corrective devices or rehabilitative therapies for hearing loss, speech disorders, and related sensory and neural problems. They plan hearing screening programs and provide counselling on hearing safety and communication performance.

**Disability:** Long term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder full and effective participation in the society on an equal basis with others

**Permanent Disability:** Is a mental or physical illness or a condition that affect a major life function over a long time, it applies to an irreversible damage or less use of some part after of maximum improvement from surgery, medical or other treatment has been reached and the condition is stationary

**Temporary Disability:** Cases that are still undergoing medical care and rehabilitation for a debilitating condition with significant deterioration from the normal and chances of complete recovery uncertain e.g., Stroke, central or peripheral nerve injury.

**ENT Specialist:** is a medical practitioner who specializes in diseases that affect the ears, nose and throat as well as head and neck.

**Functional Limitation** – Is a partial or total inability to perform Activities of Daily Living (ADLs). It may last for a short time, long time or be permanent. Functionality can get better with intervention. It may remain static or get worse overtime.

**General Surgeons:** Doctors who specialize in surgical procedures for a wide range of common ailments.

**ICF:** The international Classification of Functioning, Disability and Health is a classification of health and health related domains. As the functioning of an individual occurs in a context, ICF also includes a list of environmental factors. ICF is a WHO framework for measuring health and disability at both individual and population levels.

**Impairment** - Is an absence of or significant difference in a person's body structure or function or mental functioning.

**Dental Officers:** Diagnose, treat and prevent diseases, injuries and abnormalities of the teeth, mouth, jaws and associated tissues by applying the principles and procedures of modern dentistry. They use a broad range of specialized diagnostic, surgical and other techniques to promote and restore oral health.

**Dermatologist:** Is a doctor who specializes in treating skin, hair, nails, mucous membrane diseases and disorders.

**Occupational Therapy:** Is a client-centered health profession concerned with promoting health and wellbeing through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life.

**Occupational Therapist:** is a health professional that aids clients to develop new skills, recover, improve in regards to a condition (physical or mental) or injury, and maintain the skills needed to enhance their ability to engage in the occupations they want to, need to, or are expected to do (activities of daily living) through assessment, treatment planning and diverse interventions geared towards supporting occupational engagement.

**Oncologists:** Doctors who specialize in diagnosing and treatment of cancer

**Ophthalmologists:** Provide diagnosis, management and treatment services for disorders of the eyes and visual system. They counsel and advise on eye care and safety, and prescribe optical aids or other therapies for visual disturbance.

**Orthopaedic Surgeons:** Doctors who specialize in prevention, diagnosis and treatment of diseases and injuries of the musculoskeletal system –bones, joints, muscles, ligaments, tendons etc

**Orthopaedic Technologists /Prosthetists/Orthotists :** Health workers who assess and treat physical and functional limitations resulting from congenital impairments, illness, traumatic injuries etc. They assess, prescribe design, fit, monitor and educate on use and care of an appropriate orthosis/prosthesis that serve individual's requirements

**Paediatrician:** A medical practitioner focusing on the prevention, diagnosis and treatment of health problems in infants, children and adolescents.

**Physician:** A medical practitioner who usually focuses on non-surgical treatment of patient conditions.

**Physiatrist:** A medical practitioner who specializes in physical medicine and rehabilitation, also called physical medicine and rehabilitation physician.

**Physiotherapists:** Professionals who assess, plan and implement rehabilitative programs that improve or restore human motor functions, maximize movement ability, relieve pain syndromes, and treat or prevent physical challenges associated with injuries, diseases and other impairments. They apply a broad range of physical therapies and techniques such as movement, Specialized Exercises, Electrophysical Agents and other techniques. They may develop and implement programs for screening ,treating and prevention of common physical ailments and disorders.

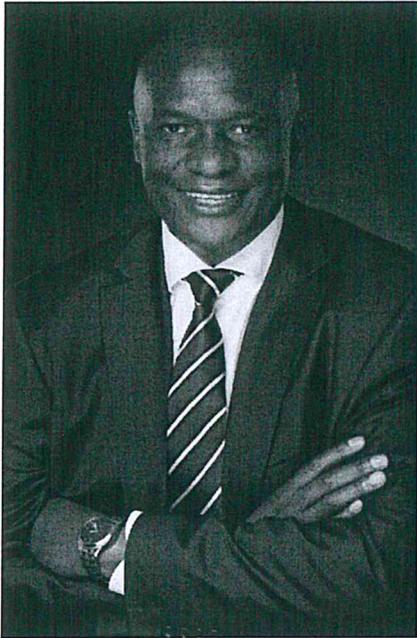
**Psychiatrist:** Medical practitioner focusing on the study and treatment of mental illness and behavioural disorders

**Rheumatologist:** Specialized physician who has expertise in treating arthritis, and other musculoskeletal conditions and autoimmune disorders.

**Neurologist:** Medical professionals that specialize in diagnosing and treating conditions affecting the nervous system.

**Rehabilitation:** Defined as a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment. It is rebuilding or relearning skills that were lost.

**Habitation:** Refers to a process aimed at helping disabled people attain, keep or improve skills and functioning for daily living. Involves learning and mastering brand-new skills particularly if the person learning those skills is developmentally disabled



## FOREWORD

The Convention on the Rights of Persons with Disabilities adopted by the United Nations General Assembly on 13th December 2006, is an international human rights treaty of the United Nations intended to protect the rights and dignity of persons with disabilities. Parties to the Convention are required to promote, protect, and ensure the full enjoyment of human rights by persons with disabilities and ensure that they enjoy full equality under the law. The Convention has served as the major catalyst in the global movement from viewing persons with disabilities as objects of charity, medical treatment and social protection towards viewing them as full and equal members of society, with human rights. It is also the only UN human rights instrument with an explicit sustainable development dimension. The Convention was the first human rights treaty of the third millennium. Kenya ratified the

UN Convention on the Rights of Persons with Disabilities (UNCRPD) on 19th May 2008 creating an obligation upon Kenya to respect, protect and fulfil the provisions in the Convention. Pursuant to article 2 (6) of the Constitution of

Kenya, the Convention forms part of Kenyan law.

Kenya has an estimated 0.9 Million persons with disabilities (KNPHC 2019). This key segment of the population is likely to experience poverty, and exclusion than persons without disabilities. Attitudinal and environmental barriers to participation have profound social and cultural effects on persons with disabilities, resulting in exclusion and creating often insurmountable obstacles in relation to health services, education and employment. Such exclusion and discrimination in turn contributes to poverty and prevents PWDs from participation in public discourse, development and decision making.

This Disability Assessment and Categorization Guidelines the first of its kind in the County have been developed in line with the International Classification of Functioning, Disability and Health (ICF) model. This represents a radical shift from emphasizing on a person's disability to a focus on their level of health.

ICF which intergrates major models of disability was approved for use by the World Health Assembly in 2001 after extensive testing across the world involving PWDs and people from a range of disciplines. By adopting this model the Ministry will be able to:

- Provide a scientific basis for understanding and studying health and health related states, outcomes, determinants and changes in health status and functioning.
- Establish a common language for describing health and health related states in order to improve communication between various users such as health care workers, PWDs, researchers, policy makers and other service providers.
- Permit comparison of data across Government agencies, health care disciplines and with other stakeholders
- Provide a sytematic coding scheme for health information systems.

A handwritten signature in black ink, appearing to read 'Patrick Amoth'. The signature is fluid and cursive, written over a white background.

**Dr. Patrick Amoth, EBS**

**Ag. Director General for Health**



## Acknowledgements

**The development of Disability Medical Assessment and Categorization Guidelines was a collaborative process undertaken by a dedicated team from the Ministry of Health with several key stakeholders and partners.**

Several meetings, contributions and inputs were received towards enriching the document, I wish to express my gratitude to each one who contributed through various forms towards the success of these guidelines.

I thank the technical team from the Ministry led by the Acting Director General for Health, Dr. Patrick Amoth, Ag Director, Directorate of Healthcare Services, Dr. Julius Ogato, Head, Department of National Health Systems Strengthening, Dr. Zeinab Gura, the Head of Rehabilitative Services and Chief Physiotherapist, Wilfrida Otieno, Alex Kisyinga, the Chief Orthopaedic Technologist and Irene Gichohi the Chief Occupational Therapist for giving lead

to the entire process. I also wish to thank all the professionals who worked under them to ensure the task is accomplished in the stipulated timelines.

I wish to recognize the immense contribution from the Ministry of Public Service, Gender, Senior Citizens Affairs and Special Programmes, National Council for Persons with Disabilities (NCPWDs), Kenya Revenue Authority (KRA), Association for the Physically Disabled of Kenya (APDK), Kenyatta National Hospital (KNH), Kenya Medical Training College (KMTC), Jomo Kenyatta University of Agriculture and Technology (JKUAT), The African Medical and Research Foundation (AMREF) University and United Disabled Persons of Kenya (UDPK).

Finally, our special gratitude goes to Clinton Health Access Initiative (CHAI) for their financial and technical support to ensure success of the exercise.

A handwritten signature in black ink, appearing to read 'Julius Ogato', written over a horizontal line.

**Dr. Julius Ogato**

**Ag. Director, Directorate of Healthcare Services**



## Preface

The overall aim of this document is to provide a unified, standard language and framework for the assessment of persons with disabilities. The document will provide a useful profile of individual's functioning disability and health in various disability domains. It has adapted a Bio-psychosocial Model, which aims to link both the social and medical models to come up with categories of various forms of disabilities. It is in the intricate balance of this pendulum that quality healthcare lies. A balance that not only needs healthcare providers to maintain, but also the patients/clients and societies in which they live in.

Body functions and structures can be interpreted by means of changes in physiological systems with anatomical structures. The document establishes a common language describing disability, components of functioning and disability and other contextual factors. It is the first of its kind in the Country

to be used by medical specialists to determine the existence of disability by organizing the information in line with International Classification of Functioning, Disability and Health (ICF) as follows.

1. Body structure and its functions
2. Activities and participation components covering the complete range of domain denoting aspects of functions from the individual and a societal perspective.
3. Environmental factors which form part of the contextual factors, with an impact in all components of functioning and disability.
4. Personal factors components form a large social and cultural variance, the document help medical personnel in assessing and categorizing persons with disabilities.

The document has categorized disability into the following six (6) broad domains: Physical, Visual, Mental and intellectual disabilities, Speech, Language and Hearing disabilities, Progressive Chronic Conditions that cause disabilities, and Maxillofacial Disabilities. The World Health Organization (WHO) has introduced functioning properties in the ICD-11 that will see Health Information integrated.

**Dr. Zeinab Gura**

**Head, Department of National Health Systems Strengthening**

# 1

## INTRODUCTION





## INTRODUCTION

### 1.1 Background

The UN Convention on the Rights of Persons with Disabilities adopted by the United Nations General Assembly on 13th December 2006, is an international human rights treaty of the United Nations intended to protect the rights and dignity of persons with disabilities. Parties to the Convention are required to promote, protect, and warrant the full enjoyment of human rights by persons with disabilities and confirm that they enjoy full equality under the law. The Convention has served as the major catalyst in the global movement from viewing persons with disabilities as objects of charity, medical treatment and social protection towards viewing them as full and equal members of society, with human rights. On May 19th 2008, Kenya amongst other countries, endorsed the Convention on the Rights of Persons with Disabilities (CRPD) creating an obligation upon Kenya to respect, protect and fulfil the provisions in the Convention, in pursuant to article 2 (6) of the Constitution of Kenya 2010.

Kenya is a developing country with variable social, cultural, geographic and economic background. Industrialization, farming, mechanization and increase in road traffic accidents have increased the number of PWDs, with communicable, non-communicable and congenital defects considered as major problems adding to the number of disabilities. The changing demographic picture of life expectancy, labour force and active working population in the rural and urban establishment has brought a number of disability related problems, in all cohort groups especially in the productive and old age groups which require disability evaluation and rehabilitation.

### 1.2 Situational analysis

According to the World Health Organization (WHO), 10% of the world population live with various forms of disabilities. Kenya has 0.9 million Persons with Disabilities (PWDs) according to the 2019 Kenya Population and Housing Census (KHPC). Disability affects all aspects of society and national development. Important to note is the challenges posed by disability owing to additional factors such as information /communication gaps, HIV/AIDS, social- economic development, omission of disability concerns in the Universal Health Coverage.

Consequently, after acknowledging that only a small percentage of PWDs access essential services such as health there was provision for the enactment of PWD Act 2003, that led to the established of National Council for Persons with Disabilities (NCPWD) to look into the welfare of persons with disabilities. One of its major functions was to register and categorize persons with various forms of disabilities. Health personnel of various specialties participate in assessment and confirmation of disabilities as per the PWD Act 2003, which states persons with disabilities should not be discriminated.

Currently there is no guidelines on how to conduct credible assessments, to enables PWDs access various benefits rendered by the Council and other agencies. These services include, provision of appropriate mobility devices, hearing aids, medical care, Braille services, education bursaries, tax exemption on incomes, and support in establishing income generation projects.

### **1.3 Rationale**

Assessment and categorization over the years has been done without standardized assessment guidelines, which have led to information disparities, registration of undeserving clients because of diverse parameters used by different facilities. By adapting the Bio-psychosocial Model, aimed at linking both the social and medical models, assessors will formulate appropriate parameters for identifying various forms of disabilities, as recommended in the ICF. In addition, the launch of these guidelines, all health facilities will have uniform assessment parameters and therefore information documented will be accurate.

### **1.4 Overall Goal**

Disability Medical Assessment and Categorization Guidelines aims to provide a standard process, unified and consistent language, for conducting the assessment and categorization of persons with disabilities.

### **1.5 Purpose of the Guideline**

The guideline is intended to ensure that standardised best practises are achieved when determining existence of disability in a person.

### **1.6 Objectives of Guideline**

- To determine the existence of disability, and organize the information into International Classification of Function (ICF) model.
- To establish a common language describing disability, and its components of functioning.
- To integrate the ICF models into clinical practices.

### **1.7 Scope and Application**

The guidelines will be used by medical personnel in approved health facilities, to determine the existence of disability, as per world health organization (WHO) international classification of functions (ICF) model, which include;

1. Body structure and its functions.
2. Activities and participation components covering the complete range of domain, denoting aspects of functions from the individual and a societal perspective.
3. Environmental factors which form part of the contextual factors, with an impact in all components of functioning and disability.
4. Personal factors components form a large social and cultural variance, necessary for medical personnel in assessing and categorizing persons with disabilities.

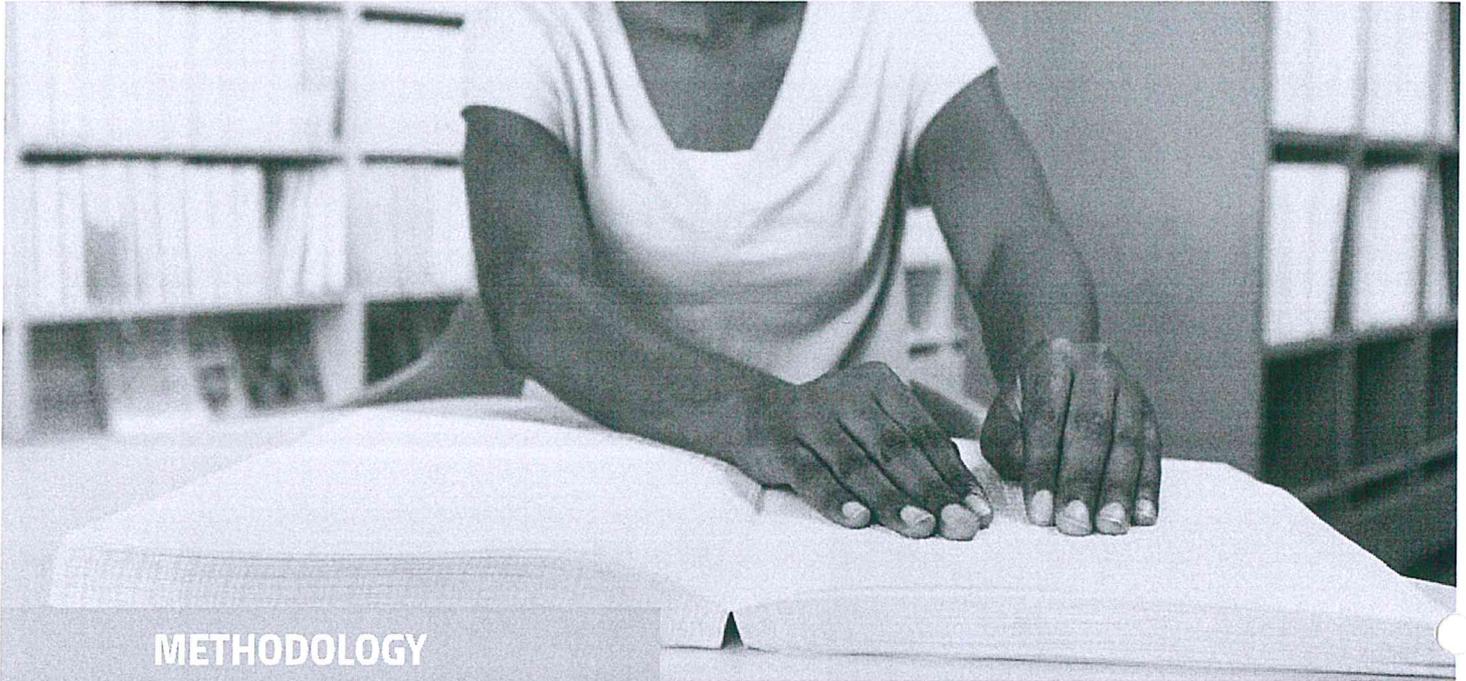
### **1.8 Target Scope**

This guideline will facilitate the medical personnel and relevant authorities to make informed decisions when offering services to Persons with Disabilities.

# 2

## METHODOLOGY





## METHODOLOGY

### 2.0. Introduction

#### 2.1 Process of Development

The process of developing this document started in August, 2020, after the inauguration of the Ministerial Disability Mainstreaming Committee. This was followed by a workshop held in Nairobi, during which a Technical Working Group (TWG) was constituted to develop a first draft informed by the Ministry of Health Strategic Plan, Ministerial Performance Contract and other relevant documents. Several meetings were held by the TWG and the draft subsequently shared with both internal and external stakeholders for inputs and comments. In addition, several consensus meetings with key stakeholders for validation and were undertaken and outputs later reviewed by the Ministry of Health Heads of Directorates to further contextualize the desired disability assessment and categorization guidelines.

#### 2.2 Legal Frame

In order to ensure equal opportunities, empowerment, protection of rights and full participation in service delivery to PWDs, as outlined in the UN Convention on the Rights of Persons with disabilities and as enshrined in the Constitution of Kenya 2010, The Persons with Disability Act 2003, Legal Notice No. 36 of 30th March 2010, a Ministerial Disability Mainstreaming Committee was set up on 2nd October 2013 by the Principal Secretary whose Terms of Reference has amongst others, guided the development of this Disability Assessment and Categorization Guideline.

#### 2.3 Principles for Development

A well-functioning health service delivery system ensures various health facilities and services offered by the government are accessible to Persons with disability (PWDs) without any discrimination and limitation, and therefore contributing to welfare and livelihoods for PWDs.

In developing these Disability assessment and categorization guidelines a set of principles that reflect the overall policy direction, have been considered, and include:

**Continuity of care:** should be able to provide a path way for further health care management

**Equity:** Application of similar parameters in the assessment process and categorization.

**Inclusivity;** all persons assessed and deemed to have disabilities will enjoy services provided by the Kenya laws.

**Integration of care:** Provide framework for comprehensive and holistic patient care

**Logic;** applicable and able to address the existing gaps in the disability assessment and categorization.

**Relevance and acceptability:** Meet demands and expectation of consumers.

**Universality:** Ensures the language used is acceptable and recognised internationally.

**Validity and reliability:** Assessment conducted in different facilities produce similar results, accurate, and complete.

## 2.4 Structure of this Document

The Disability assessment and categorization guideline is anchored / adapted 'from the 'The International Classification of Functioning (ICF) WHO framework, for measuring health and disability at both individual and population levels (resolution WHA 54.21), while trying to provide a coherent view of different perspectives of health from a biological, individual and social perspective.

The guidelines is structured into six cross-cutting domains, namely: **Physical Disabilities; Visual Disabilities; Hearing, Speech and Language Disabilities; Mental Disabilities; Intellectual Disabilities; and Autism Spectrum Disorders, Progressive Chronic Conditions and Maxillofacial Disabilities.** Within each domain, there will be sub-domains, which will further break down the domains into sub-sections or critical areas that together describe the scope of that domain.

### 2.4.1 Development Steps

The following steps have been considered during the guideline development.

**STEP 1: Outlining** the domain/ type of disability category.  
(Introduction, key definition)

**STEP 2: Detailing** the impairments, environmental factors, activity and participation factors, and personal factors and their interaction and contribute to the disability domain.

**STEP 3: Illustrating** the assessment evaluation procedures and interpretation of the results.

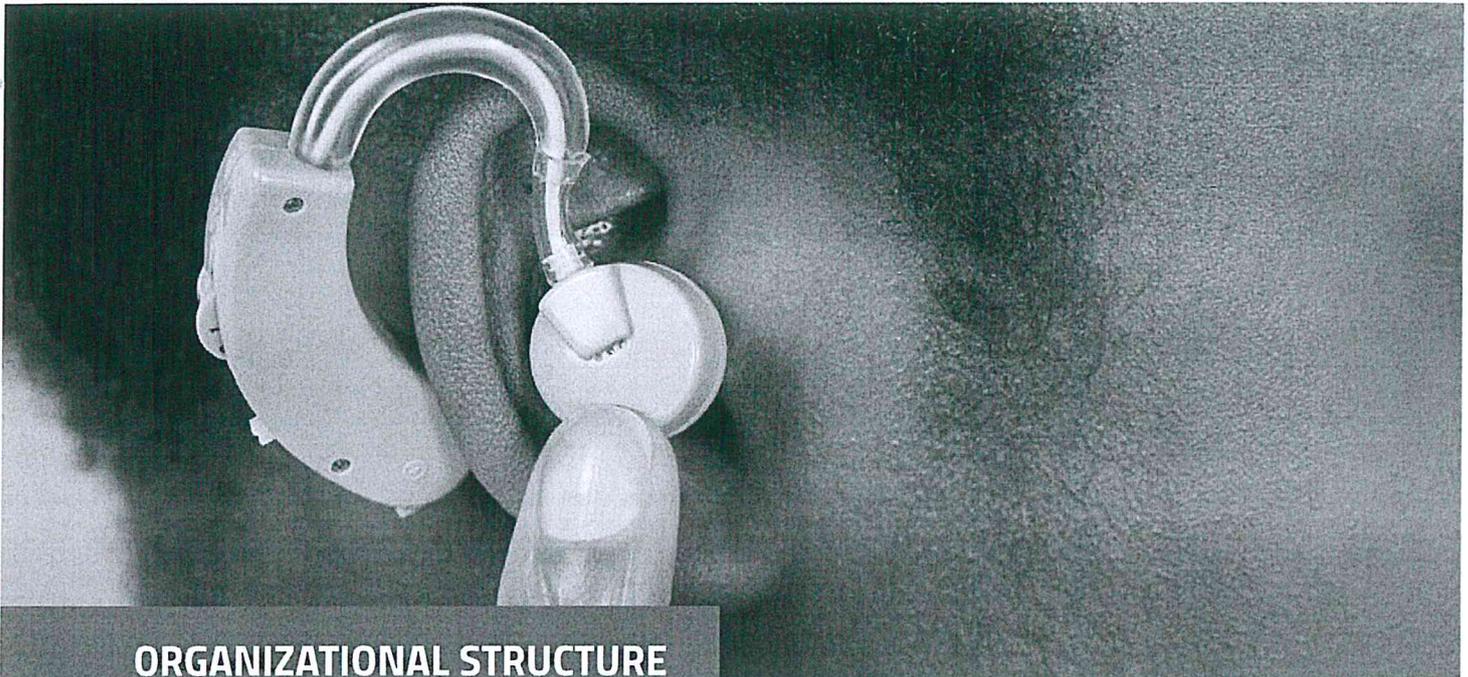
**STEP 4: Specifying** the Human Resources required for assessment and categorization of specific domain.

**STEP 5: Considering** minimum instruments and tools required for assessment and categorization of specific domain.

# 3

## ORGANIZATIONAL STRUCTURE





## ORGANIZATIONAL STRUCTURE

### 3.1. Disability Assessment Committees

#### 3.1.1 Introduction

For an assessment exercise the Committee shall be composed of at least three (3) members, out of which one shall be a Specialist in the concerned disability domain and at least one member from each of the Rehabilitation Department (Physiotherapist, Occupational Therapist or Orthopaedic Technologist)

In the absence of the line specialist in that health facility, the ophthalmic clinical officer/nurse, ENT clinical officer /nurse, psychiatric clinical officer /nurse may be appointed as members

#### 3.1.2 Roles and responsibilities

##### National Level

The role of the office of the DG for Health and the National level facilities is to address appeals that may arise from the assessments at the county level, provide technical assistance to the counties and and participate in vetting of persons with disability for tax exemption by KRA when called upon.

##### County Level

1. Conduct assessment and categorization of persons with disability (PWDs) based on the ICF classification.
2. Book and keep records of their clients
3. Acquire conducive and accessible assessment premises
4. Acquire, avail and ensure proper use of all the necessary tools and equipment,
5. Refer clients for appropriate interventions where necessary.
6. Submit dully filled and signed assessment reports per the guidelines to relevant authorities.

#### 3.1.3 Constitution of the Committees

The Medical Superintendent /Hospital CEO/ Medical Officer in Charge will appoint the disability assessment committee. Membership will comprise of the following;

- Chairmanship: Medical Superintendent or a Medical Specialist/Medical Officer appointed in writing by the Medical Superintendent to sit in the committee on his/her behalf appoint in writing a Medical Specialist /Medical Officer to represent him/her.
- Members shall include : physiotherapists, occupational therapists, orthopaedic technologists, ophthalmologists, ENT

specialists, Psychiatrists.

- Other members may include: dermatologist, orthopaedic surgeons, general surgeons, oncologists, paediatricians, Dentists, physicians, medical social workers etc.
- All committee members MUST indicate their respective professional registration numbers and sign the assessment forms.

The Chairman may co-opt other experts as the need may arise.

The Medical Superintendent/Hospital CEO/ Medical Officer in Charge shall appoint a secretary to the committee.

### **3.1.4 Criteria of Appointments**

The Medical Superintendent /Hospital CEO/ Medical Officer in Charge shall appoint a specialist for each respective domain to sit in the committee.

In the absence of the line specialist, a clinical officer or nurse who has advanced qualifications in that line speciality shall be given consideration. This shall include ophthalmic clinical officers/nurses, ENT clinical officers /nurses, psychiatric clinical officers /nurses.

All officers appointed must be registered and must possess valid practicing licenses from their respective regulatory bodies/ associations

### **3.1.5 Governance Structure**

Authority to conduct Disability assessments shall be conducted by disability Medical Assessment Committee dully constituted by National government and County governments.

## **3.2 Disability Domains/ Categories**

The Guidelines for evaluation of the following disabilities and procedure for certification considers the following disability categories (domain)

- 1) Physical Disabilities
- 2) Visual Impairments
- 3) Hearing, Speech and Language Disabilities
- 4) Mental Health Disorders, Intellectual Disabilities and Autism Spectrum Disorders
- 5) Progressive Chronic Conditions
- 6) Maxillofacial Disabilities

## **3.3. DISABILITY CATEGORY: PHYSICAL IMPAIRMENTS**

### **3.3.1. Physical Impairments**

#### **Definition**

Physical disabilities are conditions that affect a person's mobility, functional capacity, coordination, strength limb length and dexterity, which upon interaction with the environment hinders full and effective participation within the society on an equal basis with others

They can be caused by; but not limited to neurological, musculoskeletal, posttraumatic or congenital disorders. Examples of which include brain or spinal cord injuries, multiple sclerosis, cerebral palsy etc.

**Table 1: Categories of Physical Conditions**

Neurological	Musculoskeletal	Others Physical conditions
Acquired brain injuries	Amputation	Permanent colostomy
Cerebral palsy	Arthritis	Dwarfism
Congenital Hip Dislocation	Athrogryposis	Gigantism
Erb's palsy	Ankylosing spondylosis	
Hemiplegia	Congenital deformities	
Hydrocephalus	Freeman Sheldom syndrome	
Klumpke's palsy	Kyphoscoliosis	
Monoplegia	Osteogenesis Imperfecta	
Multiple sclerosis	Phocomelia/Amelia	
Muscular dystrophy	Scoliosis, kyphosis	
Paraplegia		
Poliomyelitis		
Quadriplegia		
Spina bifida		
Spinal cord injuries		

### Variables in Assessing Physical Disability

The following variables need to be taken into consideration while assessing functional loss resulting into permanent physical impairment (PPI)

- Muscle strength
- Muscle Girth
- Muscle tone
- Joint Range of motion
- Degree of angulation/rotation
- Height
- Skin pigmentation
- Co-ordination and balance
- Stability
- Limb length discrepancy
- Hand function (prehension, grasp, sensation & strength)
- Deformity
- Sensation (Skin sensation, joint vibratory and movement, stereognosis among other forms)
- Level of amputation
- Duration of illness/injury

### Areas of Assessment

- Function = b (body functions)
- Structure = s (body structures)
- Activity/Participation Restrictions = d (activities/participation)
- Environmental factors = e (environmental factors)

**Table 2: Levels of Structural Impairments**

First Qualifier: <i>Extent of impairment</i>	Second Qualifier: <i>Nature of the change</i>
<p>0. No impairment means the person has no problem</p> <p>1. Mild impairment means a problem that is present less than 25% of the time, with an intensity a person can tolerate and which happens rarely over the last 30 days.</p> <p>2. Moderate impairment means that a problem that is present less than 50% of the time, with an intensity, which is interfering in the persons day to day life and which happens occasionally over the last 30 days.</p> <p>3. Severe impairment means that a problem that is present more than 50% of the time, with an intensity, which is partially disrupting the persons day to day life and which happens frequently over the last 30 days.</p> <p>4. Complete impairment means that a problem that is present more than 95% of the time, with an intensity, which is totally disrupting the persons day to day life and which happens every day over the last 30 days.</p> <p>8. Not specified means there is insufficient information to specify the severity of the impairment.</p> <p>9. Not applicable means it is inappropriate to apply a particular code (e.g., b650 Menstruation functions for woman in pre-menarche or post-menopause age).</p>	<p>0. No change in structure</p> <p>1. Total absence</p> <p>2. Partial absence</p> <p>3. Additional part</p> <p>4. Aberrant dimensions</p> <p>5. Discontinuity</p> <p>6. Deviating position</p> <p>7. Qualitative changes in structure, including accumulation of fluid</p> <p>8. Not specified</p> <p>9. Not applicable</p>

**ACTIVITY LIMITATIONS & PARTICIPATION RESTRICTION**

- Activity is the execution of a task or action by an individual. Participation is involvement in a life situation.
- Activity limitations are difficulties an individual may have in executing activities. Participation restrictions are problems an individual may have in involvement in life situations.

The Performance qualifier indicates the extent of Participation restriction by describing the persons actual performance of a task or action in his or her current environment. Because the current environment brings in the societal context, performance can also be understood as “involvement in a life situation” or “the lived experience” of people in the actual context in which they live. This context includes the environmental factors – all aspects of the physical, social and attitudinal world that can be coded using the Environmental. The Performance qualifier measures the difficulty the respondent experiences in doing things, assuming that they want to do them.

The Capacity qualifier indicates the extent of Activity limitation by describing the person ability to execute a task or an action. The Capacity qualifier focuses on limitations that are inherent or intrinsic features of the person themselves. These limitations should be direct manifestations of the respondent’s health state, without the assistance. By assistance we mean the help of another person, or assistance provided by an adapted or specially designed tool or vehicle, or any form of environmental modification to a room, home, workplace etc. The level of capacity should be judged relative to that normally expected of the person, or the person’s capacity before they acquired their health condition.

**Levels of Functional Limitation/Participation Restrictions**

**First Qualifier:** Performance

**Extent of Participation Restriction**

**0 No difficulty** means the person has no problem

**1 Mild difficulty** means a problem that is present less than 25% of the time, with an intensity a person can tolerate and which happens rarely over the last 30 days.

**2 Moderate difficulty** means that a problem that is present less than 50% of the time, with an intensity, which is interfering in the persons day to day life and which happens occasionally over the last 30 days.

**3 Severe difficulty** means that a problem that is present more than 50% of the time, with an intensity, which is partially disrupting the persons day to day life and which happens frequently over the last 30 days.

**4 Complete difficulty** means that a problem that is present more than 95% of the time, with an intensity, which is totally disrupting the persons day to day life and which happens every day over the last 30 days.

**8 Not specified** means there is insufficient information to specify the severity of the difficulty.

**9 Not applicable** means it is inappropriate to apply a particular code (e.g., b650 Menstruation functions for woman in pre-menarche or post-menopause age).

### **Second Qualifier: Capacity (without assistance)**

Extent of Activity limitation

#### **3 - Tier Assessment**

- Presence of Impairment
- Long-term/Recurrent - To be considered twelve (12) months after the last intervention
- Substantially Limiting

**Table 3: Normal Joint Ranges of Motion for the Upper limbs, lower limbs & trunk**

Joint	Movement	Active Range of Motion Norms (degrees)
<b>Upper limb</b>		
Shoulder	Flexion	0 – 180
	Extension	0 – 60
	Abduction	0 – 150
	Adduction	0 – 30
	Internal Rotation	0 – 90
	External Rotation	0 – 90
Elbow	Extension	0 – 180
	Flexion	0 – 150
Forearm	Pronation	0 – 80
	Supination	0 – 80
Wrist	Radial Deviation	0 – 20
	Ulnar Deviation	0 – 30
	Dorsiflexion	0 – 70
	Palmar Flexion	0 – 80
Thumb CMC	Flexion	0 – 50
Thumb MCP	Flexion	0 – 55
Thumb IP	Flexion	0 – 90
Thumb MCP	Extension	60 – 0
Thumb IP	Extension	0 – 5
Thumb	Opposition	Tip of thumb to tip of each finger of the same hand
Thumb	Adduction	0 – 30
Thumb	Abduction	0 – 70
Fingers MCP	Extension	0 – 45
Fingers PIP	Extension	120 – 0
	Flexion	0 – 120
Fingers DIP	Extension	80 – 0
	Flexion	0 – 80

Fingers	Abduction	0 – 30
Fingers MCP	Flexion	0 – 90
Fingers PIP	Flexion	0 – 115
Fingers DIP	Flexion	0 – 90
<b>Lower Limb</b>		
Hip	Flexion	0 – 125
	Extension	0 – 30
	Adduction	0 – 25
	Abduction	0 – 45
	Internal Rotation	0 – 45
	External Rotation	0 – 45
Knee	Flexion	0 – 150
	Extension	0 – 180
Ankle	Eversion	0 – 20
	Inversion	0 – 30
	Dorsiflexion	0 – 20
	Plantar flexion	0 – 45
<b>Trunk</b>		
Cervical	Flexion	0 – 50
	Extension	0 – 60
	Lateral flexion	0 – 45
	Rotation	0 – 80
Lumbar	Flexion	0 – 90
	Extension	0 – 30
	Lateral Flexion	0 – 30

## Calculating % of available Range of Motion (ROM)

$$\frac{\text{Available range} \times 100}{\text{Normal range}}$$

### For Example;

Normal ROM Knee extension is 0-180°

If the available range is 90°

$$\frac{90 \times 100}{180} = 50\%$$

Available range of motion for knee is 50°

Level of impairment is mild impairment

### Example 2 -Joint limitation affecting different movements

A fracture of right Hip joint bones may affect different acts of movement for the joint.

Affected Joint-Rt. Hip:

Arc of Movement	Normal ROM	Active ROM	% age of available ROM
Flexion-Extension	0-155	0 -70	45
Abduction-Adduction	0-70	0 -25	33
Rotation	0-90	0 -30	33

Mean of available ROM of Rt Hip =  $(45+33+33)/3 = 37\%$  (Moderate impairment)

### Interpretation of Results for Joint Range

- 4: 0 - 4% - total joint stiffness/ complete impairment
- 3: 5 - 24% -severe impairment
- 2: 25 - 49% -moderate impairment
- 1: 50 - 95% -mild impairment
- 0: 0 ≥96% -full ROM-no impairment

NB: Arthroplasty shall be assessed for an individual based on the reason for surgery, surgical complications and rehabilitation duration.

Congenital and acquired deformities to be considered for registration only after all possible interventions have been explored, and despite correction achieved there is still significant functional limitations.

**Table 4: Impairments Of Body Structures & Assessment**

Impairment	Assessment	Normative values	Levels/ percentage loss of strength	Interpretation
<b>Upper &amp; Lower Limb, Trunk</b>				
Muscle weakness or paralysis	Manual muscle testing (MMT)	Grade 5 Oxford scale	Grade 5 (0%) = Normal Grade 4 (20%) = Good Grade 3 (40%) = Fair Grade 2 (60%) = Poor Grade 1 (80%) – Trace Grade 0 (100%) – No activity	5-Complete ROM against gravity with full resistance  4-Complete ROM against gravity with some resistance  3-Complete ROM against gravity with no resistance  2-Complete ROM with gravity omitted  1-slight Contractibility with no ROM  0-No Muscle Contraction
Girth circumference	Circumferential measurement (Tape)	+ /- 2cm	+-(3-6) =Mild +-(7-10) =Moderate +-(11) =Severe	0- no impairment 1-Mild 2-Moderate 3-Severe
Limb length discrepancy despite surgical intervention	True leg length measurement (Tape) In comparison with the Normal  Lower Limbs (Umbilicus to the medial malleolus)  Upper Limbs (Olecranon Process to the tip of the middle finger)		0 – 3 cm = Mild 3 – 6 cm = Moderate Above 6 cm = Severe  <b>3 – 6 cm can be corrected surgically or through shoe raise</b>  <b>Shortening of 6 cm (2,5 inches) and above is considered disabling</b>	0-no impairment 1-Mild 2-Moderate 3-Severe

<p>Balance/coordination</p>	<p>Lower limb (rapid Heel - knee, rapid plantarflexion - dorsiflexion, walking, = Observe for ataxia, dysmetria, tremors</p> <p>Upper limb (Finger-nose, rapid pronation-supination) =observe for hypermetria, terminal tremors</p> <p>Standing opens arms, open eyes/ closed eyes, feet apart/ feet together/ feet on top of each other</p>	<p>+/- Check on the ranges</p>	<p>Rapid movements with terminal tremors=mild</p> <p>Intention tremors=moderate</p> <p>Intention &amp; terminal tremors, dysmetria/hypermetria= severe</p>	<p>0-no impairment</p> <p>1-Mild</p> <p>2-Moderate</p> <p>3-Severe</p> <p>4-complete</p>
<p>Height</p>	<p>Measurement of body length in centimetres</p>	<p>Average Adult height 5 ft 9" tallest Adult 8ft 11"</p> <p>Short stature -4ft 10" (147cm)</p> <p>Gigantism 6ft 10"</p>	<p>0- Normal</p> <p>4 - gigantism/Short stature</p> <p>( Example in cases of pituitary gland tumor/ acromegaly. e.t.c.)</p>	<p>0 - Normal</p> <p>4 - Gigantism/Short stature</p>

### 3.3.2. THE EVALUATION OF PERMANENT PHYSICAL IMPAIRMENT OF TRUNK (SPINE)

#### Basic Guidelines

The local effects of the lesions of the spine can be divided into traumatic and non-traumatic. The percentage of PPI in relation to each situation should be valued as follows:

#### Traumatic Lesions

Cervical spine injuries	Percentage of PPI in relation to Spine
i) 25% or more compression of one or two adjacent vertebral bodies with No involvement of posterior elements, No nerve root involvement, moderate Neck rigidity and persistent Soreness.	20%
ii) Posterior element damage with radiological Evidence of moderate parties dislocation/sublimation including whiplash injury.  With fusion healed, No permanent motor or sensory changes B) Persistent pain with radiologically demonstrable instability.	10%  25%
iii) Severe Dislocation:  Fair to good reduction with or without fusion with no residual motor or sensory involvement;  Inadequate reduction with fusion and persistent radicular pain	10%  15%

Cervical Intervertebral Disc Lesions	Percentage of PPI in relation to Spine
i) Treated case of disc lesion with persistent pain and no neurological deficit	10%
ii) Treated case with pain and instability	15%

Thoracic and Thoracolumbar Spine Injuries:	Percentage of TT spine
i) Compression of less than 50% involving one vertebral body with no neurological manifestation	10%
ii) Compression of more than 50% involving single vertebra or more with involvement of posterior elements, healed, no neurological manifestations persistent pain, fusion indicated	20%
iii) Same as (b) with fusion, pain only on heavy use of back	15%
iv) Radiologically demonstrable instability with fracture or fracture dislocation with persistent pain.	30%

### Lumbar and Lumbosacral Spine: Fracture

Lumbar and Lumbosacral Spine: Fracture	Percentage of LLS spine
a) Compression of 25% or less of one or two adjacent Vertebral bodies, No definite pattern or neurological Deficit>	15%
b) Compression of more than 25% with disruption of Posterior elements, persistent pain and stiffness, healed with or without fusion, inability to lift more than 10 kgs.	30%
c) Radiologically demonstrable instability in low lumbar or Lumbosacral spine with pain	35%

Disclesion:	Percentage of DL
a) Treated case with persistent pain	15%
b) Treated case with pain and instability	20%
c) Treated case of disc disease with pain activities of lifting moderately modified	25%
d) Treated case of disc disease with persistent pain and stiffness, aggravated by heavy lifting necessitating modification of all activities requiring heavy weight lifting	30%

### 3.3.3. NON-TRAUMATIC LESIONS

#### Scoliosis

**Basic guidelines** - following modification is suggested: - The largest structural curve should be accounted for while calculating the PPI and not the compensatory curve or both structural curves.

#### Measurement of Spine Deformity

Cobb's method for measurement, of angle of curve in the radiograph taken in a standing position shall be used. The curves are divided into the following groups depending upon the angle of major structural scoliotic deformity.

Group	Cobb's Angle	Percentage PPI in relation to Spine
I	0-20	NIL
II	21-50	10%
III	51-100	20%
IV	101 & above	30%

### Torso Imbalance

In addition to the above PPI shall be evaluated in relation to the torso imbalance. The torso imbalance shall be measured by dropping a plumb line from C7 spine and measuring the distance of plumb line from gluteal crease.

Deviation of Plumb line	Percentage PPI
Up to 1.5 Cm	4%
1.6 - 30 Cm	8%
31 - 50 Cm	16%
51Cm and above	32%

### Head Tilt over C7 spine PPI

Head Tilt over C7 spine PPI	Percentage PPI
Up to 15	4%
More than 15	10%

### Cardiopulmonary Test

In cases with scoliosis of severe type cardiopulmonary function tests and percentage deviation from normal should be assessed by one of the following methods whichever seems more reliable clinically at the time of assessment. The value thus obtained shall be added by combining the formula.

a. Chest Expansion	Percentage PPI
4 - 5 Cm.	Normal
Less than 4 cm reduction in Chest expansion	5% for each cm
No expansion	25%

### b. Counting in one breathe

Breath Count	PPI
More than 40	Normal
0-40	5%
0-30	10%
0-20	15%
0-10	20%
Less than 5	25%

**Pain**

Mildly Interfering with ADL	4%
Moderately Restricting ADL	6%
Severely Restricting ADL	10%

**Cosmetic Appearance:**

-No obvious disfiguration with clothes on	Nil
-mild disfigurement	2%
-severe disfigurement	4%

**Leg Length Discrepancy:**

-First 1/2 " shortening	Nil
-Every 1/2" beyond first 1/2"	4%

**Neurological deficit** - Neurological deficit shall be calculated as per established method of evaluation of PPI in such cases. Value thus obtained shall be added telescopically using combining formula.

**KYPHOSIS**

Evaluation shall be done on the similar guidelines as use for scoliosis with the following modifications:

Spinal Deformity	PPI
Less than 20	Nil
21-40	10%
41-60	20%
Above 60	30%

**Torso Imbalance** - Plumb line dropped from external ear normally falls at ankle level. The deviation from normal shall be measured from the ankle anterior joint line to the plumb line.

Less than 5 cm in front of ankle	4%
5 to 10 cm in front of ankle	8%
10 to 15 cm in front of ankle	16%
More than 15 cm in front of ankle	32%

**Miscellaneous Conditions:**

Those conditions of the spine, which cause stiffness etc., are rated as follows.

	<b>Conditions</b>	<b>Percentage PPI</b>
A	Subjective symptoms of pain, no involuntary muscle spasm, not substantiated by demonstrable structural pathology	-0%
B	Pain, persistent muscles spasm, and stiffness of spine, substantiated by mild radiological changes.	-20%
C	Same as B with moderate radiological changes	-25%
D	Same as B with severe radiological changes involving any one of the regions of spine	-30%
E	Same as D involving whole spine	-40%

**3.3.4. The Evaluation of Permanent Physical Impairment in Amputees****Basic Guidelines:**

In cases of multiple amputees if the total sum of permanent physical impairment is above 100%, it should be taken as 100% only.

If the stump is unfit for fitting the prosthesis additional weightage of 5% should be added to the value.

In case of amputation in more than one limb, percentage of each limb is added by combining the formula and another 10% will be added but when only toes or fingers are involved only 5% will be added.

Any complication in form of stiffness of proximal joint, neuroma infection, etc., should be given up to a total of 10% additional weightage.

Dominant upper extremity shall be given 4% additional weightage.

	Upper Limb Amputations	PPI & loss of physical function of each limb
1.	Fore-quarter amputations	100%
2.	Shoulder Disarticulation	90%
3.	Above Elbow up to upper 1/3 of arm	85%
4.	Above Elbow up to lower 1/3 of forearm	80%
5.	Elbow disarticulation	75%
6.	Below Elbow up to upper 1/3 of forearm	70%
7.	Below Elbow up to lower 1/3 of forearm	65%
8.	Wrist disarticulation	60%
9.	Hand through carpal bones	55%
10.	Thumb through C.M. or through 1st MC joint	30%
11.	Thumb disarticulation through metacarpophalangeal Joint or through proximal phalanx.	25%
12.	Thumb disarticulation through inter phalangeal joint or through distal phalanx.	15%

		Index Finger (15%)	Middle Finger (5%)	Ring Finger (3%)	Little Finger (2%)
13.	Amputation through Proximal phalanx or Disarticulation through M.P. Joint	15%	5%	3%	2%
14.	Amputation through Middle Phalanx or Disarticulation through PP joint.	10%	4%	2%	1%
15.	Amputation through Distal Phalanx or disarticulation through DIP joint.	5%	2%	1%	1%

**Lower Limb Amputations:**

	Lower Limb Amputations	Percentage LLA
1.	Hind quarter	100%
2.	Hip disarticulation	90%
3.	Above knee up to upper 1/3 of thigh	85%
4.	Above knee up to lower 1/3 of thigh	80%
5.	Through knee	75%
6.	B.K. up to 8 cm	70%
7.	B.K. up to lower 1/3 of leg	60%
8.	Through ankle	55%
9.	Syme's	50%
10.	Up to mid-foot	40%
11.	Up to fore-foot	30%
12.	All toes	20%
13.	Loss of first toe	10%
14.	Loss of second toe	5%
15.	Loss of third toe	4%
16.	Loss of fourth toe	3%
17.	Loss of fifth toe	2%

### 3.3.5. The Evaluation Of Permanent Physical Impairment (Ppi) Of Congenital Deformities Of The Limbs.

#### TRANSVERSE DEFICIENCIES

Functionally congenital transverse limb deficiencies are comparable to acquired amputations and can be called synonymously as congenital amputation, however, in some cases revision of amputation is required to fit in prosthesis.

The transverse limb deficiencies therefore shall be assessed on basis of the guidelines applicable to the evaluation of PPI in cases of amputees as given in the preceding chapter.

For example:	PPI
Transverse deficiency Rt. Arm complete (shoulder disarticulation)	90%
Transverse deficiency at thigh complete (hip disarticulation)	90%
Transverse deficiency Proximal Upper arm (Above elbow Amp.)	85%
Transverse deficiency at lower thigh (Above knee Amp. Lower 1/3)	80%
Transverse deficiency forearm complete (elbow disarticulation)	75%
Transverse deficiency lower forearm (Below Elbow Amp.)	65%
Transverse deficiency carpal complete (wrist disarticulation)	60%
Transverse deficiency Metacarpal complete (Disarticulation through carpal bones)	55%

### 3.3.6. Deficiencies

#### Basic Guidelines

In cases of longitudinal deficiencies of limbs due consideration should be given to functional impairment

In upper limb, loss of ROM loss muscular strength and hand functions like prehension and grasp should be tested while assessing the case for PPI

In lower limb clinical method of stability component and shortening of lower limb should be given due weightage.

In cases of loss of single bone in forearm, the evaluation shall be based on the principles of evaluation of Arm component, which include Evaluation of ROM, Muscle strength-and coordinated activities.

In cases of loss of single bone in leg, the evaluation shall be based on the principles of evaluation of mobility component and stability components of the lower extremity.

**NOTE:** Congenital and acquired deformities to be considered for registration only after all possible interventions have been explored, and despite correction achieved there is a still significant functional limitation. Two years from date of birth will be appropriate time for medical intervention, surgical corrections/repairs and rehabilitation.

Registration as PWD should only be considered two years after birth but with exceptions of conditions like Phocomelia or missing limbs.

### Cranial Nerves Impairments

Type of Cranial Nerve Involvement	Physical Impairment
Motor cranial nerve	20% for each nerve
Sensory cranial nerve	10% for each nerve

### Motor system Disability

Neurological Involvement	Physical Impairment
<b>Hemiparesis/paraparesis/quadriparesis</b>	
- Mild	25%
- Moderate	50%
- Severe	75%
- Complete	100%

### Sensory System Disability

Extent of Sensory Deficit	Physical Impairment
Anaesthesia	Up to 10% for each limb
Hypo aesthesia	Depending upon the % of loss of sensation
Paraesthesia	Up to 30% depending upon loss of sensation
Hands/feet sensory loss	Depending upon the % of loss sensation

Severity of Ataxia	Physical Impairment
Mild (Detected on examination)	25%
Moderate	50%
Severe	75%
Very Severe	100%

**Bladder disability due to neurogenic involvement**

Bladder Involvement	Physical Impairment
Mild (Hesitancy/Frequency)	25%
Moderate (precipitancy)	50%
Severe (occasional but recurrent Incontinence)	75%
Very Severe (Retention/Total Incontinence)	100%

**Table 5: Restriction of function & Assessment (domains)**

Functional limitation	Assessment	Score	Interpretation
Mobility	<p>Ambulation (Mobility)</p> <p>Able to walk around the neighbourhood without difficulty and without walking equipment</p> <p>Able to walk around the neighbourhood with difficulty but does not require walking equipment or the help of another person</p> <p>Able to walk around the neighbourhood with walking equipment but without the help of another person</p> <p>Able to walk only short distances with walking equipment, and requires a wheelchair to get around the neighbourhood</p> <p>Unable to walk alone, even with walking equipment. Able to walk short distances with the help of another person and requires a wheelchair to get around the neighbourhood.</p> <p>Cannot walk at all</p>	<p>Able to walk around neighbourhood without walking aid=Normal</p> <p>Able to walk around neighbourhood with difficulty but do not require walking aid or help from another person = Mild</p> <p>Able to walk only short distance with aid = moderate</p> <p>Unable to walk alone, even with walking equipment, able to walk short distance with help/assistant and requires wheelchair = severe</p> <p>Cannot walk at all= complete</p>	<p>0-No difficulty</p> <p>1-Mild difficulty</p> <p>2-Moderate Difficulty</p> <p>3-Severe</p> <p>4-Complete Difficulty</p>

<b>Self-care</b>	Personal hygiene Dressing and eating	Requires no assistance = 0 Some assistance=1 Requires assistive device=2 Requires help even while using an assistive device=3 Requires total assistance =4	0-No difficulty 1-Mild difficulty 2-Moderate Difficulty 3-Severe 4-complete Difficulty
<b>Domestic life</b>	Farming, cooking, cleaning, laundry, herding, home security, reproduction etc.	Requires no assistance=0 Some assistance=1 Requires assistive device=2 Requires help even while using an assistive device=3 Requires total assistance =4	0-No difficulty 1-Mild difficulty 2-Moderate Difficulty 3-Severe 4-Complete Difficulty
<b>Major life roles</b>	Career. Parenting	Requires no assistance=0 Some assistance=1 Requires assistive device=2 Requires help even while using an assistive device=3 Requires total assistance =4	0-No difficulty 1-Mild difficulty 2-Moderate Difficulty 3-Severe 4-complete Difficulty
<b>Community, social, civic life</b>	Political involvement religious duties hobbies, cultural activities	Requires no assistance=0 Some assistance=1 Requires assistive device=2 Requires help even while using an assistive device=3 Requires total assistance =4	0-No difficulty 1-Mild difficulty 2-Moderate Difficulty 3-Severe 4-Complete Difficulty

### 3.3.7. Scoring for Physical Disabilities

#### Structural Impairment

Uniform qualifier with the negative scale, used to indicate the extent or magnitude of an impairment:

xxx.0 NO impairment	(none, absent, negligible...)	0-4 %
xxx.1 MILD impairment	(slight, low...)	5-24 %
xxx.2 MODERATE impairment	(medium, fair...)	25-49 %
xxx.3 SEVERE impairment	(high, extreme, ...)	50-95 %
xxx.4 COMPLETE impairment	(total...)	96-100 %
xxx.8 not specified		
xxx.9 not applicable		

#### Coding Activities and Participation

xxx.0 NO difficulty	(none, absent, negligible...)	0 - 4 %
xxx.1 MILD difficulty	(slight, low...)	5 - 24 %
xxx.2 MODERATE difficulty	(medium, fair...)	25 - 49 %
xxx.3 SEVERE difficulty	(high, extreme, ...)	50 - 95 %
xxx.4 COMPLETE difficulty	(total...)	96 - 100 %
xxx.8 not specified		

**Table 6. Physical Disability Quantification Table**

96 - 100% 4 COMPLETE impairment	4	4	8	12	16
50 - 95 % 3 SEVERE impairment	3	3	6	9	12
25 - 49 % 2 MODERATE impairment	2	2	4	6	8
5 - 24 % 1 MILD impairment	1	1	2	3	4
0 - 4 % 0 NO impairment	0	1	2	3	4
	0 NO difficulty 0 - 4 %	1 MILD difficulty 5 - 24 %	2 MODERATE difficulty 25 - 49 %	3 SEVERE difficulty 50 - 95 %	4 COMPLETE difficulty 96-100 %

## SCORING

- 0 No Impairments / Difficulty
- 1 Mild Disability
- 2 - 4 Moderate Disability
- 6 - 9 Severe Disability
- 12 - 16 Complete Disability

3 Tier Assessment
► Presence of Impairment
► Long Term/ Recurrent
► Substantially Limiting

### 3.3.8. Physical Disability Assessment Team

Chairperson - Physical rehabilitation professional/Physiatrist /Medical Officer /Surgeon

Other Members

- Physiotherapist
- Occupational Therapist
- Orthopedic Technologist
- General Surgeon/ Orthopedic Surgeon
- Medical Social worker

## 3.4 DISABILITY CATEGORY: VISUAL IMPAIRMENTS

**Impairment-** a general term used to describe a problem in the function or structure of a person's body due to a health condition.

**Vision Impairment:** Vision Impairment also known as visual impairment or vision loss, occurs when an eye condition affects the visual system and one or more of its functions and causes a decreased ability to see to a degree that causes problems not fixable by usual means, such as glasses, intraocular lenses, contact lenses and surgery.

**Low vision:** A person with low vision is one who has impairment of visual functioning even after treatment and/or standard refractive correction, and has a visual acuity of less than 6/18 to light perception, or a visual field of less than 10 degrees from the point of fixation, but who uses, or is potentially able to use, vision for planning and/or execution of a task.

**Visual acuity -** Visual acuity is a simple, non-invasive measure of the visual system's ability to discriminate two high contrast points in space.

**Visual field defect:** Refers to any deficit where a part of the field of vision is missing, such as tunnel vision or hemianopia.

**Diplopia:** (double vision) is simultaneous perception of two separate or overlapping images of the same object when you should only be seeing one.

**Aphakia:** Absence of the natural lens of the eye from its normal anatomical position.

### 3.4.2: Categories of Vision Impairment

**Normal Vision:** Visual acuity equal to or better than 6/12 in the better eye, a full field of vision and normal colour vision as measured using standard procedures.

**Mild visual Impairment:** Best corrected visual acuity worse than 6/12 up to 6/18 in the better eye.

**Moderate visual Impairment:** Best corrected visual acuity worse than 6/18 to 6/60 in the better eye.

**Severe visual Impairment:** Best corrected visual acuity worse than 6/60 and equal to or better than 3/60 or visual field loss to less than 200 in the better eye.

**Blind:** Best corrected visual acuity worse than 3/60 or a corresponding visual field loss to less than 100 in the better eye.  
Assessment of Vision Impairment

## A. Clinical Assessment

- Points of Assessments; Visual assessment shall be done in Sub County referral hospitals, County referral hospital or a National Referral Hospital.
- Parameters to be assessed: Visual acuity, for distance, and near shall be the primary assessment used for categorizing client's visual impairment. Where found necessary to conduct the following specialized tests, clients will be referred to where the services are available:
  - a. Visual field Analysis
  - b. Colour Vision Tests
  - c. Stereopsis (Depth Perception) test
- Skilled workforce to do the assessment; Visual assessment shall be done by an ophthalmologist, and in cases where there is no ophthalmologist stationed in the facility, the assessment shall be done by an ophthalmic clinical officer. This is in addition to the disability medical assessment team in the facility, chaired by a medical officer.
- Procedure: Assessment will comprise of distance visual acuity and ophthalmic examination of anterior and posterior segment of the eye. Where indicated (as the assessor finds), Visual field Analysis, Colour Vision Tests, Stereopsis (Depth Perception) test may also be assessed.
- Distance visual acuity will be assessed using a Snellen's Chart at a fixed distance. It will be conducted in well-lit room using a 6m or 3m Snellen's chart placed 6m or 3m respectively. The smallest line read on the chart is written as a fraction, where the numerator refers to the distance at which the chart is viewed, and the denominator is the distance at which a "healthy" eye is able to read that line of the vision chart (usually written on the chart).
- Ocular Examination: The objective of ophthalmic examination is to assess the health status of the structures of the eye and the resulting impairment. The examination of the anterior and posterior segments of the eye shall be done preferably using a Slit Lamp and an Ophthalmoscope.
- Documentation of findings: The findings of assessment shall be recorded in the Ministry of Health (MOH) Vision impairment documentation tool (Annex I A). Visual acuity shall be recorded using the '6/6' Snellen version for distance vision, and "N" format for Near.
- Quantification, and Decision: The examiners will use table 7 below to complete the Visual Impairment assessment tool (Annex I A) (Percentage of disability)
- A conversion is also provided (Annex I B)

**Note:** Officer who signs this form shall indicate their regulatory Council registration number and shall bear personal, professional responsibility of the information in the form.

## B. Functional Assessment

- Functional Assessment should be done with the use of the SF-12 tool (modified) which is a widely used instrument for assessing self-reported health related quality of life. It consists of twelve questions that measure eight health domains to assess physical and mental health. The tool has been validated across a number of diseases and conditions hence it is not disease-specific the assessment will be done to a client where the opinion of the primary assessment recommends (e.g., for placement, post care, environmental adaptation and others). A standardized functional assessment tool, (Annex I C), shall be used by a joint team, comprising of Ophthalmologist, Occupational Therapist and Social Worker.

## C. Other Conditions And Considerations For Assessment

- Progressive degenerative conditions will be considered as recurring, and shall be assessed periodically, as will change with time.
- Loss of Eye ball, (Enucleation/ Evisceration/ Exenteration) (40%)
- Constant uncorrectable /intractable diplopia: (25%)

- One eye normal and the other eye aphakic, correctable to 6/9 or better: (15%);
- Both eyes aphakic correctable to 6/9 or better: (20%)
- One eye blind, other eye aphakic and correctable to 6/9 or better: (35%)
- Specialized tests are only to be done if indicated.

**Table 7: Reference for Visual Impairment Quantification**

3/60	-	-	3/60	-	80	Svi
3/60	-	-	NPL	-	80	Svi
<3/60			<3/60		100	Bl
NPL	-	-	NPL	-	100	Bl

**Key:**N; Normal, Mi; Mild Impairment, Mo: Moderate Impairment, SV: Severe Visual Impairment, Bl: Blind R: Recommended for Registration

Adopted from The Work Injury Benefits Act, 2007

### 3.5. DISABILITY CATEGORY: HEARING IMPAIRMENT, SPEECH AND LANGUAGE DISABILITY

#### 3.5.0. Introduction

Hearing loss is often referred to as a hidden disability. World Health Organization (2018) 466 million people worldwide have disabling hearing loss 34 million being children.

Depending on the severity, it affects:

- Interpersonal communication
- Social interactions
- Development of speech and language in children
- Educational performance
- Employment prospects
- Cognitive decline

#### 3.5.1. Section A: Hearing Impairment

##### Definitions

- Hearing loss - means any reduction of or difficulties in hearing sounds.
- Hearing impairment - means any level or grade of hearing loss.
- Deafness - profound hearing loss
- Disabling Hearing Loss - Moderate or above hearing loss in the better ear
- Decibels- Unit of measurement of sound intensity

#### 3.5.2. Types of Hearing Loss

- Conductive Hearing loss: This occurs when sound cannot get through the outer ear and middle ear and can often be corrected medically or surgically.
  - Sensorineural hearing loss (SNHL): This occurs when there is damage to the inner ear (cochlea) or to the nerve pathways from the inner ear to the brain. It results in permanent hearing loss ranging from mild, moderate, severe to profound.
  - It results in permanent hearing loss ranging from mild, moderate, severe to profound.
  - Mixed Hearing loss: This occurs when a conductive hearing loss happens in combination with SNHL
- There may be damage in the outer ear, middle ear, inner ear (cochlea) or the auditory nerve.

### 3.5.3. Categories of Hearing Impairment (W.H.O)

**Table 8: Categories of Hearing Impairment**

Category	Level of hearing In dBHL	Functional limitation	DHL -Moderate or greater in better hearing ear
Grade 0- Normal Hearing	25 dB and below	No problems	-
Grade 1- mild	26-40 dB	Hears/repeats words in normal voice at 1 m	-
Grade 2 –child Moderate- Adult	31-60 dB 41-60 dB	Hears/repeats words raised voice at 1 m	Disabling hearing loss
Grade 3 -Severe	61-80 dB	Hears some words shouted	Disabling hearing loss
Grade 4 - Profound	81 and above	Cannot hear/understand shouted voice	Disabling hearing loss

### 3.5.4. Assessment for Hearing Impairment Hearing Tests

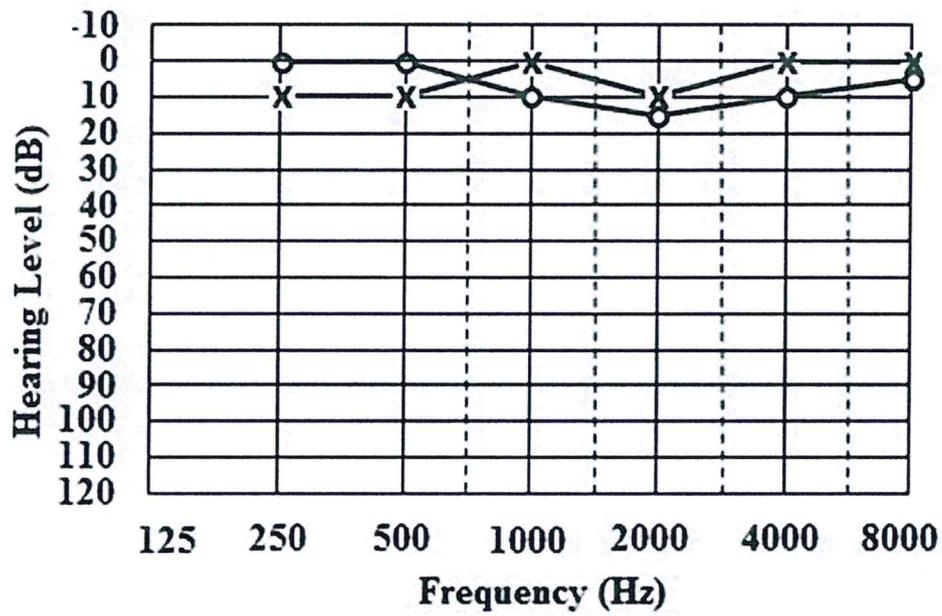
1.	<b>SUBJECTIVE TEST</b>
	PURE TONE AUDIOMETRY (PTA)
2.	<b>OBJECTIVE TEST</b>
	AUDITORY BRAINSTEM RESPONSE AUDIOMETRY (ABR)

#### Procedure

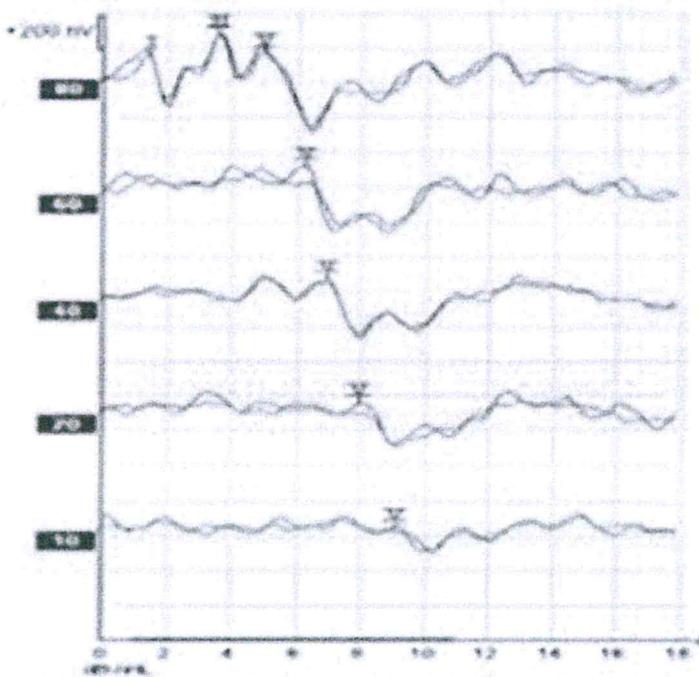
##### **PURE TONE AUDIOMETRY TEST (PTA)**

- Pure tone audiometry is a subjective test of hearing.
- Air Conduction thresholds using Pure Tone Audiometry will be measured for right and left ear separately
- The PTA results will be recorded on an Audiogram
- Pure tone average will be obtained for each ear at frequencies (500Hz, 1000Hz, 2000Hz, 4000Hz)
- The Pure tone average will determine the level/grade of hearing for the specific ear.

## Normal Audiogram



## AUDITORY BRAINSTEM RESPONSE AUDIOMETRY (ABR)



- Also known as Brainstem Response Audiometry Test (BERA) is an objective test of hearing assessment
- The test stimulus that shall be used will be either Click stimulus at frequency range 2.0-4.0 KHz or Tone burst at frequency range 0.5, 1.0, 2.0, 4.0 KHz.
- ABR measurements shall be conducted for each ear separately.

### 3.5.5: Medical Assessment

#### HEARING ASSESSMENT PROTOCOL

##### Documentation:

The Audiogram and ABR report shall be attached to the Ministry of Health (MoH) Persons with Disability Medical assessment report.

**Location** - The hearing assessment shall be conducted in the Sub County Referral Hospital, County hospital or National referral hospital.

**Assessors** - Hearing assessment shall be conducted by an Audiologist or Audiology technologist and in cases where there is no Audiologist or Audiology technologist stationed in the facility, the assessment shall be done by an ENT Clinical Officer. The ENT Surgeon will be the professional lead (where available) and will include the professional registration details.

**Equipment** - The equipment required for the assessment shall be a calibrated Diagnostic Audiometer and Auditory Brainstem Response (ABR) machine.

**Table 9: Hearing Assessment Protocol**

Age Categorisation	Hearing Tests to be conducted
Adults	Both Auditory Brainstem Response Audiometry report (ABR/BERA) and Pure Tone Audiometry Test report (PTA)
Below 3 years	ABR hearing test.
Children aged 3-5 years	Conditioned Play audiometry or ABR test
Children aged 5-18 years	P.T.A or ABR test

Mode of communication for persons with hearing impairment or deafness:-

- Auditory verbal communication for persons who use hearing aids or cochlear implants.
- Sign language for persons with profound deafness and have had no hearing intervention or those who obtain minimal benefit from using hearing aids.

**Table 10: Determination of level of Hearing Disability**

Category	Level	PTA of better Ear in dBHL	Speech discrimination score of better Ear	Percentage of disability
(1)	Mild	26-40	80-100%	<40%
(1a)	Moderate	41-60	50-80 %	40-50%
(1b)	Severe	61-80	40-50%	51-70%
(1c)	Profound	81 dB and above	< 40%	71-100%

<b>Monoaural PTA in dBHL</b>	<b>% Hearing Disability</b>
25	1
30	1
35	3
40	8
45	13
50	18
55	23
60	40
65	48.55
70	57.1
75	65.65
80	74.2
85	82.75
90	91.3
95	100

### Calculation of Percentage of Hearing Disability

Calculate the Pure tone average of Air conduction Thresholds (ACT) for 500Hz, 1000Hz, 2000Hz and 4000Hz separately (where there is No response at any frequency, ACT will be considered to be 95 dB)

#### Percentage of Hearing Disability=

$(\text{Better ear \% of hearing disability} \times 5) + (\text{Poorer ear \% of hearing disability}) / 6$

#### As a guide,

- Persons with hearing loss of more than 40dBHL in the better ear and profound hearing loss in the poorer ear, will yield a hearing disability of 25% and above.
- Persons with hearing loss of above 60 dBHL in the better ear will yield disability of 40 % and above.
- Persons with normal hearing in one ear and profound hearing loss in poorer ear will yield a hearing disability of 17.5%

Level	PTA of better ear in dBHL	Percentage of disability	Recommendation
Moderate to Severe	45-80 dB	25 - 75%	Hearing Aids
Profound	81 dB	76 - 100%	Hearing Aids Cochlear Implants

### 3.5.6. Essentials for Disability Medical Assessment

#### Location

- The hearing assessment shall be conducted in the Sub County Referral Hospital, County hospital or National referral hospital.

#### Assessors

- Hearing assessment shall be conducted by an Audiologist or Audiology technologist and in cases where there is no Audiologist or Audiology technologist stationed in the facility, the assessment shall be done by an ENT Clinical Officer.
- ENT Surgeon will be the professional lead (where available) and will include the professional registration details.

#### Equipment

- The equipment required for the assessment shall be a calibrated Diagnostic Audiometer and an Auditory Brainstem Response (ABR) machine.

#### Disability Assessment Committee

The committee will constitute of the following medical professionals:

- Chairperson - Medical Officer / ENT surgeon
- Audiologist/ Audiology Technologist or ENT Clinical Officer.
- Core Rehabilitation team in the hospital (Physiotherapist, Occupational Therapist, Orthopaedic Technologist) - at least one of the core team.

### 3.5.7. Disability Medical assessment tool (Appendices)

- PWD Medical Assessment Report
- The Pure Tone Audiogram
- The ABR report
- ICF Checklist

**ICF CHECK LIST IS ATTACHED**

		Code	Score
<b>b 2 Sensory Function</b>	<b>Hearing</b>	<b>B230</b>	

**Score rating as per the disability rating**

**Rehabilitation**

**1. Hearing Aids**

Recommended for clients with Mild to Severe Sensorineural Hearing Loss.

**2. Cochlear Implants**

Recommended for clients with: -

- a) Severe sensorineural hearing loss (SNHL) with minimal or no benefit from hearing aids
- b) Profound sensorineural hearing loss

**3.6 DISABILITY CATEGORY: SPEECH, LANGUAGE, COMMUNICATION AND SWALLOWING IMPAIRMENTS**

**3.6.0. Introduction**

Speech, Language, Communication and Swallowing Impairments may be congenital or acquired; stable, improving or progressive. They may be temporary or permanent. Access to education, work, social activities and the legal system is often dependent on communication skills.

**DEFINITIONS**

**Speech:** saying sounds accurately and in the right places in words of a language or dialect so that others people can understand. It relates to speaking fluently, without hesitating, prolonging/repeating words or sounds. It also means speaking with expression, using appropriate voice, pitch, volume and intonation for the person’s culture, language, and dialect.

**Language:** the learned system of words or signs used to express and understand meaning, also encompassing the rules for combining them to form sentences and longer texts (such as stories and instructions). Language allows people to interact, share ideas, express wants and needs, and can be spoken, written, or signed.

**Communication** refers to how we interact with others; being able to talk to people and take turns as well as using appropriate language to suit the situation. It includes non-verbal communication such as eye contact, gesture, and facial expression. In addition, communication relates to being able to consider another person’s perspective, intentions, and the wider social context. For those who are unable to communicate using spoken language, alternative means of communication may be used. These include low tech (e.g., picture-based communication books or boards) or high tech (e.g., speech-generating devices) systems (ICP International Communication Project 2018).

**SWALLOWING IMPAIRMENT (DYSPHAGIA) -** Is difficulty in eating, drinking and swallowing. Good nutrition/hydration is essential to life and underpins health and rehabilitation. Dysphagia/feeding difficulties can cause malnutrition, dehydration, pneumonia (via aspiration - food/drink/saliva entering the airways), death and psychological distress.

**3.6.1. Classification of Speech, Language, Communication and Swallowing**

## 1. SPEECH IMPAIRMENT

**A. DYSFLUENCY – STAMMERING or STUTTERING-** Dysfluent speech is the disruption of the forward flow and timing of speech by repetition of sounds, syllables or words, sound prolongation and/or blocking on sounds, silent or audible. These differ from breaks in fluency typically experienced, such as hesitations, pauses to process ideation or production, as they may involve significant tension and struggle. Disruptions may be accompanied by secondary behaviours (facial grimaces, head/body movements), physical tension, negative reactions, and avoidance of sounds, words or situations or decreased overall communication. Disorders of fluency comprise developmental stammering in children, young adults and adults; acquired/late onset stammering; atypical fluency disorders; and cluttering.

**Terminology:** Dysfluency, stammering and stuttering are interchangeable terms.

**CLUTTERING:** involves speech that sounds rapid, unclear and/or disorganized. The listener may hear excessive breaks in the normal flow of speech that sound like disorganized speech planning, talking too fast or in spurts, or simply being unsure of what one wants to say. The struggle seen with stammering is not usually present.

**B. VOICE DIFFICULTIES-** Voice disorders are a range of conditions which affect the larynx. They can cause changes to the voice called dysphonia or loss of voice aphonia. Voice disorders can also make the throat feel different, for example, it might feel sore, achy or dry. Voice disorders can cause difficulties in day-to-day life for some people and can cause frustration, low mood or isolation in some cases.

- **APHONIA** - total loss of voice can be temporary (for example, due to a viral infection) or permanent (e.g., due to laryngectomy).
- **DYSPHONIA** - partial loss of voice. The voice may sound hoarse, creaky, strained, breathy or weak. This can be temporary (e.g., due to overuse or misuse of the voice) or permanent (e.g., due to vocal nodules or congenital malformation such as laryngeal web) unless treated with a surgical or other intervention. Dysphonia can be the earliest sign of a progressive neurological disorder (e.g., Parkinson's, Motor Neuron Disease) or of laryngeal, breast or lung cancer and therefore always need to be investigated by an ENT Consultant.

**C. ARTICULATION** – Speech Sound Disorders are common in children (although they may not have resolved by adulthood if the child was unable to access Speech and Language Therapy) and Motor Speech Disorders can be found in children and adults.

- **SPEECH SOUND DISORDERS:** is a term used to cover difficulties that some children have with their articulation, phonological and/or prosodic development. A variety of other terms is also used to describe speech sound disorders including speech delay, phonological delay/ disorder, speech impairment. Children show patterns of errors in their speech. These might be patterns, which are observed in typically developing younger children, or non-developmental patterns. The terms 'delay' and 'disorder' may be used to describe these different patterns, but these terms are also used interchangeably.
- **MOTOR SPEECH DISORDERS:**
  - Dysarthria: changes to voice and speech associated with neurological and neuro-muscular conditions such as myasthenia gravis and with muscle function, e.g., muscular dystrophies. Severity may range from 'changes imperceptible to listeners but felt by speakers' through to 'absence of any speech or voice'. Lesions may be localized, e.g., stroke or systemic, motor neuron disease, dementia. They can be sudden onset or slowly or rapidly progressive. Congenital causes include cerebral palsy.
  - Apraxia of Speech/ Verbal Dyspraxia: Difficulty in the planning and coordination of motor tasks involved in the production of speech. When congenital, it is referred to as developmental dyspraxia. It could also be acquired following stroke,

Traumatic Brain Injury or neurodegenerative conditions such as dementia. Verbal apraxia/dyspraxia can be associated with other apraxia such as limb apraxia.

▪ **ARTICULATION DISORDERS due to IMPAIRED STRUCTURE** of the Oral Musculature: congenital difficulties such as cleft lip and palate, injuries due to trauma (accidents or post- surgery) or due to cancer. Surgical interventions may help these types of difficulty.

**2. LANGUAGE DISORDERS:** 'Language Disorder' refers to children and adults with language difficulties that create obstacles to communication or learning in everyday life. For children this is seen to be a congenital condition while for adults it is usually 'acquired' through brain injury (for example, due to stroke, head injury or dementia) and is also called aphasia. People with learning disabilities/ mental handicap commonly also have language disorders as they have a general impairment in learning.

**A. DEVELOPMENTAL LANGUAGE DELAY and DISORDER (DLD)/SPECIFIC LANGUAGE IMPAIRMENT (SLI):** These terms are used when the language disorder is not associated with a known condition. These children struggle with school and may be behind their peers in literacy skills as well as spoken communication and listening/ understanding. DLD/SLI could be associated with learning difficulties such as dyslexia, dysgraphia, dyscalculia. A Special Needs Teacher should be involved in the assessment, diagnosis and management of learning difficulties.

**B. CONGENITAL LANGUAGE DISORDER** due to conditions in children and adults- such as autism spectrum disorder, genetic conditions such as Down's syndrome and sensorineural hearing loss. Learning disability or intellectual disability such as Down's syndrome or autism is a lifelong condition and not an illness as such, although it may be accompanied by physical, psychological and psychiatric illness and disability. The term encompasses a range of conditions and levels of severity.

**C. APHASIA:** This is an acquired language disorder in adults; difficulties with understanding others, speaking, reading and writing due to stroke, head injury or dementia. This affects ability to live independently and to work and care for others.

**3. COMMUNICATION IMPAIRMENT:** People with social communication disorder have prominent difficulties with using language for social purposes, or pragmatics, for example in conversation, story-telling, and using figurative language, i.e., jokes and metaphors. Social communication disorder has overlapping features with terms such as 'pragmatic language impairment' and 'semantic-pragmatic language disorder'. People with autism and dementia may also have communication impairment.

**4. DYSPHAGIA:** describes eating, drinking and swallowing difficulties in infants, children and adults. People with dysphagia often have other health conditions, which can affect their eating, drinking and swallowing abilities. The following stages of swallowing can be affected:

- Pre- oral (getting the food or drink to the mouth)
- Oral stage (chewing, manipulating the food/ drink, keeping it within the mouth, propelling it to the back of the mouth to initiate a swallow)
- Pharyngeal stage (initiation of swallow and movement of food and drink back into the pharynx and down to the top of the oesophagus)
- Oesophageal stage (movement of food and drink down the oesophagus to the stomach).

## WHAT TO ASSESS

- History of Condition: Birth history for applicant presenting with a developmental disorder and relevant medical history for applicant with acquired disorder
- Brief information regarding milestones achieved thus far (relevant for children with developmental disorders)

- Pre-linguistic skills
- Receptive Language
- Expressive Language
- Speech
- Swallowing screen (detailed below)
- Administer appropriate standardized test

## ASSESSMENT TEAM

- Medical Officer
- Speech and Language Therapist
- Members drawn from: (include other rehabilitation professionals e.g., psychiatrist, occupational therapist, physiotherapist in cases that present with comorbidities)

**N.B:** Solely, a qualified Speech and Language Therapist make Majority of the speech, language, communication and swallowing diagnoses detailed above. However, with the fewer number of SLT professionals in Kenya, an ENT specialist, Paediatrician, Paediatric Neurologist, Neurologist or Neurosurgeon can be consulted for a more generalized diagnosis. An ENT Surgeon/Laryngologist shall review all voice patients.

## ADDITIONAL NOTES ON ASSESSMENT OF DYSPHAGIA

**A. Non-Instrumental Swallowing Assessment** (bedside assessment) check the patient behaviours associated with swallow function by observing the presence or absence of signs and symptoms of dysphagia, with consideration for factors such as fatigue during feeding, posture, positioning, and environmental conditions. It includes case history taking based on comprehensive review of medical/ clinical records as well as interviews with caregivers and other health care professionals.

**B - Oral Mechanism Exam** including cranial nerve assessment, structural assessment of face, lips, tongue, hard and soft palate, jaw, oral pharynx and oral mucosa.

C - Functional assessment of muscles and structures used in swallowing.

D - Assess overall physical, social, behavioural, cognitive and communication status.

F - Monitoring of physiological status including heart rate and oxygen saturation

G - Identification of signs and symptoms of penetration and/or aspiration such as throat clearing or coughing before/during/ after the swallow.

**Note:** These SLTs should use the Dysphagia checklist included in the assessment tool and refer applicant to a dysphagia specialist if needed.

**B. Instrumental Swallow** - this is for evaluating oral, pharyngeal, laryngeal, upper oesophageal and respiratory functions as they apply to normal swallowing.

Swallowing assessment conducted by SLP with Gastroenterologist, radiologist, radiologic technologist, ENT surgeon, or medical doctor with competency in video fluoroscopic Swallowing study (VFSS) and Fiber optic endoscopic Evaluation of Swallowing (FEES)

## SPEECH & LANGUAGE THERAPY& ASSESSMENT RESOURCES

Speech and Language Therapists diagnose communication, voice and swallowing disorders with formal and informal assessment tools. These tools are also used as a baseline measure to determine a patient's therapy progress over time.

**Table 12. Assessment Reference Tools**

<b>NAME</b>	<b>PUBLISHER/AUTHOR</b>	<b>CLIENT GROUP</b>
The Quick Screener	Caroline Bowen	Phonology - paediatrics
New Zealand Articulation Test (NZAT)	Ministry of Education New Zealand – Jayne Moyle	Phonology - paediatrics
Articulation Screener	Little Bee Speech	Phonology - paediatrics
South Tyneside Assessment of Phonology (STAP)	Susan Armstrong & Maureen Ainley	Phonology - paediatrics
Clinical Evaluation of Language Fundamentals 3 (CELF 3 <sup>rd</sup> Edition)	Pearson	Language - paediatrics
Renfrew Action Picture Test	Speech mark	Language - paediatrics
Bus Story Test	Speech mark	Language - paediatrics
Preschool Language Scale- 3 (PLS-3)	The Psychological Corporation	Language - paediatrics
East Africa Expressive & Receptive Language Test	Yellow house Kenya	
Rapid Screening Test	Derbyshire Language Scheme	Language - paediatrics
Detailed Test of Comprehension	Derbyshire Language Scheme	Language - paediatrics
Modified Checklist for Autism in Toddlers (M-CHAT)	Robins, Fein & Barton	Autism - paediatrics
Autism Diagnostic Observation Schedule (ADOS)	WPS	Autism – paediatrics/adults
Assessment of Comprehension & Expression (ACE 3)	Pearson	Language - paediatrics
Test for Auditory Comprehension of Language 3 <sup>rd</sup> Edition (TACL-3)	Pro-ed	Language - paediatrics
Comprehensive Aphasia Test (CAT)	Swinburn, Porter & Howard	Language – adults, brain injury
Mount Wilga High Level Language Test (revised edition)	Fiona Simpson	Language – adults, brain injury
Quick Aphasia Battery (QAB)	Vanderbilt University	Language – adults, brain injury
ACC - Aphasia Categories of Communicators Checklist and the Aphasia Needs Assessment	(unknown)	Language – adults, brain injury

NAME	PUBLISHER/AUTHOR	CLIENT GROUP
Stroke Specific Quality of Life Scale (SS-QOL)	Williams, Weinberger, Harris, Clark & Biller	Quality of Life – adults, stroke
VASES: Visual Analogue Self Esteem Scale	Speech mark	Mood/self-esteem – adults, stroke
Voice Handicap Index	Jacobson et al.	Voice – adults
Stuttering Severity Instrument (SSI)	Glyndon Riley	Stammering – paediatrics/adults
Frenchay Dysarthria Assessment 2 <sup>nd</sup> Edition	Pro-ed	Speech – adults
Newcastle Dysarthria Assessment Tool (N-DAT)	(unknown)	Speech – adults
GRBAS (grade, roughness, breathiness, asthenia, strain) scale	(unknown)	Voice – adults
Mini Mental State Examination (MMSE)	(unknown)	Cognition - adults
Therapy Outcome Measures for Rehabilitation Professionals 3 <sup>rd</sup> Edition (TOMS)	Enderby& John	General – paediatrics/adults
Oral Speech Mechanism Screening Examination 3 <sup>rd</sup> Edition (OMSE-3)	Pro-ed	Speech – paediatrics/adults
Kiswahili Articulation Test	(unknown)	Speech – paediatrics/adults
Diagnostic Assessment of Reading 2 <sup>nd</sup> Edition	Roswell, Chall, Curtis & Kearns	Reading – teenagers/adults
Gagging Swallowing Screen	(unknown)	Swallowing
Penetration Aspiration Scale	(unknown)	Swallowing

NOTE: Periodic reviews should be done regularly to allow improved diagnosis and client management.

Speech and Language Therapists also use informal assessments in assessing patients with speech, language, voice and swallowing disorders. These are often locally designed and implemented. Given the mixed linguistic background of the Kenyan population, further work is required to develop culturally and linguistically appropriate standardized assessments.

### 3.6.2. Impairment, Activity, Participation, Wellbeing/ Distress SCALE (Adapted from Therapy Outcome Measures ENDERBY 2015)

	<b>Impairment: Speech- Fluency, Articulation, Voice/ Language Communication/ Dysphagia (Circle Those Relevant)</b>	<b>Tick</b>
<b>0</b>	No impairment, normal.	
<b>1</b>	Mild difficulties e.g., easy repetitions or covert stammering with mild secondary behaviours (avoidance), difficulty with some sounds only, or articulation problems only when tired, intermittent or very mild dysphonia, infrequent word finding difficulties or higher - level reading difficulties. Mild dysphagia with no evidence of aspiration.	
<b>2</b>	Moderate to mild- e.g., occasional moderate stammer or mild consistent dysphonia or mild dysarthria, or mild frequent expressive speech/ word finding difficulties or mild frequent writing difficulty and/ or mild auditory comprehension difficulty. Mild to moderate dysphagia, mild or no aspiration risk.	
<b>3</b>	Moderate e.g., moderate stammering with/ without moderate secondary behaviours, or severe to moderate stammering inconsistently, or moderate dyspraxia, or consistent moderate dysphonia, or moderate difficulty with auditory comprehension and reading and moderate expressive speech and/ or word finding errors. Moderate dysphagia, swallow and cough reflex present, some aspiration risk.	
<b>4</b>	Severe- stammering with significant secondary behaviour, severe dysarthria, severe dyspraxia, severe dysphonia, severe aphasia with auditory comprehension, severe speech difficulties and severe reading/ writing difficulties. Severe dysphagia, high risk of aspiration.	
<b>5</b>	Profound- unable to say words in any situation without severe stammering, aphonia (e.g., due to laryngectomy), global profound aphasia with no words in speech and no writing plus difficulty understanding and reading. Aphagia (unable to swallow), signs of aspiration, no cough reflex.	

	<b>Activity (Disability)</b>	<b>Tick</b>
<b>0</b>	No difficulties, normal ability to get a message across to a listener.	
<b>1</b>	Mild difficulty in getting a message across or difficulty only with unfamiliar listeners (90% intelligible in conversation) or difficulty only when tired or difficulty only in specific situations. Can be understood in most situations by any listener.	
<b>2</b>	Mild to moderate difficulty getting a message across (around 70 – 80% intelligible) in most situations. Interaction mildly affected. Consistently able to make needs known though can make more information known.	
<b>3</b>	Moderate difficulty getting a message across with around 40 - 60% intelligibility. Interaction moderately affected.	
<b>4</b>	Severe difficulty getting a message across with less than 40% intelligibility. Interaction severely affected. Can make basic needs know with familiar person and in familiar environment sometimes.	

5	Profound difficulty getting a message across even to close family and in all situations. (Needs augmentative and alternative communication). Interaction profoundly affected. Unable to make basic needs known (e.g., can't let carers know if hungry or uncomfortable)	
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	Participation (Handicap)	Tick
0	No difficulty, normal level of participation in social/ family/ education/ work/ community roles. Achieving potential.	
1	Mild difficulty in some situations only, mainly able to make decisions and interact with others.	
2	Mild to moderate difficulty in participating in life roles, some self - confidence and decision making in familiar situations.	
3	Moderate difficulty in participating in life roles, some self - confidence, some participation and makes some decisions.	
4	Severe difficulty to participate in life roles. Limited social interaction or only with very close family/ friends, low self- confidence, not achieving potential in any situation.	
5	Profound difficulty. No ability to participate in social/ family/ education/ work/ community roles. Not able to make decisions and influence what happens.	

	Wellbeing/ Distress	Tick
0	No difficulty, no distress. Well adjusted, stable and able to cope emotionally with most situations, good insight and accepts own limitations.	
1	Mild and/ or occasional distress etc. Able to control emotions in most situations, occasional support needed.	
2	Mild consistent to moderate inconsistent distress etc. Controls emotions with support, vulnerable to change in routine, spontaneously uses methods to assist emotional control.	
3	Moderate consistent distress etc. in unfamiliar situations, frequent support needed.	
4	Frequently severe distress in many or most situations, with constant need for support. Loses emotional control easily.	
5	Severe constant distress/ frustration/ anger/ embarrassment/ withdrawal/ severe depression or apathy/ unable to express or control emotions appropriately.	

## 3.7. Disability Category: Mental Health Disorders, Intellectual Disability And Autism Spectrum Disorders

### 3.7.1. Definitions

**Mental Health Disorders** :- Are disorders of the mind characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning.

**Autism Spectrum Disorders** - Are neuro - developmental disorders characterized by impaired social interaction and communication, repetitive and stereotyped patterns of behaviour, and uneven intellectual development often with intellectual disability.

**Intellectual Disabilities** - As neuro - developmental disorders that begin in childhood and are characterized by intellectual difficulties as well as difficulties in conceptual, social, and practical areas of living.

**Acquired Brain Injuries** - An acquired brain injury is an injury to the brain as a result of a cause e.g., trauma, stroke, resulting in impairments to the person.

### 3.7.2. Classification

#### Classification of Mental Disorders

- Neuro - developmental Disorders
- Schizophrenia spectrum and other psychotic disorders
- Bipolar and Related Disorders
- Depressive Disorders
- Anxiety Disorders
- Others (Trauma and Stress related disorders, Somatic Symptoms and related disorders)

#### Neuro - developmental Disorders

- Intellectual Disability
- Autism Spectrum Disorder
- Attention Deficit Hyperactivity Disorder
- Specific Learning Disorder

**Intellectual Disability** - The term "intellectual disability" is a specific type of disability. It is caused by limited mental capacity. Limited mental capacity makes it difficult to develop important mental abilities. This includes reasoning, planning, thinking, and judgment. This limited mental capacity makes it difficult to learn new things. The ability to learn is a very important mental ability. We learn new information and skills in school. We learn from our past mistakes. We learn how to do many things by watching others. When this ability to learn is lacking, it causes many problems in everyday life.

**Specific Learning Disorder** - (often referred to as learning disorder or learning disability) is a neuro - developmental disorder that begins during school age, although may not be recognized until adulthood. Below are common types of specific learning disabilities.

**Dyslexia:** Dyslexia is the most common form of all learning disabilities. It is a language-based disability in which a person has trouble understanding words, sentences, or paragraphs.

**Dyscalculia:** is a life-long learning disability that affects the ability to grasp and solve math concepts.

**Dysgraphia:** is a writing disability where people find it hard to form letters and write within a defined space. Many people with dysgraphia possess handwriting that is uneven and inconsistent.

**Dyspraxia:** is a disorder that affects the development of motor skills. People with dyspraxia have trouble planning and executing fine motor tasks, which can range from waving goodbye to getting dressed.

Auditory Processing Disorders: are disorders that may cause a person to struggle with distinguishing similar sounds, as well as other difficulties.

**Visual Processing Disorders:** Visual processing disorders are disorders that cause people to struggle with seeing the differences between similar letters, number, objects, colours, shapes and patterns.

**Attention Deficit Hyperactivity Disorder -** A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development, as characterized by Inattention and Hyperactivity and impulsivity.

### 3.7.3. Disability Assessment Criteria

The assessment team will base their clinical assessments on the Diagnostic Statistical Manual for Mental Disorders 5 to identify specific mental health condition.

#### Intellectual Disability

Intellectual disability (intellectual developmental disorder) includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains. The following criteria shall be met:

**A. Deficits in intellectual functions,** such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing.

**B. Deficits in adaptive functioning** that result in failure to meet developmental and socio - cultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work, and community.

#### Autism Spectrum Disorders

Autism spectrum disorder is also defined by restricted, repetitive patterns of behaviour, interests, or activities and challenges in communication.

Stereotyped or repetitive behaviours include simple motor stereotypes (e.g., hand flapping, finger flicking), repetitive use of objects (e.g., spinning coins, lining up toys), and repetitive speech (e.g., echolalia, the delayed or immediate parroting of heard words; use of "you" when referring to self; stereotyped use of words, phrases, or prosodic patterns).

Excessive adherence to routines and restricted patterns of behaviour may be manifest in resistance to change (e.g., distress at apparently small changes, such as in packaging of a favourite food; insistence on adherence to rules, rigidity of thinking) or ritualized patterns of verbal or nonverbal behaviour (e.g., repetitive questioning, pacing a perimeter).

Highly restricted, fixated interests in autism spectrum disorder tend to be abnormal in intensity or focus (e.g., a toddler strongly attached to a toy).

Some fascinations and routines may relate to apparent hyper- or hyper-reactivity to sensory input, manifested through extreme responses to specific sounds or textures, excessive smelling or touching of objects, fascination with lights or spinning objects, and sometimes-apparent indifference to pain, heat, or cold.

Extreme reaction to or rituals involving taste, smell, texture, or appearance of food or excessive food.

#### Attention Deficit Hyperactivity Disorder (ADHD)

A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development, as characterized by (1) and/or (2):

**1. Inattention:** Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities:

**Note:** The symptoms are not solely a manifestation of oppositional behaviour, defiance, hostility, or failure to understand tasks or instructions.

For older adolescents and adults (age 17 and older), at least five symptoms are required.

a. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities

- (e.g., overlooks or misses details, work is inaccurate).
- b. Often has difficulty sustaining attention in tasks or play activities (e.g., has difficulty remaining focused during lectures, conversations, or lengthy reading).
  - c. Often does not seem to listen when spoken to directly (e.g., mind seems elsewhere, even in the absence of any obvious distraction).
  - d. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., starts tasks but quickly loses focus and is easily side-tracked).
  - e. Often has difficulty organizing tasks and activities (e.g., difficulty managing sequential tasks; difficulty keeping materials and belongings in order; messy, disorganized work; has poor time management; fails to meet deadlines).
  - f. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework; for older adolescents and adults, preparing reports, completing forms, reviewing lengthy papers).
  - g. Often loses things necessary for tasks or activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
  - h. Is often easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).
  - i. Is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents and adults, returning calls, paying bills, keeping appointments).

**2. Hyperactivity and Impulsivity:** Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities:

**Note:** The symptoms are not solely a manifestation of oppositional behaviour, defiance, hostility, or a failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required.

- a. Often fidgets with or taps hands or feet or squirms in seat.
  - b. Often leaves seat in situations when remaining seated is expected (e.g., leaves his or her place in the classroom, in the office or other workplace, or in other situations that require remaining in place).
  - c. Often runs about or climbs in situations where it is inappropriate. (Note: In adolescents or adults, may be limited to feeling restless.)
  - d. Often unable to play or engage in leisure activities quietly.
  - e. Is often "on the go," acting as if "driven by a motor" (e.g., is unable to be or uncomfortable being still for extended time, as in restaurants, meetings; may be experienced by others as being restless or difficult to keep up with).
  - f. Often talks excessively.
  - g. Often blurts out an answer before a question has been completed (e.g., completes people's sentences; cannot wait for turn in conversation).
  - h. Often has difficulty waiting his or her turn (e.g., while waiting in line).
  - i. Often interrupts or intrudes on others (e.g., butts into conversations, games, or activities; may start using other people's things without asking or receiving permission; for adolescents and adults, may intrude into or take over what others are doing).
- B. Several inattentive or hyperactive-impulsive symptoms were present prior to age 12 years.
  - C. Several inattentive or hyperactive-impulsive symptoms are present in two or more settings (e.g., at home, school, or work; with friends or relatives; in other activities).
  - D. There is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning.
  - E. The symptoms do not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder).

**Table 13: Acceptable Interchangeable Terms for Mental Disorders**

Condition	Acceptable Interchangeable Term (s)
Mental Health Disorder	Mental Disorder/ Psychiatric Illness/ Mental illness/ Cognitive/ Psychosocial Disabilities/ Psychosocial Disorders
Intellectual Disability	General Learning Disability/Mental Retardation
Autism Spectrum Disorder	Autism, Autistic Disorder or Classic Autism, Rett's Disorder or Rett Syndrome, Childhood Disintegrative Disorder, Asperger's Disorder or Asperger Syndrome, Pervasive Developmental Disorder - Not Otherwise Specified (PDD-NOS)
Specific Learning Disorder	Learning disorder/Learning Disability/ Dysgraphia/ Dyscalculia/ Dyslexia

**3.7.4. Disability1 Medical Team (Mental Health Conditions/ Intellectual Disabilities/ Specific Learning Disorders)**

- Chairperson - Medical Officer - /Psychiatrist if available
- Mental Health Nurse/Clinical Officer Psychiatrist
- Occupational Therapist
- Physiotherapist
- Medical Social Worker
- Psychologist

**3.7.5. Procedure and Documentation**

Location of Assessment: The Disability medical assessments in this domain shall be conducted in a government health facility.

In situations where there is no mental health expert in the assessment team, the client should be referred to a facility with the experts and the necessary report provided.

Client should present medical evidence (radiological evidence and a radiologist report to show the extent of injury and other medical reports) where applicable.

In cases of specific learning disorder, assessors should review school progress reports and any Educational Assessment and Resource Centre (EARC) reports (in cases where the client is attending school).

The degree of disability will be determined by the presenting impairment/ dysfunction and the evidence presented as above and as indicated by various screening tools.

**Table 14: ICF Assessment of Mental Health Conditions**

CONDITIONS	IMPAIRMENT	ACTIVITY LIMITATION	PARTICIPATION RESTRICTION
Schizophrenia and Related Disorders, Bipolar and Related Disorders expressive Disorders, Anxiety Disorders	Cognitive, Mobility (psychomotor disturbance)	Self-care, activities of daily living	Difficulties in Getting along

**Table 15: ICF Assessment of Specific Learning Disorders**

CONDITIONS	IMPAIRMENT	ACTIVITY LIMITATION	PARTICIPATION RESTRICTION
Dyslexia	Reading	Difficulty in reading	Lack of practical life skills, conceptual skills
Dyscalculia	Calculating	Difficulty in calculating	Lack of practical life skills, conceptual skills
Dysphasia/Aphasia	Speaking	Difficulty with language	Problems understanding spoken language, thus poor communication
Dyspraxia	Motor coordination	Difficulties with fine motor skills	Hand-eye coordination and balance problems.
Dysgraphia	Writing	Difficulty in writing	Problems with handwriting and organizing ideas
Auditory processing	Listening	Difficulty hearing differences between sounds	Problems with reading, comprehension and language
Visual processing	Seeing	Difficulty interpreting visual information	Problems with reading math, maps charts and tables

**Table 16: ICF Assessment of Neuro - developmental Disorders**

Condition	Impairment	Activity Restriction	Participation Limitation
Autism Spectrum Disorder	Learning, Speech/ Language and social skills	Behavioural disturbances, Communication	Difficulty in learning, establishing relationships

### 3.7.6. Tools and Equipment

- Child Friendly environment for Children with learning disorders and autism spectrum disorders (Cognitive Toys, Play Area)
- Sensory Integration Toolkit

#### Assessment Tools/ Batteries

- DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure – Adult (Highly recommended for diagnosing of mental disorders in adults)
- Paediatric Symptoms Checklist (PSC)
- Disability Rating Scale (DRS)
- Daily Living Activities (©DLA20): Adult Mental Health
- Global Assessment of Functioning (©Axis V, DSMIVTR) – GAF

**Table 17. DSM V Diagnostic Criteria**

DIAGNOSTIC CRITERIA FOR AUTISM SPECTRUM DISORDER	SPECIFIC SYMPTOMS/SIGNS
<p><b>A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, but not exhaustive;)</b></p>	<p>Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.</p> <ol style="list-style-type: none"> <li>1. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.</li> <li>2. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.</li> </ol>
<p><b>B. Restricted, repetitive patterns of behaviour, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text)</b></p>	<ol style="list-style-type: none"> <li>1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up of toys or flipping objects, echolalia, idiosyncratic phrases).</li> <li>2. Insistence on sameness, inflexibility, adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food everyday day).</li> <li>3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).</li> <li>4. Hyper- or hypo- activity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).</li> </ol>
<p><b>C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life).</b></p>	
<p><b>D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.</b></p>	
<p><b>E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make co-morbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.</b></p>	

**Table 18. Classifications of Intellectual Disability Severity**

Severity Category	Approximate Percent Distribution of Cases by Severity	DSM-IV Criteria (severity levels were based only on IQ categories)	DSM-5 Criteria (severity classified on the basis of daily skills)
Mild	85%	Approximate IQ range 50–69	Can live independently with minimum levels of support.
Moderate	10%	Approximate IQ range 36–49	Independent living may be achieved with moderate levels of support, such as those available in group homes.
Severe	3.5%	Approximate IQ range 20–35	Requires daily assistance with self-care activities and safety supervision.
Profound	1.5%	IQ <20	Requires 24-hour care.

**Formulae for calculating IQ**

Intelligence quotient (IQ) can be obtained by the equation  $MA/CA \times 100 = IQ$ , where MA is mental age and CA is chronological age.

**Table 19. DSM Diagnostic Criteria - Specific Learning Disability**

Condition	Diagnostic Criteria
<p><b>Specific Learning Disability</b></p>	<p><b>A. Difficulties learning and using academic skills, as indicated by the presence of at least one of the following symptoms that have persisted for at least 6 months, despite the provision of interventions that target those difficulties:</b></p> <ol style="list-style-type: none"> <li>1. Inaccurate or slow and effortful word reading (e.g., reads single words aloud incorrectly or slowly and hesitantly, frequently guesses words, has difficulty sounding out words).</li> <li>2. Difficulty understanding the meaning of what is read (e.g., may read text accurately but not understand the sequence, relationships, inferences, or deeper meanings of what is read).</li> <li>3. Difficulties with spelling (e.g., may add, omit, or substitute vowels or consonants).</li> <li>4. Difficulties with written expression (e.g., makes multiple grammatical or punctuation errors within sentences; employs poor paragraph organization; written expression of ideas lacks clarity).</li> <li>5. Difficulties mastering number sense, number facts, or calculation (e.g., has poor understanding of numbers, their magnitude, and relationships; counts on fingers to add single-digit numbers instead of recalling the math fact as peers do; gets lost in the midst of arithmetic computation and may switch procedures).</li> <li>6. Difficulties with mathematical reasoning (e.g., has severe difficulty applying mathematical concepts, facts, or procedures to solve quantitative problems).</li> </ol> <p><b>B. The affected academic skills are substantially and quantifiably below those expected for the individual’s chronological age, and cause significant interference with academic or occupational performance, or with activities of daily living, as confirmed by individually administered standardized achievement measures and comprehensive clinical assessment. For individuals age 17 years and older, a documented history of impairing learning difficulties may be substituted for the standardized assessment.</b></p> <p><b>C. The learning difficulties begin during school -age years but may not become fully manifest until the demands for those affected academic skills exceed the individual’s limited capacities (e.g., as in timed tests, reading or writing lengthy complex reports for a tight deadline, excessively heavy academic loads).</b></p> <p><b>D. The learning difficulties are not better accounted for by intellectual disabilities, uncorrected visual or auditory acuity, other mental or neurological disorders, psychosocial adversity, lack of proficiency in the language of academic instruction, or inadequate educational instruction.</b></p> <p><b>Note: The four diagnostic criteria are to be met based on a clinical synthesis of the individual’s history (developmental, medical, family, educational), school reports, and psycho -educational assessment.</b></p>

## **3.8. DISABILITY CATEGORY: CHRONIC PROGRESSIVE DISORDERS**

### **3.8.0. Chronic Progressive Disorders**

#### **Definition**

Chronic Progressive Condition is a disease or health condition that gets worse over time, resulting in a general decline in health or function. Common examples of progressive disorders include but are not limited to muscular dystrophy, multiple sclerosis, Alzheimer's disease, and types of vision and hearing loss that get worse over time.

Disease or health conditions that get worse over time resulting in general decline in health or function.

Common examples include but are not limited to muscular dystrophy, multiple sclerosis, Alzheimer's

With these types of chronic progressive diseases, conditions change gradually over time. As the condition changes, the types of support that one may need, including health benefits, work accommodations, and equipment (such as crutches or wheelchairs) also change.

That does not mean one cannot have a satisfying life. However, it does mean that you need to adapt to your changing disability and plan for how things may be different in the future.

#### **Characteristics of Chronic Progressive Conditions**

- Have a pattern of recurrence, or deterioration; the impairment subsides and flares again after some time with substantial pain or tissue damage and it is never cured
- Have a poor prognosis which is likely to get worse with time
- Produce consequences, or sequelae that impact on the individual's quality of life
- Long term; the impairment has lasted for or is likely to persist for at least twelve months
- Substantially limits a person's ability to perform essential functions or activities of daily living

#### **3.8.1. Criteria for Disability Categorization: Chronic Progressive Disorders**

Under this category, relevant medical specialists will examine specific medical conditions. Clients who shall be considered to have disability due to a progressive chronic disorder should meet the following criteria:

- 1) The client has suffered from a medical condition for a period not less than 12 months.
- 2) There should be evidence of continued relevant treatment and rehabilitation without satisfactory improvement for the same period of 12 months.
- 3) There is presence of physical impairment or limitation of activity that is measurable.
- 4) The condition of the client affects their ability to function in the usual work setting or environment
- 5) The client needs consideration for alternative tasks within the same environment
- 6) In case of a child, they should be at least 2 years of age or more to allow sufficient time for treatment/interventions and expected development. This point should be reconsidered as some progressive illnesses in childhood e.g., cystic fibrosis, Duchenne's muscular dystrophy, trisomy 21, congenital malformations can be diagnosed from birth and disability is expected.

#### **3.8.2. Major Assessment Categories**

The following areas shall be assessed

1. Mobility: Walking & Moving Around
2. Changing & Maintaining Body Position
3. Carrying, Moving, & Handling Objects
4. Self-Care
5. Swallowing,
6. Attention and Memory

## **Medical Assessment**

- Past medical history: Description of The Condition,
- The Date of Diagnosis, the date of onset and prognosis
- Cell level tests: Labs, imaging
- System level Assessment: Based on diagnosis
- Assessment of Both Impairments and Functional Limitations, activity restrictions
- Documentation of current level versus normal value
- Type of Rehabilitation offered

## **Body Structures**

- The nervous system structures
- The eye, ear and related structures
- Structures involved in voice and speech
- Cardiovascular, immunological and respiratory Systems
- The digestive, metabolic and endocrine systems
- The genitourinary and reproductive systems
- Structures related to movement
- Skin and related structures

## **Body Functions**

- Mental
- Sensory and Pain
- Voice and Speech
- Cardiovascular, Haematological, Immunological and Respiratory Systems
- Digestive, Metabolic and Endocrine Systems
- Genitourinary and Reproductive Functions
- Neuro-musculoskeletal and Movement-Related Functions
- Skin and Related Structures

## **Members /Assessors (Name, Professional body Reg. no.)**

1. Chairperson: Medical specialist in the area of concern (e.g., Dermatologist, Neurologist, Rheumatologist, Cardiologist, Orthopedic Surgeon etc) / Medical officer
2. Physiotherapist
3. Occupational Therapist
4. Speech Therapist
5. Any other member as per need/area of concern.

### 3.8.3. Categories of Chronic Progressive Conditions

Categories of Chronic Progressive Conditions		
SYSTEMS	CONDITIONS	DIAGNOSTIC TESTS
<b>Cardiopulmonary or Cardiovascular</b>	<ul style="list-style-type: none"> <li>✓ COPD</li> <li>✓ Chronic Ischemic Heart Diseases</li> <li>✓ Cardiomyopathy</li> <li>✓ Cystic fibrosis:</li> <li>✓ Rheumatic heart disease: Echocardiogram (echo)</li> <li>✓ Symptomatic congenital heart disease – birth defects in the heart which cause malfunctions.</li> </ul>	<p>6 minutes' walk test, PFTs, MMT, Functional mobility test, Echocardiogram</p> <ul style="list-style-type: none"> <li>✓ The sweattest, spirometry, functional mobility test</li> </ul>
<b>Musculoskeletal:</b> Musculoskeletal disorders may be congenital or acquired, and may include deformities, amputations, or other abnormalities.	<ul style="list-style-type: none"> <li>✓ Fibromyalgia</li> <li>✓ Severe osteoarthritis</li> <li>✓ Severe Systemic Lupus Erythematosus</li> <li>✓ Rheumatoid arthritis</li> <li>✓ Ankylosing spondylitis</li> <li>✓ Reiter's syndrome</li> <li>✓ Polymyositis</li> </ul>	<p>ROM, Visual analog pain scale, MMT, Berg balance scale, TUG, Tinetti, Lower extremity functional scale test</p>
<b>Neurological</b>	<ul style="list-style-type: none"> <li>✓ Dementia</li> <li>✓ ALS (Amyotrophic lateral sclerosis)</li> <li>✓ Parkinson's</li> <li>✓ Multiple sclerosis</li> <li>✓ Muscular dystrophy</li> <li>✓ Hereditary neuropathy</li> <li>✓ Epilepsy</li> <li>✓ Inclusion type Myositis</li> <li>✓ Huntington's disease Motor</li> <li>✓ Friedreich's ataxia</li> <li>✓ Spinocerebellar degeneration</li> <li>✓ coma and persistent vegetative state</li> <li>✓ Chronic fatigue syndrome</li> <li>✓ Stroke</li> </ul>	<p>Electroencephalogram (EEG), ROM, Visual analogue pain scale, MMT, Berg balance scale, TUG, lower extremity functional tests, Tinetti, cognitive tests, swallowing tests,</p>

	<ul style="list-style-type: none"> <li>✓ <b>Cerebral Palsy</b></li> <li>✓ <b>Spinal Cord Injury</b></li> <li>✓ <b>Arachnoiditis</b></li> </ul>	
Cancers/ malignancies	<ul style="list-style-type: none"> <li>✓ Haematological e.g., leukemia</li> <li>✓ Solid organs</li> <li>✓ Bone/soft tissue tumors resulting in amputation</li> <li>✓ Head and neck tumours e.g., laryngeal cancer leading to aphonia</li> <li>✓ Brain tumours</li> </ul>	<b>Histology reports</b>  <b>Staging imaging- CT scans, MRI, PET scans</b>
Gastro-intestinal disorders	<ul style="list-style-type: none"> <li>✓ Inflammatory bowel diseases</li> <li>✓ Liver cirrhosis</li> <li>✓ Chronic pancreatic</li> </ul>	
Dermatological conditions	<ul style="list-style-type: none"> <li>✓ Albinism</li> <li>✓ Vitiligo</li> <li>✓ Psoriasis</li> <li>✓ Hydradenitis suppurativa</li> <li>✓ Scleroderma.</li> </ul>	PFTs, ROM, MMT
Vascular conditions	<ul style="list-style-type: none"> <li>✓ Lymphedema /Elephantiasis (should specify the cause, measurement compared to other limb, activity limitation)</li> <li>✓ Association of lymphedema and mastectomy</li> <li>✓ Mastectomy should only be considered for registration if its bilateral for mothers of child bearing age or where there is marked lymphoedema with associated functional limitations</li> </ul>	
Genito - urinary	<ul style="list-style-type: none"> <li>✓ Bowel and bladder incontinence (due to an irreversible medical condition)</li> </ul>	
Frailty		
HIV/AIDS & HIV associated illnesses		Laboratory tests  Imaging  Any other relevant tests

<b>Chronic obstructive pulmonary disease:</b>	<b>%</b>
More than FEV-1 of 71- to 80-percent predicted, or; FEV-1/FVC of 71 to 80 percent, or; DLCO (SB) 66- to 80-percent predicted	0%
FEV-1 of 71- to 80-percent predicted, or; FEV-1/FVC of 71 to 80 percent, or; DLCO (SB) 66- to 80-percent predicted	10%
FEV-1 of 56- to 70-percent predicted, or; FEV-1/FVC of 56 to 70 percent, or; DLCO (SB) 56- to 65-percent predicted	30%
FEV-1 of 40- to 55-percent predicted, or; FEV-1/FVC of 40 to 55 percent, or; DLCO (SB) of 40- to 55-percent predicted, or; maximum oxygen consumption of 15 to 20 ml/kg/min (with cardio-respiratory limit)	60%
FEV-1 less than 40 percent of predicted value, or; the ratio of Forced Expiratory Volume in one second to Forced Vital Capacity (FEV-1/FVC) less than 40 percent, or; Diffusion Capacity of the Lung for Carbon Monoxide by the Single Breath Method (DLCO (SB)) less than 40-percent predicted, or; maximum exercise capacity less than 15 ml/kg/min oxygen consumption (with cardiac or respiratory limitation), or; cor pulmonale (right heart failure), or; right ventricular hypertrophy, or; pulmonary hypertension (shown by Echo or cardiac catheterization), or; episode(s) of acute respiratory failure, or; requires outpatient oxygen therapy	100%
Client's activity should be evaluated using the 6-minute stress test.	
<b>Sleep Apnea Syndromes (Obstructive, Central, Mixed):</b>	
Asymptomatic but with documented sleep disorder breathing	0%
Persistent day-time hypersomnolence	30
Requires use of breathing assistance device such as continuous airway pressure (CPAP) machine	50%
Chronic respiratory failure with carbon dioxide retention or cor pulmonale, or; requires tracheostomy	100%

<b>CONDITIONS LIMITING TRUNK RANGE OF MOTION</b>		
The general rating formula that is used to rate the conditions listed above is mainly based on range of motion (ROM) measurements. The cervical spine (neck) and the thoracolumbar spine (low back) are rated according to the following criteria:		
<b>Cervical Spine</b>	<b>Thoracolumbar Spine</b>	<b>RATING</b>
Flexion $\geq 45$ degrees, OR combined ROM $\geq 340$ degrees	Flexion $\geq 90$ degrees, OR combined ROM $\geq 240$ degrees	0%
Flexion between 30 and 45 degrees, OR combined ROM between 175 and 340 degrees	Flexion between 60 and 90 degrees, OR combined ROM between 125 and 240 degrees	10%
Flexion between 15 and 35 degrees, OR combined ROM $\leq 170$ degrees	Flexion between 30 and 65 degrees, OR combined ROM $\leq 120$ degrees	20%
Flexion $\leq 15$ degrees, OR entire cervical spine is frozen in a favorable position	Not applicable to thoracolumbar spine	30%
Entire cervical spine is frozen in an unfavorable position	Flexion $\leq 30$ degrees, OR entire thoracolumbar spine is frozen in a favorable position	40%
Not applicable to cervical spine	Entire thoracolumbar spine is frozen in an unfavorable position	50%
Entire spine is frozen in an unfavorable position	Entire spine is frozen in an unfavorable position	100%

<b>HIV-Related Illness</b>	<b>% Rating</b>
Those who are asymptomatic without decreased T4 cell counts or evidence of lymphadenopathy.	0%
10% percent rating for those who develop symptoms of HIV-related problems, have qualifying T4 cell counts, and have evidence of depression or memory loss that can affect employment.	10%
Recurrent constitutional symptoms, intermittent diarrhea, and "use of approved medication" or that meet certain T4 cell count criteria.	30%
For HIV-related illness is possible (depending on circumstances) in cases where one or more are present: <ul style="list-style-type: none"> <li>• Refractory constitutional symptoms</li> <li>• Diarrhoea</li> <li>• Pathological weight loss</li> <li>• Minimum rating following development of AIDS-related opportunistic infection or neoplasm</li> </ul>	60%

In cases where the patient described as having AIDS with "recurrent opportunistic infections."	100%
Cases where AIDS and secondary diseases affect multiple systems in the body. HIV-related illness "with debility" and progressive weight loss is also rated at 100%.	
NB: Since HIV complications can be corrected by initiation of HAART, it should be considered a cause of disability only when there is irreversible physical limitation due to the illness	

LUPUS ERYTHEMATOSUS, SYSTEMIC (DISSEMINATED): Evaluate this condition either by combining the evaluations for residuals under the appropriate system	% Rating
Stable no Exacerbations	0%
Exacerbations once or twice a year or symptomatic during the past 2 years	10%
Exacerbations lasting a week or more, 2 or 3 times per year	60%
Acute, with frequent exacerbations, producing severe impairment of health	100%

CHRONIC FATIGUE SYNDROME (CFS)	% Rating
Debilitating fatigue, cognitive impairments (such as inability to concentrate, forgetfulness, or confusion), or a combination of other signs and symptoms:	
Which wax and wane but result in periods of incapacitation of at least one but less than 6 weeks total duration per year, or; symptoms controlled by continuous medication	0%
Which wax and wane but result in periods of incapacitation of at least 6 weeks total duration per year, or; symptoms controlled by continuous medication	10%
Which are nearly constant and restrict routine daily activities by less than 25 percent of the pre-illness level, or; which wax and wane, resulting in periods of incapacitation of at least 2 but less than four months total duration per year	20%
Which are nearly constant and restrict routine daily activities to 50 to 75 percent of the pre-illness level, or; which wax and wane, resulting in periods of incapacitation of at least four but less than six months total duration per year	40%
Which are nearly constant and restrict routine daily activities to less than 50 percent of the pre-illness level, or; which wax and wane, resulting in periods of incapacitation of at least six months total duration per year	60%
Which are nearly constant and so severe as to restrict routine daily activities almost completely and which may occasionally preclude self-care	100%

<b>POLYCYTHEMIA VERA</b>	<b>% Rating</b>
Requiring peripheral blood or bone marrow stem-cell transplant or chemotherapy (including myelosuppressant) for the purpose of ameliorating the symptom burden.	100
Requiring phlebotomy 6 or more times per 12-month period or molecularly targeted therapy for the purpose of controlling RBC count	60
Requiring phlebotomy 4-5 times per 12-month period, or if requiring continuous biologic therapy or myelosuppressive agents, to include interferon, to maintain platelets <200,000 or white blood cells (WBC) <12,000	30
Requiring phlebotomy 3 or fewer times per 12-month period or if requiring biologic therapy or interferon on an intermittent basis as needed to maintain all blood values at reference range levels	10

<b>IMMUNE THROMBOCYTOPENIA</b>	<b>% Rating</b>
Requiring chemotherapy for chronic refractory thrombocytopenia; or a platelet count 30,000 or below despite treatment	100
Requiring immunosuppressive therapy; or for a platelet count higher than 30,000 but not higher than 50,000, with history of hospitalization because of severe bleeding requiring intravenous immune globulin, high-dose parenteral corticosteroids, and platelet transfusions	70
Platelet count higher than 30,000 but not higher than 50,000, with either immune thrombocytopenia or mild mucous membrane bleeding which requires oral corticosteroid therapy or intravenous immune globulin	30
Platelet count higher than 30,000 but not higher than 50,000, not requiring treatment	10
Platelet count above 50,000 and asymptomatic; or for immune thrombocytopenia in remission	0

<b>Multiple Myeloma</b>	<b>% Rating</b>
Symptomatic multiple myeloma	100
Asymptomatic, smoldering, or monoclonal gammopathy of undetermined significance (MGUS).	0
NB: Should be causing irreversible physical limitation	

<b>Lymphoma</b>	<b>% Rating</b>
Non-Hodgkin's lymphoma: With active disease or during a treatment phase	100
Hodgkin's lymphoma: When there is active disease, during treatment phase, or with indolent and non-contiguous phase of low-grade NHL	100
NB: Should be causing irreversible physical limitation	

<b>SICKLE CELL ANEMIA</b>	<b>% Rating</b>
With at least 4 or more painful episodes per 12-month period, occurring in skin, joints, bones, or any major organs, caused by hemolytic and sickling of red blood cells, with anaemia, thrombosis, and infarction, with residual symptoms precluding even light manual labor	100
With 3 painful episodes per 12-month period or with symptoms precluding other than light manual labor	60
With 1 or 2 painful episodes per 12-month period	30
Asymptomatic, established case in remission, but with identifiable organ impairment	10
Sickle cell trait alone, without a history of directly attributable pathological findings, is not a ratable disability	0

<b>ESSENTIAL THROMBOCYTHEMIA AND PRIMARY MYELOFIBROSIS:</b>	<b>% Rating</b>
Requiring either continuous myelosuppressive therapy or, for six months following hospital admission, peripheral blood or bone marrow stem cell transplant, or chemotherapy, or interferon treatment	100
Requiring continuous or intermittent myelosuppressive therapy, or chemotherapy, or interferon treatment to maintain platelet count $<500 \times 10^9/L$	70
Requiring continuous or intermittent myelosuppressive therapy, or chemotherapy, or interferon treatment to maintain platelet count of 200,000-400,000, or white blood cell (WBC) count of 4,000-10,000	30
Asymptomatic	0
<b>NB: Should be causing irreversible physical limitation</b>	

<b>ACQUIRED HEMOLYTIC ANEMIA</b>	<b>% Rating</b>
Requiring a bone marrow transplant or continuous intravenous or immunosuppressive therapy (e.g., prednisone, Cytoxan, azathioprine, or rituximab)	100
Requiring immunosuppressive medication 4 or more times per 12-month period	60
Requiring at least 2 but less than 4 courses of immunosuppressive therapy per 12-month period	30
Requiring one course of immunosuppressive therapy per 12-month period	10
Asymptomatic	0
<b>NB: Should be causing irreversible physical limitation</b>	

## DERMATOLOGY DISABILITY CATEGORIZATION

Albinism	
<p><b>Criteria – Three of the following required:</b></p> <ul style="list-style-type: none"> <li>○ Apparent at birth and characterized by partial or complete absence of melanin in the skin, hair and eyes (oculocutaneous albinism) or limited to the eyes (ocular albinism)</li> <li>○ Cutaneous manifestations include generalized hypopigmentation of the skin and hair, solar lentiginos, melanocytic naevi and an increased susceptibility to melanoma and/or non-melanoma skin cancers</li> <li>○ Visual complications include nystagmus, strabismus, photophobia, refractive errors and foveal hypoplasia</li> </ul>	
<p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ Evidence of receiving definitive treatment for albinism from a registered healthcare provider <u>since birth</u></li> </ul>	

Vitiligo		
Body Site Involved	% BSA Area	% BSA Involved
Head, Face & Neck	0 - 9%	
Trunk	0 - 36%	
Upper Limbs	0 - 18%	
Lower Limbs	0 - 36%	
Genitalia	0 - 1%	
<b>Total</b>	<b>0 - 100%</b>	
<p><b>Criteria – Two of the following required:</b></p> <ul style="list-style-type: none"> <li>○ Characteristic skin lesions involving more than 30% of the entire body surface area</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>○ Characteristic skin lesions involving more than 5% of exposed body surface area, including the face and/or the hands</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ Evidence of receiving definitive treatment for vitiligo from a registered healthcare provider for a minimum period of 12 months</li> </ul> <p><b>NB</b> Another example is that of an individual with vitiligo on the face but no other physical complaints. This cosmetic problem produces no limitations in capacity. However, the individual may live in a setting where vitiligo is mistaken for leprosy and so considered contagious. In the person's current environment, therefore, this negative attitude is an environmental barrier that leads to significant performance problems in interpersonal interactions</p>		

<b>Psoriasis</b>		
<b>Body Site Involved</b>	<b>% BSA Area</b>	<b>% BSA Involved</b>
Head, Face & Neck	0 - 9%	
Trunk	0 - 36%	
Upper Limbs	0 - 18%	
Lower Limbs	0 - 36%	
Genitalia	0 - 1%	
<b>Total</b>	<b>0 - 100%</b>	

**Criteria - Two of the following required:**

- Characteristic skin lesions involving more than 30% of the entire body surface area

**OR**

- Characteristic skin lesions involving more than 5% of exposed body surface area, including the face and/or the hands
- Severe psoriatic arthritis characterized by arthritis mutilans affecting small joints in the hands and resulting in permanent deformity & disability

**AND**

- Evidence of receiving definitive treatment for psoriasis from a registered healthcare provider for a minimum period of 12 months

<b>Hidradenitis Suppurativa</b>		
<b>Criteria – Two of the following required:</b>		
<ul style="list-style-type: none"> <li>○ Skin lesions characterized by multiple recurrent abscesses, nodules, sinus tracts, fistulas and scars involving more than 2 body areas including the axillae and/or the perineum</li> </ul>		
<b>OR</b>		
<ul style="list-style-type: none"> <li>○ Diffuse involvement or multiple interconnected tracts and abscesses across an entire area with associated permanent disfigurement and/or scarring</li> </ul>		
<b>AND</b>		
<ul style="list-style-type: none"> <li>○ Evidence of receiving definitive treatment for hidradenitis suppurativa from a registered healthcare provider for a minimum period of 12 months</li> </ul>		

## Scleroderma

### Criteria – Four of the following required:

- Characterized by rapid onset of skin fibrosis, Raynaud's phenomenon, telangiectasia and/or calcinosis cutis
- Associated with extensive involvement of multiple organ systems resulting in interstitial lung disease, esophageal dysmotility & dysphagia, cardiac arrhythmias, sarcopenia, arthritis and renal failure
- Extensive skin involvement of more than 30% of the entire body surface area

OR

- Characteristic skin lesions involving more than 5% of exposed body surface area, including the face and/or the hands and/or the feet

AND

- Evidence of receiving definitive treatment for scleroderma from a registered healthcare provider for a minimum period of 12 months

## Congenital Ichthyosis

### Criteria – Four of the following required:

- Onset at birth and characterized by severe symptoms including extreme skin xerosis with large adherent scale, erythroderma, pruritus, palmoplantar keratoderma, heat intolerance and/or scarring alopecia
- Ocular manifestations include cicatricial ectropion, exposure keratopathy & corneal scarring which may result in visual impairment/loss
- Extensive skin involvement of more than 30% of the entire body surface area

OR

- Characteristic skin lesions involving more than 5% of exposed body surface area, including the face and/or the hands

AND

- Evidence of receiving definitive treatment for severe congenital ichthyosis from a registered healthcare provider since birth

### Xeroderma Pigmentosa

Criteria – Three of the following required:

- Onset at early infancy and characterized by severe photosensitivity, solar lentigines, solar keratoses, mottled pigmentation, and associated melanoma and/or non-melanoma skin cancers
- Ocular manifestations include severe photophobia, exposure keratitis, corneal opacification and/or neoplasia with associated visual impairment/loss
- Extensive skin involvement of more than 30% of the entire body surface area

OR

- Characteristic skin lesions involving more than 5% of exposed body surface area, including the face and/or the hands

AND

- Evidence of receiving definitive treatment for xeroderma pigmentosa from a registered healthcare provider since infancy

### Epidermolysis Bullosa

Criteria – Four of the following required:

- Onset at birth or early infancy and characterized by severe blistering of the skin and mucous membranes following minimal trauma.
- Extensive skin involvement of more than 30% of the entire body surface area

OR

- Characteristic skin lesions involving more than 5% of exposed body surface area, including the face and/or the hands and/or the feet
- Associated with prominent scarring, nail dystrophy, pseudo syndactyly of hands & feet and/or osteoporosis

AND

- Evidence of receiving definitive treatment for epidermolysis bullosa from a registered healthcare provider since birth or early infancy





## Neurofibromatosis

### Criteria – Four of the following required:

- Onset at birth or early infancy and characterized by the following cutaneous manifestations: multiple café-au-lait spots, axillary freckling, neurofibromas and/or plexiform neurofibromas.
- Associated with ocular involvement (Lisch nodules), skeletal abnormalities (scoliosis, tibial dysplasia) and functional impairments (hearing loss, speech problems & learning disabilities)
- Extensive skin involvement of more than 30% of the entire body surface area

### OR

- Characteristic skin lesions involving more than 5% of exposed body surface area, including the face and/or the hands and/or the feet

### AND

- Evidence of receiving definitive treatment for neurofibromatosis from a registered healthcare provider since birth or early infancy

ACNE	% Rating
Superficial acne (comedones, papules, pustules) of any extent or rate as disfigurement of the head, face, or neck or scars, depending upon the predominant disability	0%
Deep acne (deep inflamed nodules and pus-filled cysts) affecting less than 40 percent of the face and neck, or deep acne other than on the face and neck	10%
Deep acne (deep inflamed nodules and pus-filled cysts) affecting 40 percent or more of the face and neck	30%

<b>BURNS</b>	<b>% Rating</b>
<p>NOTE PRESENCE OF THE FOLLOWING DISFIGUREMENT:</p> <p>Scar 5 or more inches (13 or more cm.) in length. Scar at least one-quarter inch (0.6 cm.) wide at widest part.</p> <p>Surface contour of scar elevated or depressed on palpation.</p> <p>Scar adherent to underlying tissue.</p> <p>Skin hypo-or hyper-pigmented in an area exceeding six square inches (39 sq. cm.).</p>	0%
With one characteristic of disfigurement	10%
With visible or palpable tissue loss and either gross distortion or asymmetry of one feature or paired set of features (nose, chin, forehead, eyes (including eyelids), ears (auricles), cheeks, lips), or; with two or three characteristics of disfigurement	30%
With visible or palpable tissue loss and either gross distortion or asymmetry of two features or paired sets of features (nose, chin, forehead, eyes (including eyelids), ears (auricles), cheeks, lips), or; with four or five characteristics of disfigurement	50%
Burn scar(s) of the head, face, or neck; scar(s) of the head, face, or neck due to other causes; or other disfigurement of the head, face, or neck: With visible or palpable tissue loss and either gross distortion or asymmetry of three or more features or paired sets of features (nose, chin, forehead, eyes (including eyelids), ears (auricles), cheeks, lips), or; with six or more characteristics of disfigurement	80%

RATINGS OF THE GENITOURINARY SYSTEM	% Rating
Hydronephrosis, only an occasional attack of colic, not infected and not requiring catheter drainage	10
<ul style="list-style-type: none"> <li>• Hydronephrosis (cont.): Frequent attacks of colic, requiring catheter drainage</li> <li>• Penis, removal of glans</li> <li>• Penis, deformity, with loss of erectile power</li> <li>• Testis, atrophy complete: Both</li> <li>• Renal tubular disorders (such as renal glycosurias, aminoacidurias, renal tubular acidosis, Fanconi's syndrome, Bartter's syndrome, related disorders of Henle's loop and proximal or distal nephron function, etc.):</li> </ul>	20
<ul style="list-style-type: none"> <li>• Both Testis removal:</li> <li>• Kidney, removal of one</li> <li>• Nephritis, chronic: Pyelonephritis, chronic</li> <li>• Nephrolithiasis, Hydronephrosis: Severe; Rate as renal dysfunction. Frequent attacks of colic with infection (pyonephrosis), kidney function impaired</li> <li>• Penis, removal of half or more</li> </ul>	30
<ul style="list-style-type: none"> <li>• Malignant neoplasms of the genitourinary system</li> <li>• Postoperative, suprapubic cystotomy</li> <li>• Multiple urethroperineal fistulae</li> <li>• Kidney transplant surgery</li> </ul>	100
<ul style="list-style-type: none"> <li>• Disorders of sexual differentiation specifically ambiguous genitalia</li> </ul>	

<b>DIABETES MELLITUS</b>	<b>% Rating</b>
Manageable by restricted diet only	0%
Requiring one or more daily injection of insulin and restricted diet, or; oral hypoglycemic agent and restricted diet	10%
Requiring one or more daily injection of insulin, restricted diet, and regulation of activities	40%
Requiring one or more daily injection of insulin restricted diet, and regulation of activities with episodes of ketoacidosis or hypoglycemic reactions requiring one or two hospitalizations per year or twice a month visits to a diabetic care provider, plus complications that would not be compensable if separately evaluated	60%
Requiring more than one daily injection of insulin restricted diet, and regulation of activities (avoidance of strenuous occupational and recreational activities) with episodes of ketoacidosis or hypoglycemic reactions requiring at least three hospitalizations per year or weekly visits to a diabetic care provider, plus either progressive loss of weight and strength or complications that would be compensable if separately evaluated	100%

**Table 20. ICF Assessment of Progressive Chronic Conditions**

<b>Conditions</b>	<b>Impairments</b>	<b>Activity limitation</b>	<b>Participation/ Restriction</b>
Multiple	From cell level> to system level  ROM, Muscle strength, balance coordination	Functional mobility, ADLS, IALs, such as work	Varied. Unable to access and participate their environment, work, recreation

## Assessment Tools and Equipment

Assess cognition, Joint Range of Motion, muscle tone, coordination, balance, gait, radiological imaging, cardiorespiratory tests, functional mobility tests, as appropriate. The tools and equipment below may be necessary in assessment of the persons with progressive chronic conditions

- Oniometers Dynamometers
- BP machines
- Spirometers
- Pulse oximeters
- Cycle's ergometers
- Tape measures
- Peg boards
- Cones
- Timers
- Stairs
- Toys
- Lifting boxes
- Wheelchair
- Chairs
- Monofilaments

## Standardized Tests (See Annex)

- Oxford Scale for Manual Muscle Testing
- Gait Test: Tinetti, Timed Up and Go
- Lower Extremity Functional Scale (LEFS)
- Berg balance test

## Chronic Progressive Conditions Assessment Tests

**Table 21. Oxford Scale**

**MMT: MUSCLE STRENGTH: Grade 3 (Fair; 50%):**

<i>OXFORD SCALE</i>	<i>EXPLANATION</i>
<i>0</i>	<i>No contraction present</i>
<i>1</i>	<i>There is flickering contraction</i>
<i>2</i>	<i>Full range of motion with gravity</i>
<i>3</i>	<i>Full range of motion against gravity</i>
<i>4</i>	<i>Full range of motion with against gravity + added resistance</i>
<i>5</i>	<i>Muscle function normally</i>

**Table 22. Berg Balance Scale**

<p><b>BERG BALANCE SCALE</b></p> <p>Interpretation: 41-56 = low fall risk, 21-40 = medium fall risk, 0 –20 = high fall risk</p> <p><b>Register if &gt; 21 points</b></p>	
<p><b>SITTING TO STANDING</b></p> <p>INSTRUCTIONS: Please stand up. Try not to use your hand for support.</p> <ul style="list-style-type: none"> <li>• 4 able to stand without using hands and stabilize independently</li> <li>• 3 able to stand independently using hands</li> <li>• 2 able to stand using hands after several tries</li> <li>• 1 needs minimal aid to stand or stabilize</li> <li>• 0 needs moderate or maximal assist to stand</li> </ul>	
<p><b>STANDING UNSUPPORTED</b></p> <p>INSTRUCTIONS: Please stand for two minutes without holding on.</p> <ul style="list-style-type: none"> <li>• 4 able to stand safely for 2 minutes</li> <li>• 3 able to stand 2 minutes with supervision</li> <li>• 2 able to stand 30 seconds unsupported</li> <li>• 1 needs several tries to stand 30 seconds unsupported</li> <li>• 0 unable to stand 30 seconds unsupported</li> </ul> <p>If a subject is able to stand 2 minutes unsupported, score full points for sitting unsupported. Proceed to item #4.</p>	
<p><b>SITTING WITH BACK UNSUPPORTED BUT FEET SUPPORTED ON FLOOR OR ON A STOOL</b></p> <p>INSTRUCTIONS: Please sit with arms folded for 2 minutes.</p> <ul style="list-style-type: none"> <li>• 4 able to sit safely and securely for 2 minutes</li> <li>• 3 able to sit 2 minutes under supervision</li> <li>• 2 able to sit 30 seconds</li> <li>• 1 able to sit 10 seconds</li> <li>• 0 unable to sit without support 10 seconds</li> </ul>	
<p><b>STANDING TO SITTING</b></p> <p>INSTRUCTIONS: Please sit down.</p> <ul style="list-style-type: none"> <li>• 4 sits safely with minimal use of hands</li> <li>• 3 controls descent by using hands</li> <li>• 2 uses back of legs against chair to control descent</li> </ul>	

<ul style="list-style-type: none"> <li>• 1 sits independently but has uncontrolled descent</li> <li>• 0 needs assist to sit</li> </ul>	
<p><b>TRANSFERS</b></p> <p>INSTRUCTIONS: Arrange chair(s) for pivot transfer. Ask subject to transfer one way toward a seat with armrests and one way toward a seat without armrests. You may use two chairs (one with and one without armrests) or a bed and a chair.</p> <ul style="list-style-type: none"> <li>• 4 able to transfer safely with minor use of hands</li> <li>• 3 able to transfer safely definite need of hands</li> <li>• 2 able to transfer with verbal cuing and/or supervision</li> <li>• 1 needs one person to assist</li> <li>• 0 needs two people to assist or supervise to be safe</li> </ul>	
<p><b>STANDING UNSUPPORTED WITH EYES CLOSED</b></p> <p>INSTRUCTIONS: Please close your eyes and stand still for 10 seconds.</p> <ul style="list-style-type: none"> <li>• 4 able to stand 10 seconds safely</li> <li>• 3 able to stand 10 seconds with supervision</li> <li>• 2 able to stand 3 seconds</li> <li>• 1 unable to keep eyes closed 3 seconds but stays safely</li> <li>• 0 needs help to keep from falling</li> </ul>	
<p><b>STANDING UNSUPPORTED WITH FEET TOGETHER</b></p> <p>INSTRUCTIONS: Place your feet together and stand without holding on.</p> <ul style="list-style-type: none"> <li>• 4 able to place feet together independently and stand 1 minute safely</li> <li>• 3 able to place feet together independently and stand 1 minute with supervision</li> <li>• 2 able to place feet together independently but unable to hold for 30 seconds</li> <li>• 1 needs help to attain position but able to stand 15 seconds feet together</li> <li>• 0 needs help to attain position and unable to hold for 15 seconds</li> </ul>	
<p><b>REACHING FORWARD WITH OUTSTRETCHED ARM WHILE STANDING</b></p> <p>INSTRUCTIONS: Lift arm to 90 degrees. Stretch out your fingers and reach forward as far as you can. (Examiner places a ruler at the end of fingertips when arm is at 90 degrees. Fingers should not touch the ruler while reaching forward. The recorded measure is the distance forward that the fingers reach while the subject is in the most forward lean position. When possible, ask subject to use both arms when reaching to avoid rotation of the trunk.)</p> <ul style="list-style-type: none"> <li>• 4 can reach forward confidently 25 cm (10 inches)</li> <li>• 3 can reach forward 12 cm (5 inches)</li> </ul>	

<ul style="list-style-type: none"> <li>• 2 can reach forward 5 cm (2 inches)</li> <li>• 1 reaches forward but needs supervision</li> <li>• 0 loses balance while trying/requires external support</li> </ul>	
<p><b>PICK UP OBJECT FROM THE FLOOR FROM A STANDING POSITION</b></p> <p>INSTRUCTIONS: Pick up the shoe/slipper, which is place in front of your feet.</p> <ul style="list-style-type: none"> <li>• 4 able to pick up slipper safely and easily</li> <li>• 3 able to pick up slipper but needs supervision</li> <li>• 2 unable to pick up but reaches 25 cm(1-2 inches) from slipper and keeps balance independently</li> <li>• 1 unable to pick up and needs supervision while trying</li> <li>• 0 unable to try/needs assist to keep from losing balance or falling</li> </ul>	
<p><b>TURNING TO LOOK BEHIND OVER LEFT AND RIGHT SHOULDERS WHILE STANDING</b></p> <p>INSTRUCTIONS: Turn to look directly behind you over toward the left shoulder. Repeat to the right. Examiner may pick an object to look at directly behind the subject to encourage a better twist turn.</p> <ul style="list-style-type: none"> <li>• 4 looks behind from both sides and weight shifts well</li> <li>• 3 looks behind one side only other side shows less weight shift</li> <li>• 2 turns sideways only but maintains balance</li> <li>• 1 needs supervision when turning</li> <li>• 0 needs assist to keep from losing balance or falling</li> </ul>	
<p><b>TURN 360 DEGREES</b></p> <p>INSTRUCTIONS: Turn completely around in a full circle. Pause. Then turn a full circle in the other direction.</p> <ul style="list-style-type: none"> <li>• 4 able to turn 360 degrees safely in 4 seconds or less</li> <li>• 3 able to turn 360 degrees safely one side only 4 seconds or less</li> <li>• 2 able to turn 360 degrees safely but slowly</li> <li>• 1 needs close supervision or verbal cuing</li> <li>• 0 needs assistance while turning</li> </ul>	
<p><b>PLACE ALTERNATE FOOT ON STEP OR STOOL WHILE STANDING UNSUPPORTED</b></p> <p>INSTRUCTIONS: Place each foot alternately on the step/stool. Continue until each foot has touch the step/stool four times.</p> <ul style="list-style-type: none"> <li>• 4 able to stand independently and safely and complete 8 steps in 20 seconds</li> <li>• 3 able to stand independently and complete 8 steps in &gt; 20 seconds</li> </ul>	

<ul style="list-style-type: none"> <li>• 2 able to complete 4 steps witho ut aid with supervision</li> <li>• 1 able to complete &gt; 2 steps needs minimal assist</li> <li>• 0 needs assistance to keep from falling/unable to try</li> </ul>	
<p><b>STANDING UNSUPPORTED ONE FOOT IN FRONT</b></p> <p>INSTRUCTIONS: (DEMONSTRATE TO SUBJECT) Place one foot directly in front of the other. If you feel that you cannot place your foot directly in front, try to step far enough ahead that the heel of your forward foot is ahead of the toes of the other foot. (To score 3 points, the length of the step should exceed the length of the other foot and the width of the stance should approximate the subject's normal stride width.)</p> <ul style="list-style-type: none"> <li>• 4 able to place foot tandem independently and hold 30 seconds</li> <li>• 3 able to place foot ahead independently and hold 30 seconds</li> <li>• 2 able to take small step independently and hold 30 seconds</li> <li>• 1 needs help to step but can hold 15 seconds</li> <li>• 0 loses balance while stepping or standing</li> </ul>	
<p><b>STANDING ON ONE LEG</b></p> <p>INSTRUCTIONS: Stand on one leg as long as you can without holding on.</p> <ul style="list-style-type: none"> <li>• 4 able to lift leg independently and h old &gt; 10 seconds</li> <li>• 3 able to lift leg independently and hold 5 -10 seconds</li> <li>• 2 able to lift leg independently and hold ≥ 3 seconds</li> <li>• 1 tries to lift leg unable to hold 3 seconds but remains standing independently.</li> <li>• 0 unable to try of needs assist to prevent fall</li> </ul>	
<ul style="list-style-type: none"> <li>• TOTAL SCORE (Maximum = 56 )</li> </ul>	

**Table 23. Gait Test: Tinetti, Timed Up and Go**

TINETTI	DATE	COMMENTS
<b>Balance Tests: Subject is seated on hard, armless chair</b>		
<b>SITTING BALANCE</b> Leans or slides in chair =0, steady, safe =1		
<b>ARISES</b> Unable without help =0; Able, uses arms =1, Able without using arms =2		
<b>ATTEMPTS TO RISE:</b> Unable w/o help=0; Able, requires > 1 attempt =1; Able in 1 attempt =2		
<b>IMMEDIATE STANDING BALANCE (first 5 seconds)</b> Unsteady (sway/stagger/feet move) =0; Steady, w/ support =1; Steady w/o support =2		
<b>STANDING BALANCE</b> Unsteady =0; Steady, stance >4-inch BOS & requires support =1; Narrow stance, w/o support =2		
<b>STERNAL NUDGE (feet close together)</b> Begins to fall =0; Staggers, grabs, catches self =1; Steady =2		
<b>EYES CLOSED (feet close together)</b> Unsteady =0; Steady =1		
<b>TURNING 360 DEGREES</b> Discontinuous steps =0; Continuous steps =1		
<b>TURNING 360 DEGREES</b> Unsteady (staggers, grabs) =0; Steady =1		
<b>SITTING DOWN</b> Unsafe (misjudges distance, falls) =0; Uses arms, or not a smooth motion =1; Safe, smooth motion =2		COMMENTS
<b>BALANCE SCORE TOTAL</b>	/16	
<b>GAIT INITIATION (immediate after told "go)</b> Any hesitancy, multiple attempts to start =0; No hesitancy =1		
<b>STEP LENGTH</b> R swing foot passes L stance leg =1; L swing foot passes R =1		

<b>FOOT CLEARANCE</b> R foot completely clears floor =1; L foot completely clears floor =1		
<b>STEP SYMMETRY</b> R and L step length unequal =0; R and L step length equal=1		
<b>STEP CONTINUITY</b> Stop/discontinuity between steps =0; Steps appear continuous =1		
<b>PATH (excursion)</b> Marked deviation =0; Mild/moderate deviation or use of aid =1; Straight without device=2		
<b>TRUNK</b> Marked sway or uses device =0; No sway but knee or trunk flexion or spread arms while walking =1; None of the above deviations=2		
<b>BASE OF SUPPORT</b> Heels apart =0; Heels close while walking =1		
<b>GAIT SCORE TOTAL</b>	/12	
<b>ASSISTIVE DEVICE</b>		
<b>TOTAL SCORE (BALANCE + GAIT)</b> <b>FALL RISK (minimal &gt;23, Mod. 19-23, High/Severe&lt; 19)</b>	/28	
Therapist initials		

**Table 24. Lower Extremity Functional Scale (LEFS)**

Activities		Extreme difficulties or unable to perform an Activity	Quite a bit of difficulty	Moderate difficulty	A little bit of difficulty	No difficulty
a.	Any of your usual work, homework or school activities	0	1	2	3	4
b.	Your usual hobbies recreational, or school activities	0	1	2	3	4
c.	Getting into or out of the bath	0	1	2	3	4
d.	Walking in between rooms	0	1	2	3	4
e.	Putting on your shoes or sock	0	1	2	3	4
f.	Squatting	0	1	2	3	4
g.	Lifting an object like a bag of groceries from the floor	0	1	2	3	4
h.	Performing light activities around your home	0	1	2	3	4
i.	Performing heavy activities around your home	0	1	2	3	4
j.	Getting into or out of a car	0	1	2	3	4
k.	Walking two blocks	0	1	2	3	4
l.	Walking a mile	0	1	2	3	4
m.	Going up or down 10 stairs	0	1	2	3	4
n.	Standing for one hour	0	1	2	3	4
o.	Sitting for one hour	0	1	2	3	4
p.	Running on even ground	0	1	2	3	4
Q	Running on uneven ground	0	1	2	3	4
r.	Making sharp turns while running fast	0	1	2	3	4
s.	Hopping	0	1	2	3	4
t.	Rolling over in bed	0	1	2	3	4
Column Totals						

The patient's score is tallied at the bottom of the page. The maximum possible score is 80 points, indicating very high function. The minimum possible score is 0 points, indicating very low function.

### **1.Disability Rating; This will be final depending on impairment or loss of body part and functional limitation in the person's environment.**

Those with disability rating over 25% will be eligible for registration

.0 NO impairment (none, absent, negligible,)	0 - 4 %
.1 MILD impairment (slight, low,)	5 - 24 %
.2 MODERATE impairment (medium, fair,)	25 - 49 %
.3 SEVERE impairment (high, extreme,)	50 - 95 %
.4 COMPLETE impairment (total,)	96 - 100 %

#### **3.8.4. Interpretation of Examination Reports.**

Different examiners, at different times, will not describe the same disability in the same language. Features of the disability, which must have persisted unchanged, may be overlooked or a change for the better or worse may not be accurately appreciated or described. It is the responsibility of the rating specialist to interpret reports of examination in the light of the holistic recorded history, reconciling the various reports into a consistent picture so that the current rating may accurately reflect the elements of disability present. If a diagnosis is not supported by the findings on the examination report, or if the report does not contain sufficient detail, it is incumbent upon the rating board to return the report as inadequate for evaluation purposes.

#### **3.8.5. Total Disability Rating**

Total disability will be considered to exist when there is present any impairment of mind or of body which is sufficient to render it impossible for the average person to follow a substantially gainful occupation; Provided, that permanent total disability shall be taken to exist when the impairment is reasonably certain to continue throughout the life of the person. The following will be considered permanent total disability: the permanent loss of the use of both hands, or of both feet, or of one hand and one foot, or of the sight of both eyes, and becoming permanently helpless or permanently bedridden. Other total disability ratings are scheduled in the various bodily systems of this rating schedule.

### **3.9. DISABILITY CATEGORY: MAXILLOFACIAL DISABILITIES**

#### **3.9.1. Head and Neck Region (ICF Classification - S710)**

##### **Definition:**

These are conditions related to the oral, dental and maxillofacial structures; leading to permanent considerable loss of function and affecting the individuals daily living and productivity.

These disabilities are characterized by orofacial pain, infection, or pathological condition and/ or lack of functional dentition affecting nutritional intake, growth and development, or participation in life activities.

#### **3.9.2. Classifications or Categories Within Maxillofacial Disability Category**

##### **Classifications or Categories**

Impairments affecting:

- 1) The teeth
- 2) Jaws
- 3) Temporomandibular joints
- 4) Nerves
- 5) Soft tissues
- 6) Salivary Glands

### **3.9.2.1. Definitions**

#### **Impairments affecting teeth**

Congenital lack of growth of teeth on one or both jaws.

#### **Impairments affecting Jaws**

Loss of both or one jaw, partial or complete caused by trauma, infection or malignancy/tumour or a congenital anomaly OR total resorption of the jaws that does not allow prosthetic rehabilitation OR abnormal growth of either or both jaws.

#### **Impairments affecting the Temporo-mandibular Joint (TMJ)**

TMJ ankylosis on both sides and one side partial or complete caused by trauma, infection, tumour or congenital anomaly

#### **Impairments affecting nerves**

Bell's palsy or any other nerve impairment affecting either one or both sides of the face caused by infection, trauma, tumour, iatrogenic or idiopathy OR abnormal movement of muscles of the face or mouth

#### **Facial pains and syndrome**

Pain on the face or mouth region affecting either part or whole face and mouth, originating from a specific nerve e.g., Trigeminal neuralgia, or a group of nerves or of neurological origin. This should be considered a disability with the following facts in mind (that pain can cause disability, that pain is very subjective and hence a compressive report from the attending medical/dental professional is crucial, that there must be prove that the pain is not amenable to all available interventions and that effect on functionality should be demonstrated).

#### **Impairments of the soft tissues and organs**

Damage or loss of a significant amount of tissue, muscle of the face and mouth or organ (tongue) caused by trauma, infection, malignancy/tumours or congenitally missing.

#### **Xerostomia**

Considerable or complete lack of saliva caused by damage to salivary glands by infection, trauma, radiotherapy, chemotherapy, malignancy/tumour or of unknown origin.

#### **Cleft lip and palate**

Congenital clefts lips and/or palate bilateral and unilateral

### **3.9.3. Part 2: Medical Assessment**

#### **IMPAIRMENTS of BODY FUNCTIONS**

Body Functions are the physiological functions of body systems.

Impairments are problems in body function as a significant deviation or loss.

#### **3.9.3.1. Functions relating directly to the Dental, Oral and Maxillofacial Disabilities**

##### **b 510 Ingestion functions**

Functions related to taking in and manipulating solids or liquids through the mouth into the body.

Inclusions: functions of sucking, chewing and biting, manipulating food in the mouth, salivation, swallowing.

### **b 5100 Sucking**

Functions of drawing into the mouth by a suction force produced by movements of the checks, lips and tongue.

### **b 5101 Biting**

Functions of cutting into, piercing or tearing off food with the front teeth.

### **b5102 Chewing**

Function of crushing, grinding and masticating food with the back teeth (e.g., molars)

### **b 5103 Manipulation of food in the mouth**

Functions of moving food around the mouth with the teeth and tongue.

### **b 5104 Salivation**

Function of production of saliva within the mouth

### **b 5105 Swallowing**

Functions of clearing the food and drink through the oral cavity, pharynx and oesophagus into the stomach at an appropriate rate and speed.

### **b5106 Quality of Speech**

Function related to speech and verbal communication

**Inclusions:** oral, pharyngeal dysphagia: impairments in esophageal passage of food.

## **3.7.2.1: Additional sensory functions**

### **B250 Taste function**

Sensory functions of sensing qualities of bitterness, sweetness, sourness and saltiness.

**Inclusions:** gustatory functions: impairments such as ageusia and hypogeusia

### **B 280 Sensation of pain**

Sensation of unpleasant feelings indicating potential or actual damage to some body structure.

**Inclusions:** sensations of generalized or localized pain, in one or more body part, pain in a dermatome, stabbing pain, burning pain, dull pain, aching pain: impairments such as myalgia, analgesia and hyperalgesia.

### **B 2801 Pain in body part**

Sensation of unpleasant feeling indicating potential or actual damage to some body part structure felt in a specific part, or parts, of the body.

**First Qualifier: Extent of impairments**

**0 No impairment** means the person has no problem

**1 Mild impairment** means a problem that is present less than 25% of the time, with an intensity which is tolerable and which happens rarely over the last 30 days

**2 Moderate impairment** means that a problem is present less than 50% of the time, with an intensity which interferes in day-to-day life and which happens occasionally over the last 30 days

**3 Severe impairment** means that a problem is present more than 50% of the time, with an intensity which partially disrupts day to day life and which happens frequently over the last 30 days

**4 Complete impairment** means that a problem is present over 95% of the time, with an intensity that totally disrupts day to day life and happens every day over the last 30 days.

**8 Not specified** means there is insufficient information to specify the severity of the impairment

**9 Not applicable** means it is inappropriate

**FUNCTIONS RELATING DIRECTLY TO THE DENTAL, ORAL AND MAXILLOFACIAL DISABILITIES**

<b>Body Function</b>	<b>Qualifier</b>							
b 250 Taste	0	1	2	3	4	8	9	
b 5100 Sucking	0	1	2	3	4	8	9	
b 5101 Biting (front teeth)	0	1	2	3	4	8	9	
b 5102 Chewing (back teeth)	0	1	2	3	4	8	9	
b 5103 Manipulation of food in the mouth	0	1	2	3	4	8	9	
b 5104 Salivation	0	1	2	3	4	8	9	
b 5105 Swallowing	0	1	2	3	4	8	9	
b5106 Quality of Speech	0	1	2	3	4	8	9	

**Table 25: Categorization of Dental, Oral and Maxillofacial Disabilities**

Category of Impairment	Classification	Functions lost	Level of disability
			Qualifier
2.1 Impairments of teeth	Total anodontia	Biting, chewing, Food manipulation, swallowing, speech.	Complete impairment
2.2 Impairment of Jaws	Loss / Missing of jaws	Biting, chewing, Food manipulation, swallowing, speech.	Severe/ Complete impairment
	Total Jaw Resorption	Biting, chewing, Food manipulation, swallowing, speech.	Severe/ Complete impairment
	Micrognathia	Biting, chewing, Food manipulation, swallowing, speech.	Complete impairment
	Macrognathia	Biting, chewing, Food manipulation, swallowing, speech.	Unilateral or Bilateral
2.3 Impairment of Temporomandibular Joint	Trismus	Biting, chewing, Food manipulation, swallowing, speech.	Severe/ Complete impairment
	Temporal-Mandibular Joint (TMJ) Ankylosis	Biting, chewing, Food manipulation, swallowing, speech.	Unilateral or bilateral

<b>2.4 Impairments affecting nerves</b>	Bell's Palsy and other motor nerve defects	Biting, chewing, Food manipulation, swallowing, Speech, Facial expressions, Eye closure	Unilateral or Bilateral
<b>2.5 Facial pains and Facial pain syndrome</b>	Facial pain syndromes	Chewing, Facial expression, Oral hygiene	Severe pain
	Ageusia	Taste	Complete impairment
<b>2.6 Impairments of the soft tissues and organs</b>	Loss / Missing soft tissues e.g., Tongue, Facial muscles, cheeks	Lost tissue	Severe/Complete impairment
<b>2.7 Salivary glands disorders</b>	Salivary glands disorders	Food manipulation, swallowing, speech.	Complete impairment
<b>2.8 Cleft Lip and Palate</b>	Cleft lip and palate	chewing, Food manipulation, swallowing, Speech, Drinking Suckling	- Unilateral or bilateral - Partial or complete

**Table 26: Structural Medical Assessment**

<b>Impairment</b>	<b>Condition</b>	<b>What should be assessed</b>	<b>Measurable variables</b>	<b>Assessment procedure and documentation</b>
<b>3.1 Impairments of teeth</b>	Total anodontia	Teeth	Lack of teeth	<ol style="list-style-type: none"> <li>1. Observe mouth- total lack of teeth as compared to the client's age</li> <li>2. Listen to speech-difficulty in speech</li> </ol>
<b>3.2 Impairment of Jaws</b>	Loss / Missing of jaws	Jaws	Lack of jaws	<ol style="list-style-type: none"> <li>1. Observe face- Missing jaw</li> <li>2. Listen to Speech- difficulty in speech</li> <li>3. Palpate the affected area - missing jawbone (mandible / maxilla or both)</li> </ol>
	Total Jaw Resorption	Jaws	Resorbed jaw	<ol style="list-style-type: none"> <li>1. Observe face - poorly defined jaw</li> <li>2. Listen to Speech - Difficulty in speech</li> <li>3. Palpate and examine the mouth - poorly defined jaw</li> </ol>
	Micrognathia	Lower Jaw	Small lower jaw	<ol style="list-style-type: none"> <li>1. Observe face - small lower jaw as compared to upper jaw</li> <li>2. Listen to speech - Difficulty in speech</li> </ol>
	Macrogathia	Lower Jaw	Large lower jaw	<ol style="list-style-type: none"> <li>1. Observe face- large jaw as compared to upper jaw</li> <li>2. Listen to speech- difficulty in speech</li> </ol>
<b>3.3 Impairment of Temporomandibular Joint</b>	Trismus	TMJ Opening of Jaws	Jaw movement	<ol style="list-style-type: none"> <li>1. Observe face - jaw clamping, involuntary muscle movement</li> <li>2. Listen to speech - Difficulty in speech</li> <li>3. Palpation for jaw movement</li> <li>4. Assess degree of jaw opening</li> </ol>
	Temporal-Mandibular Joint (TMJ) Ankylosis	TMJ	Joint movement	<ol style="list-style-type: none"> <li>1. Observe face - Partial TMJ -facial asymmetry</li> <li>2. Listen to speech - Difficulty in speech</li> <li>3. Palpation for jaw movement</li> <li>4. Assess degree and symmetry of jaw opening</li> </ol>

<b>3.4 Impairments affecting nerves</b>	Bell's Palsy and other motor nerve defects	Face	Facial asymmetry, reduced or absent muscle movement	1. Observe face - asymmetry, difficulty making facial expressions, inability to blink, facial droop, drooling of saliva,
<b>3.5 Facial pains and Facial pain syndrome</b>	Facial pain syndromes	Distress	History taking Visual analog scale for pain and Numerical pain assessment scale	1. Observe - demeanor of the patient 2. Measure pain levels 3. Numerical pain assessment by a pain specialist
	Ageusia	Loss of taste	Numerical taste assessment by a taste specialist	
<b>3.6 Impairments of the soft tissues and organs</b>	Loss / Missing soft tissues e.g., Tongue, Facial muscles, cheeks	Soft tissues	Missing tissue	1. Observe face, mouth - Missing tissue 2. Listen to Speech - Difficulty in speech
<b>3.7 Salivary Glands Disorder</b>	Salivary Glands Disorder	Dry lips, dry tongue,	Dry mouth	1. Observe face - dry lips 2. Listen to speech - Difficulty in speech 3. Examine mouth - dry tongue
<b>3.8 Cleft Lip and Palate</b>	Cleft lip and palate	Mouth	Cleft lip, cleft palate or both	1. Observe face - cleft lip visible 2. Listen to speech - Difficulty in speech 3. Examine mouth for Cleft palate

**Table 27: Criteria for the Decision on Disability Rating**

<b>Condition</b>	<b>Degree of loss</b>	<b>% Loss of Function</b>
Loss of Jaw	Complete - 100%	100%
	Partial - >=50%	100%
Loss / Missing soft tissues e.g., Tongue, Facial muscles, cheeks	Complete - 100%	100%
	Partial - >50%	100%
Total Jaw Resorption	Complete - 100%	100%
Total anodontia	Complete - 100%	100%
Micrognathia / Macrognathia	Complete - 100%	75%
Trismus	Teeth to teeth caliper measure of the widest opening of the mouth  Mild I (35–26 mm),	75%
	Moderate II (25–16 mm), Severe III (15-0 mm).	100%
Temporal-Mandibular Joint (TMJ) Ankylosis	Complete - 100%	100%
	Partial - 50%	75%
Cleft lip and palate	Complete - 100%	100%
Salivary Gland Disorder	Complete - 100%	100%
Bell's Palsy and other motor nerve defects	Severe - 100%	100%
Facial pain syndromes	A comprehensive report from the attending officer is required to establish that the problem cannot be managed. Loss of functionality should also be demonstrated.	
Ageusia	Loss of taste can only be a disability when tasting was the source of livelihood for example, wine tasters, coffee tasters.	

### **3.9.3. Health Professionals/Medical Workers Assessment Team Composition**

- Chairperson: Dentist / Maxillofacial surgeon
- Medical officer (on condition the client comes with a duly filled assessment form from a dentist.)
- Dental Technologist
- Occupational Therapist/ Physiotherapist/ Orthopaedic Technologist/ Medical Social Worker

NB: A multi-disciplinary approach should be highly considered when the team decision is inconclusive.

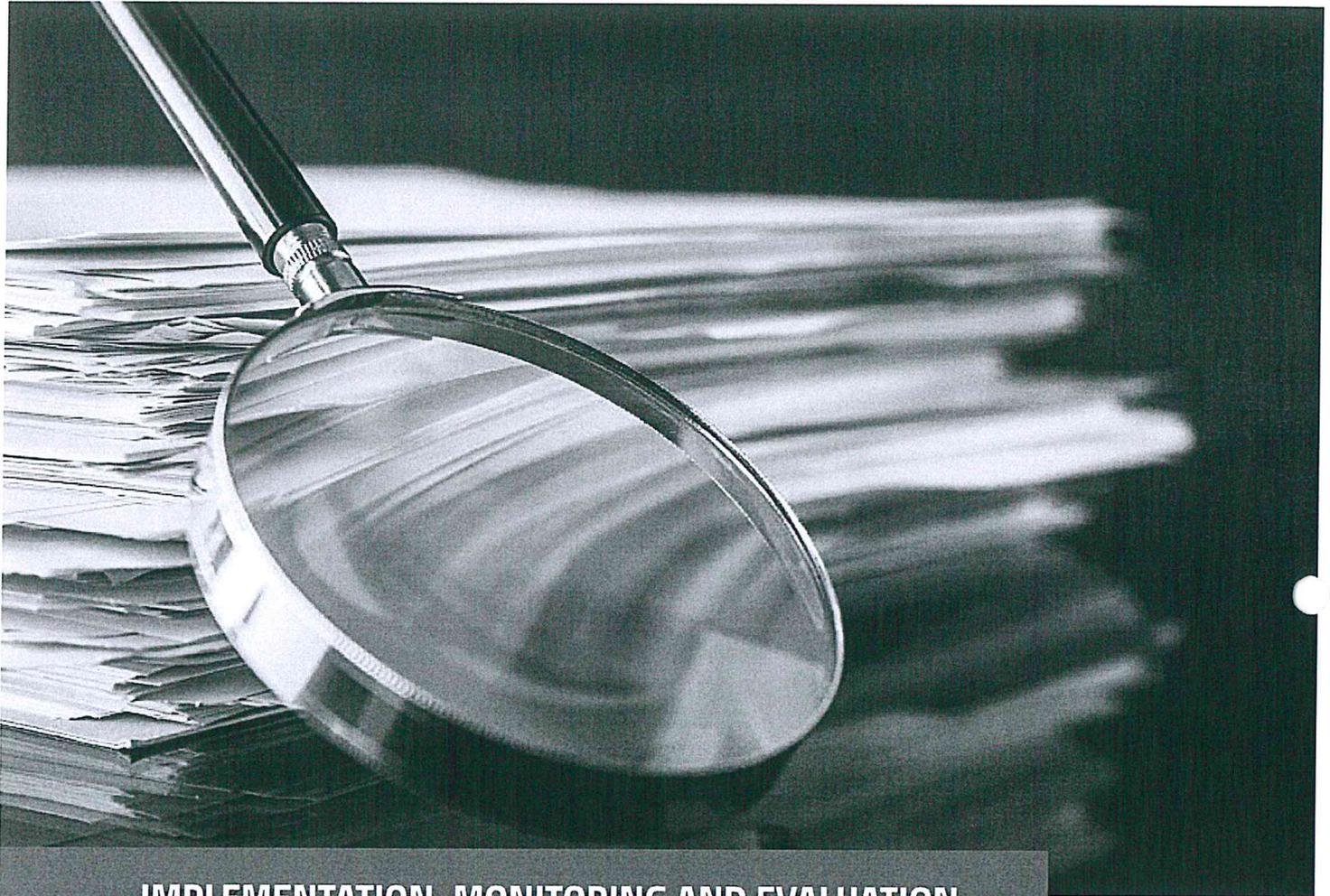
### **3.9.4. Assessment Tools**

- 1) Caliper for measuring- Trismus
- 2) Pain scale
- 3) Muscle tone
- 4) Nerve sensation

# 4

## Implementation, Monitoring and Evaluation





## IMPLEMENTATION, MONITORING AND EVALUATION

This monitoring and evaluation framework, is intended to generate credible information that will guide decision making processes. During assessment and categorization data will be collected for purposes of understanding clients need and hence the effectiveness of assessment exercises, informing the future direction of the program. such as: need to expand or relocated services, resource mobilization, and service delivery policies and strategies to be adapted among other key program decisions.

### **4.1. Implementation and Compliance**

These guidelines are designed to place emphasis on the inter-linkages between ministry at national and county levels, and regulatory bodies, in the operationalization and implementation.

To ensure compliance forms derived from these disability assessment and categorization guidelines will be used, to audit and report the extent of compliance with these standards. Audit reports issued by the assessment committee will indicate the extent of disability, and may allow the independent regulator to issue certificates regarding the degree of disability.

### **4.2. Monitoring and Evaluation**

The Ministry of Health has put in place mechanisms to ensure generation and management of information to guide evidence-based decision making, in the provision of health services at both national and county levels. Hence health care providers will be expected to report on information emanating from disability assessment exercise.

For the day to day running of the disability assessment/ categorization guideline, program data will be utilized to understand and establish the following result areas. The standards and criteria listed in chapter 3 will be form the basis for monitoring and evaluating each standard.

Result Area	Performance Indicator	Frequency	Definition	Source of Data	Person Responsible	Point of Use
Establish the no of facilities with assessment committees	No. facilities with assessment committees established	Annually	Total number of health facilities having operational disability assessment committees	County administrative records	County Director of Health	National and County management teams
Determine number of health facilities approved to conduct disability assessment	No of facilities approved to conduct disability assessment	Annually	Determine number of health facilities approved (using the disability guidelines) to conduct disability assessment	KHIS	Director General for Health	National and County management teams
Establish the number of clients accessing disability assessment services	Number of clients accessing assessment services	monthly	Total number of clients accessing assessment in the month	OPD Register KHIS	Secretary, Disability Assessment Committee	National and County management teams
Establish the number of clients with disabilities referred for further services	No of male cases referred. No of male cases referred.	monthly	Total no. of male cases referred. Total No of male cases referred for further services.	OPD Register	Secretary, Disability Assessment Committee	National and County management teams
Establish the occurrence per disability domain	Percentage of persons with disability per the domain	monthly	Total no. of case per the domain	KHIS	Secretary, Disability Assessment Committee	National and County management teams

# 5

## DATA COLLECTION





## DATA COLLECTION

### 5.0. Data Collection

The main purpose of data collection is to understand client needs and therefore effectiveness of the disability assessment and categorization to respond to clients' needs efficiently. Data is collected for purposes of informing the future direction of the disability assessment and categorization such as need to expand or relocate services, resource mobilization and service delivery strategies to be adopted among other key decisions. In addition to informing programs, data also provides credible evidence for the formulation and guide review of related policies which are critical pillars of advocacy. For day to day running of the disability assessments, data will be utilized to:

- I. Understand the number of clients accessing disability assessment and referred for services
- II. Established the different needs among persons with disability
- III. Establish referral uptake and case outcomes

# 6

## REFERENCES





## REFERENCES

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Annex 1A: Visual Impairment Assessment Tool

REPUBLIC OF KENYA



MINISTRY OF HEALTH

Ref: MOH/276B

ASSESSMENT FORM FOR VISUAL IMPAIRMENTS

Name of Health Facility:		Date:	DD	MM	YYYY
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Applicant Information for the purpose of reporting on Disability Assessment:

Name:		ID No.		Gender:	
Date of Birth:	DD / MM / YYYY	Occupation:		Phone No.	
Age:					
County:		Sub-County:		Marital Status:	

Next of Kin Details:

Name:		Relation:		Phone No.	
-------	--	-----------	--	-----------	--

Assembled Medical Team details:

MEMBERS	NAME	REG. NO.	SIGNATURE	Health Facility Official Stamp
Chairperson				
Member				
Member				
Member				

*(I understand that giving false information is punishable by the laws of Kenya)*

*Note: the committee should have a minimum of three Members*

**HISTORY**

**ASSISTIVE DEVICE**

.....  
 .....

**MEDICAL HISTORY**

.....  
 .....  
 .....  
 .....

**OCULAR HISTORY**

.....  
 .....  
 .....  
 .....

Distance Visual Acuity	With Correction		Without Correction
Right Eye			
Left Eye			
Near Vision Test			

**Ophthalmic Examination**

Examination	Right Eye	Left Eye		Right Eye	Left Eye
Present eyeball			Cornea		
Squint			Anterior Chamber		
Nystagmus			Iris		
Tearing			Pupil		
Lids			Lens		
Conjunctiva			Fundus		

**Specialized Tests**

Test	Findings/Defect
Humphreys Visual Field	
Colour Vision	
Stereopsis	

**Conclusion**

Category	Tick	Cause of Vision Impairment		
		Percentage Disability	Any Possible Intervention	Recommendation
Normal				
Mild Impairment				
Moderate Impairment				
Severe Impairment			Yes	
Blind			No	
Near Vision Impairment				

TEMPORARY

PERMANENT

**VERIFIED BY THE COUNTY DIRECTOR OF HEALTH**

Name.....

Date .....

Signature.....

<p><b>COUNTY DIRECTOR OF HEALTH OFFICIAL STAMP</b></p>
--

## Annex I B: Visual Acuity Scales Conversions

Visual acuity scales Conversions			
Foot	Metre (6m)	Decimal	LogMAR
20/200	6/60	0.10	1.00
20/120	6/36	0.17	0.80
20/80	6/24	0.25	0.60
20/60	6/18	0.3	0.50
20/40	6/12	0.50	0.30
20/30	6/9	0.7	0.20
20/20	6/6	1.00	0.00

## Annex I C: Visual Functional Assessment; Interaction with The Environment

SF-12 tool – assessing health related quality of life among people living with vision impairment (modified)

### 1. In general, would you say your vision is;

Excellent	Very good	Good	Fair	Poor
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

### 2. The following questions are about activities you might do during a typical day. Does your vision now limit you in these activities? If so, how much?

	No, not limited at all	Yes, limited a little	Yes, limited a lot
a. <u>Moderate activities</u> , such as moving a table, fetching water, washing clothes or carrying a baby	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
b. Climbing a <u>hill</u>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

### 3. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your vision

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
a. <u>Accomplished less</u> than you would like	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
b. Were limited in the <u>kind</u> of work or other activities?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

### 4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
a) <u>Accomplished less</u> than you would like	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
b. Did work or activities <u>less carefully</u> than usual	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

**5. During the past 4 weeks, how much did vision interfere with your normal work (including both work outside the home and housework)?**

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

**6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks.**

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. Have you felt calm and peaceful?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
b. Did you have a lot of energy?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
	None of the time	A little of the time	Some of the time	Most of the time	All of the time
c. Have you felt downhearted and depressed?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

**7. During the past 4 weeks, how much of the time has your visual status or emotional problems related interfered with your social activities (like visiting friends, relatives, etc.)?**

None of the time	A little of the time	Some of the time	Most of the time	All of the time
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

**To score:** add totals from No 1 to 7 where 1 is 1 point and 5 is 5 points

<b>Equal or less than 12</b>	<b>13 to 28</b>	<b>29 to 42</b>	<b>Greater than 42</b>
<b>Well adapted</b>	<b>Mild Limitation</b>	<b>Moderate Limitation</b>	<b>Severe Limitation</b>

## Annex 2. Physical Disabilities Assessment Tool

REPUBLIC OF KENYA



MINISTRY OF HEALTH

Ref: MOH/276A

### ASSESSMENT FORM FOR PHYSICAL DISABILITIES

Name of Health Facility:		Date:	DD	MM	YYYY
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Applicant Information for the purpose of reporting on Disability Assessment:

Name:		ID No.		Gender:	
Date of Birth:	DD / MM / YYYY	Occupation:		Phone No.	
Age:					
County:		Sub-County:		Marital Status:	

Next of Kin Details:

Name:		Relation:		Phone No.	
-------	--	-----------	--	-----------	--

Assembled Medical Team details:

MEMBERS	NAME	REG. NO.	SIGNATURE	Health Facility Official Stamp
Chairperson				
Member				
Member				
Member				

*(I understand that giving false information is punishable by the laws of Kenya)*

*Note: the committee should have a minimum of three Members*

#### SUMMARY FINDINGS

Brief Medical History	
Date of Injury/Onset of Illness	
Date of Last Intervention	
Cause of Disability	

**STRUCTURAL IMPAIRMENTS**

.....  
 .....

**s7. STRUCTURE: (Tick Region/part being assessed that has IMPAIRMENT)**

- s710 Head and neck region
- s720 Shoulder region
- s730 Upper extremity (arm, hand)
- s740 Pelvis
- s750 Lower extremity (leg, foot)
- s760 Trunk

**s8. SKIN AND RELATED STRUCTURES ANY OTHER BODY STRUCTURES**

**REGION (s) AFFECTED**

.....  
 .....

Assessment Area	Findings	Score ✓ for nature of impairments					Remarks
		No Impairment	Mild Impairment	Moderate Impairment	Severe Impairment	Complete Impairment	
Muscle Power of affected muscle groups							
Range of motion of joints affected							
Degree of structural angulation /deviation							
Level of limb Amputation							
Bilateral Lower Limb Length							
Balance and coordination							
Other Physical Impairments (Specify)							
SCORE FOR IMPAIRMENTS							

**FUNCTION AND PARTICIPATION RESTRICTIONS**

Area	Score √ For Nature of Difficulty					Remarks
	No Difficulty	Mild Difficulty	Moderate Difficulty	Severe Difficulty	Complete Difficulty	
Mobility						
Self-Care						
Domestic Life						
Major Life Areas						
Community, Social, Civic Life						
Score For Function and Participation Restriction						

**Disability Rating**

No disability	
Mild	
Moderate	
Severe	
Complete	

**CONCLUSION**

TEMPORARY

PERMANENT

RECOMMENDED ASSISTIVE PRODUCT(S).....

OTHER REQUIRED SERVICES.....

VERIFIED BY THE COUNTY DIRECTOR OF HEALTH

Name.....

Date .....

Signature.....

<p><b>COUNTY DIRECTOR OF HEALTH OFFICIAL STAMP</b></p>
--

Annex 3 A: Hearing Assessment Tool

REPUBLIC OF KENYA



MINISTRY OF HEALTH

Ref: MOH/276C

ASSESSMENT FORM FOR HEARING IMPAIRMENTS

Name of Health Facility:		Date:	DD	MM	YYYY
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Applicant Information for the purpose of reporting on Disability Assessment:

Name:		ID No.		Gender:	
Date of Birth:	DD / MM / YYYY	Occupation:		Phone No.	
Age:					
County:		Sub-County:		Marital Status:	

Next of Kin Details:

Name:		Relation:		Phone No.	
-------	--	-----------	--	-----------	--

Assembled Medical Team details:

MEMBERS	NAME	REG. NO.	SIGNATURE	Health Facility Official Stamp
Chairperson				
Member				
Member				
Member				

*(I understand that giving false information is punishable by the laws of Kenya)*

*Note: the committee should have a minimum of three Members*

**History**

<b>History of Hearing Loss</b>	
<b>History of Hearing Devices Usage</b>	

**3.0 Hearing Test Results**

Hearing Test	Right Ear	Left Ear
Type of Hearing Loss		
Degree (Grade) of Hearing Loss		

**4.0 Calculation of Hearing Disability**

Ear	Hearing Level in dBHL	Monoaural Percentage of Disability	Overall (Binaural) Percentage of Disability
Right			
Left			

**CONCLUSION**

TEMPORARY

PERMANENT

RECOMMENDED ASSISTIVE PRODUCT(S).....

OTHER REQUIRED SERVICES.....

VERIFIED BY THE COUNTY DIRECTOR OF HEALTH

Name.....

Date .....

Signature.....

<p><b>COUNTY DIRECTOR OF HEALTH OFFICIAL STAMP</b></p>
--

**Annex 3B: Assessment Tool for Speech, Language, Communication and Swallowing Disabilities**

**REPUBLIC OF KENYA**



**MINISTRY OF HEALTH**

**Ref: MOH/276D**

**ASSESSMENT FOR SPEECH, LANGUAGE, COMMUNICATION AND SWALLOWING DISABILITIES**

<b>Name of Health Facility:</b>		<b>Date:</b>	<b>DD</b>	<b>MM</b>	<b>YYYY</b>
---------------------------------	--	--------------	-----------	-----------	-------------

**Applicant Information for the purpose of reporting on Disability Assessment:**

<b>Name:</b>		<b>ID No.</b>		<b>Gender:</b>	
<b>Date of Birth:</b>	<b>DD / MM / YYYY</b>	<b>Occupation:</b>		<b>Phone No.</b>	
<b>Age:</b>					
<b>County:</b>		<b>Sub-County:</b>		<b>Marital Status:</b>	

**Next of Kin Details:**

<b>Name:</b>		<b>Relation:</b>		<b>Phone No.</b>	
--------------	--	------------------	--	------------------	--

**Assembled Medical Team details:**

<b>MEMBERS</b>	<b>NAME</b>	<b>REG. NO.</b>	<b>SIGNATURE</b>	<b>Health Facility Official Stamp</b>
Chairperson				
Member				
Member				
Member				

*(I understand that giving false information is punishable by the laws of Kenya)*

*Note: the committee should have a minimum of three Members*

<b>Reason for referral:</b>	
<b>Referred By:</b>	

<b>Medical Diagnosis (if available):</b>	

**History of Condition:**

*(Fill in relevant Birth History for Developmental Disorder or Medical History for Acquired Disorder)*

**Domains to be assessed:** *(please tick)*

LANGUAGE

SPEECH

DYSPHAGIA

COMMUNICATION

**Complete the areas below for Developmental Disorders only:** *(please tick)*

Delay in Motor Milestones: Yes  / No

Sensory Impairment: Visual: Yes  / No  Auditory: Yes  / No

**Other:**

*Please attach relevant reports, if available*

**Speech and Language Milestones achieved thus far:**

**Pre-Linguistic Skills:** *(please tick if age appropriate or not)*

Eye Contact: Yes  / No

Attention Span: Yes  / No

Imitation skills: Yes  / No

**A. LANGUAGE IMPAIRMENTS**

This section is common for applicants with developmental or acquired disorders. Please complete briefly and use findings from standardized test scored to inform further.

(i). RECEPTIVE LANGUAGE	REMARKS
Attention, Memory	
Listening, Auditory Processing, Phonological Awareness	
Syntactic Comprehension (no. of information carrying words that applicant can understand in 1 sentence)	
Semantic Comprehension	
Reading Comprehension	

(ii). EXPRESSIVE LANGUAGE	REMARKS
Sound, word, sentence level production	
Non-verbal Communication	
Pragmatics	
Play/Work	
Written output	

### B. SPEECH IMPAIRMENTS

	Check for:	Remarks
FLUENCY	Stuttering	
	Cluttering	
VOICE	Aphonia	
	Dysphonia	
ARTICULATION	Speech Sound Disorder	
	Motor Speech Disorder	

### STANDARDISED TEST RESULTS AND INTERPRETATION

--

### C. DYSPHAGIA

SLTs who are not dysphagia trained should use the checklist below to provide more information on applicant's swallow. If objective swallow assessment findings are available, attach report and skip the checklist.

#### **Basic Signs & Symptoms of Dysphagia Checklist**

ASLTk (Association of Speech and Language Therapists Kenya 2021)

*Please complete checklist below if suspecting that applicant has dysphagia and refer on to dysphagia specialist for further assessment, confirmed diagnosis and management.*

**Possible Dysphagia/ 'red flag' symptoms: (please tick)**

- History of recurrent chest infections with or without hospitalization
- Current chest infection that are related to difficulties swallowing
- Dehydration and malnutrition related to difficulties eating & drinking.
- Unintentional weight loss short or long term.
- Taking a long time to eat/drink a small amount of food or unable to manage a normal amount of food/drink.
- Avoidance of particular foods or drinks.
- Avoidance of eating/drinking in social situations.
- Distress before/during/after eating and/or drinking.

**Pre-oral Stage Difficulties: (please tick)**

- Difficulty with self-feeding (as appropriate to age).
- Difficulty with cleaning own mouth/teeth (as appropriate to age).

**Oral Stage Difficulties: (please tick)**

- Difficulty closing lips when eating and drinking. (Age appropriate)
- Difficulty taking food off a spoon or fork. (Age appropriate)
- Losing food or drink from the mouth (oral escape), age appropriate.
- Restricted oral movements due to neurological/ neuromuscular problem.
- Food residue in mouth after swallowing.
- Difficulty managing saliva/ drooling.

**Pharyngeal Stage Difficulties: (please tick)**

- Blinking, eye bulging, squeezing eyes, tearing up/ crying, red eyes, or grimacing associated with swallowing.
- Coughing, throat clearing during or soon after swallowing.
- Changing colour (flushed or blue/ grey) or breath pattern changes, just after swallowing.
- Nasal/ oral regurgitation of food/ drinks during/ just after swallowing.
- 'Wet' or gurgly voice after swallowing.

**Esophageal Stage Difficulties: (please tick)**

- Reflux (heartburn, chest pain, acid) during or after (up to 30 minutes) swallow.
- Coughing after eating/ drinking or regurgitating food.
- Coughing when lying down.
- Breathing difficulties or choking episodes, sometimes on saliva or on no oral intake.

**SCORE:** Total no. of ticks on all stage:

**Please note that person with dysphagia may present with one or more of these symptoms.**

**CONCLUSION**

**SLT DIAGNOSIS:** Include severity and complete attached scale to rate impairment, activity, participation, well-being, and distress.

Severity (circle as appropriate):	Mild	Moderate	Severe
	Profound		

**Impact of disability on fulfilling PWD's roles and responsibilities.**

**Impact on Career**

**Recommendations:** *(please tick and expand below)*

- Further management of speech, language, communication, swallowing disorder.
- Referral to other professionals
- Communication aids

<b>Cause of disability</b>			
<b>Date of injury/onset of illness</b>		<input type="checkbox"/> <b>Acute</b>	<input type="checkbox"/> <b>Chronic</b>
<b>Date of last intervention</b>			

**RECOMMENDED ASSISTIVE PRODUCT(S)**.....

**OTHER REQUIRED SERVICES**.....

**VERIFIED BY THE COUNTY DIRECTOR OF HEALTH**

**Name**.....

**Date** .....

**Signature**.....

**COUNTY DIRECTOR OF HEALTH OFFICIAL STAMP**

**Annex 4: Assessment Tool for Mental Health Disorders/ Intellectual Disabilities and Autism Spectrum Disorders**

**REPUBLIC OF KENYA**



**MINISTRY OF HEALTH**

**Ref: MOH/276E**

**ASSESSMENT FORM FOR MENTAL/ INTELLECTUAL/ AUTISM SPECTRUM DISORDERS**

<b>Name of Health Facility:</b>		<b>Date:</b>	<b>DD</b>	<b>MM</b>	<b>YYYY</b>
---------------------------------	--	--------------	-----------	-----------	-------------

**Applicant Information for the purpose of reporting on Disability Assessment:**

<b>Name:</b>		<b>ID No.</b>		<b>Gender:</b>	
<b>Date of Birth:</b>	<b>DD / MM / YYYY</b>	<b>Occupation:</b>		<b>Phone No.</b>	
<b>Age:</b>					
<b>County:</b>		<b>Sub-County:</b>		<b>Marital Status:</b>	

**Next of Kin Details:**

<b>Name:</b>		<b>Relation:</b>		<b>Phone No.</b>	
--------------	--	------------------	--	------------------	--

**Assembled Medical Team details:**

<b>MEMBERS</b>	<b>NAME</b>	<b>REG. NO.</b>	<b>SIGNATURE</b>	<b>Health Facility Official Stamp</b>
Chairperson				
Member				
Member				
Member				

*(I understand that giving false information is punishable by the laws of Kenya)*

*Note: the committee should have a minimum of three Members*

**BRIEF CLINICAL HISTORY (Past and Present Medical History)**

.....

.....

.....

.....

**Mental Status Evaluation**

.....  
 .....  
 .....  
 .....

**Complete the Assessment Tool Below by Scoring Appropriately**

*Knows how and when to feed, toilet or groom self*

Feeding	Toileting	Grooming
<input type="checkbox"/> 0.0 Completely Independent	<input type="checkbox"/> 0.0 Completely Independent	<input type="checkbox"/> 0.0 Completely Independent
<input type="checkbox"/> 1.0 Partial	<input type="checkbox"/> 1.0 Partial	<input type="checkbox"/> 1.0 Partial
<input type="checkbox"/> 2.0 Minimal	<input type="checkbox"/> 2.0 Minimal	<input type="checkbox"/> 2.0 Minimal
<input type="checkbox"/> 3.0 None (Dependent)	<input type="checkbox"/> 3.0 None (Dependent)	<input type="checkbox"/> 3.0 None (Dependent)

Dependence on Others		Psychosocial Adaptability
Level of Functioning		Employability/ Schooling
<i>Physical &amp; cognitive disability</i>		<i>As full-time worker, homemaker, student</i>
0.0	Completely Independent	0.0 Not Restricted
1.0	Independent in special environment	1.0 Selected jobs, competitive
2.0	Mildly Dependent-Limited assistance	2.0 Sheltered workshop, Non-competitive.
3.0	Moderately Dependent-moderate assist by Person in home	3.0 Not Employable/ not in school
4.0	Markedly Dependent Assistance with all major activities, all times	
5.0	Totally Dependent	
<b>Total Disability Rating Score (Sum of all Scores)</b>		<b>=</b>

**Scoring Key:**

Total DR Score	Level of Disability
0	None
1 - 4	Mild
5 - 8	Moderate
9 - 12	Severe
13 - 17	Very Severe

**Conclusion:**

Duration of Illness: .....

Major Cause of Disability: .....

Level of Disability: .....

**RECOMMENDED ASSISTIVE PRODUCT(S)**.....

**OTHER REQUIRED SERVICES**.....

**VERIFIED BY THE COUNTY DIRECTOR OF HEALTH**

Name.....

Date .....

Signature.....

<b>COUNTY DIRECTOR OF HEALTH OFFICIAL STAMP</b>
---

**ANNEX 5: Assessment Tool for Progressive Chronic Disorders**

**REPUBLIC OF KENYA**



**MINISTRY OF HEALTH**

**Ref: MOH/276G**

**ASSESSMENT FORM FOR PROGRESSIVE CHRONIC DISORDERS**

<b>Name of Health Facility:</b>		<b>Date:</b>	<b>DD</b>	<b>MM</b>	<b>YYYY</b>
---------------------------------	--	--------------	-----------	-----------	-------------

**Applicant Information for the purpose of reporting on Disability Assessment:**

<b>Name:</b>		<b>ID No.</b>		<b>Gender:</b>	
<b>Date of Birth:</b>	<b>DD / MM / YYYY</b>	<b>Occupation:</b>		<b>Phone No.</b>	
<b>Age:</b>					
<b>County:</b>		<b>Sub-County:</b>		<b>Marital Status:</b>	

**Next of Kin Details:**

<b>Name:</b>		<b>Relation:</b>		<b>Phone No.</b>	
--------------	--	------------------	--	------------------	--

**Assembled Medical Team details:**

<b>MEMBERS</b>	<b>NAME</b>	<b>REG. NO.</b>	<b>SIGNATURE</b>	<b>Health Facility Official Stamp</b>
Chairperson				
Member				
Member				
Member				

*(I understand that giving false information is punishable by the laws of Kenya)*

*Note: the committee should have a minimum of three Members*

**SUMMARY FINDINGS**

Medical History (brief)	
Date of Injury/Onset of Illness	
Date of Last Intervention	
List Past and Ongoing Interventions	
Cause of Disability	

**STRUCTURAL IMPAIRMENTS**

.....  
 .....

**REGION (s) AFFECTED**

.....  
 .....  
 .....

Assessment Area	Findings / diagnostic tests Imaging (MRIs, CT) Labs tests, 6 minutes' walk test, Pulmonary function test (PFTs), MMT, ROM, Echocardiogram (EEG), Visual analog pain scale, Berg balance scale, TUG, Tinetti, lower extremity functional tests, cognitive tests, Speech and swallowing tests	Score v For Nature of Impairments					Remarks
		No Impairment	Mild Impairment	Moderate Impairment	Severe Impairment	Complete Impairment	
Cardiopulmonary/ Cardiovascular							
Respiratory							
Malignancies/ Cancer							
Musculoskeletal							
Neurological							
Gastro-intestinal disorders							
Dermatological							

Hematologic system							
Vascular conditions							
Genito - urinary							
Frailty							
Other							

**FUNCTION AND PARTICIPATION RESTRICTIONS**

AREA	Score √ For Nature of Difficulty					REMARKS
	No Difficulty	Mild Difficulty	Moderate Difficulty	Severe Difficulty	Complete Difficulty	
Mobility						
Self-care						
Domestic life						
Major life areas						
Community, social, civic life						
Score For Function and Participation Restriction						

**Disability Rating**

No disability	
Mild	
Moderate	
Severe	
Complete	

**CONCLUSION**

TEMPORARY

PERMANENT

**RECOMMENDED ASSISTIVE PRODUCT(S)**.....

**OTHER SERVICES REQUIRED** .....

**VERIFIED BY THE COUNTY DIRECTOR OF HEALTH**

Name.....

Date .....

Signature.....

<p><b>COUNTY DIRECTOR OF HEALTH OFFICIAL STAMP</b></p>
--

## Annex 6: Assessment Tool for Maxillofacial Disabilities

### REPUBLIC OF KENYA



### MINISTRY OF HEALTH

Ref: MOH/276F

#### ASSESSMENT FOR MAXILLOFACIAL DISABILITIES

Name of Health Facility:		Date:	DD	MM	YYYY
--------------------------	--	-------	----	----	------

#### Applicant Information for the purpose of reporting on Disability Assessment:

Name:		ID No.		Gender:	
Date of Birth:	DD / MM / YYYY	Occupation:		Phone No.	
Age:					
County:		Sub-County:		Marital Status:	

#### Next of Kin Details:

Name:		Relation:		Phone No.	
-------	--	-----------	--	-----------	--

#### Assembled Medical Team details:

MEMBERS	NAME	REG. NO.	SIGNATURE	Health Facility Official Stamp
Chairperson				
Member				
Member				
Member				

*(I understand that giving false information is punishable by the laws of Kenya)*

*Note: the committee should have a minimum of three Members*



## Annex 7. ICF Domain Coding-Mental

Table 1: World Health Organization Disability Assessment Schedule 2.0, 36 items over six domains with the corresponding International Classification of Functioning, Disability and Health (ICF) codes

Domain	Domain question	ICF code
In the last 30 days, how much difficulty		
1: Cognition did you have in:		
1.1	Concentrating on doing something for 10 minutes	d16 Focusing attention; b140 Attention functions; d110-d129 Purposeful sensory experiences
1.2	Remembering to do important things	b14 4 Memory functions
1.3	Analysing and finding solutions to problems in day-to-day life	d17 Solving problems; d130-d159 Basic learning
1.4	Learning a new task, for example, learning how to get to a new place	d155 1 Acquiring complex skills
1.5	Generally understanding what people say	d31 Communicating with - receiving - spoken messages
1.6	Starting and maintaining a conversation	d350 Starting a conversation; d3501 Sustaining a conversation
In the last 30 days, how much difficulty		
2: Mobility did you have in:		
2.1	Standing for long periods such as 30 minutes	d415 4 Maintaining a standing position
2.2	Standing up from sitting down	d410 4 Standing
2.3	Moving around inside your home	d460 0 Moving around within the home
2.4	Getting out of your home	d460 Moving around outside the home and other buildings 2
2.5	Walking a long distance such as a kilometre (or equivalent)	d450 1 Walking long distances
In the last 30 days, how much difficulty		
3: Self-care did you have in:		
3.1	Washing your whole body	d5101 Washing whole body
3.2	Getting dressed	d54 0 Dressing

3.3	Eating	d55 0 Eating
3.4	Staying by yourself for a few days	d510-d650 Combination of multiple self-care and domestic life tasks
4: Getting along	In the last 30 days, how much difficulty did you have in	
4.1	Dealing with people you do not know	d73 0 Relating with strangers
4.2	Maintaining a friendship	d750 0 Informal relationships with friends
4.3	Getting along with people who are close to you	d76 Family relationships; d770 Intimate relationships; 0
		d75 0 Informal social relationships
4.4	Making new friends	d750 0 Informal relationships with friends; d720 0 Forming relationships
4.5	Sexual activities	d770 2 Sexual relationships
5: Life activities	In the last 30 days, how much difficulty did you have in:	
5.1	Taking care of your household responsibilities	d6 Domestic life
5.2	Doing most important household tasks well	d64 Doing housework; d210 Undertaking a single task; d22 0 Undertaking multiple tasks
5.3	Getting all the household work done that you needed to do	d64 Doing housework; d210 Undertaking a single task; d22 0 Undertaking multiple tasks
5.4	Getting your household work done as quickly as needed	d64 Doing housework; d210 Undertaking a single task; d22 0 Undertaking multiple tasks

5.5	Your day-to-day work/school	d85 Remunerative employment; d830 0 Higher education;
		d82 Vocational training; d820 School 5 education
5.6	Doing your most important work/school tasks well	d85 Remunerative employment; d830 0 Higher education;
		d82 Vocational training; d820 School 5 education; d210
		Undertaking a single task; d 220 Undertaking multiple tasks
5.7	Getting done all the work that you needed to do	d85 Remunerative employment; d830 0 Higher education;
		d82 Vocational training; d820 School 5 education; d 210
		Undertaking a single task; d220 Undertaking multiple tasks
5.8	Getting your work done as quickly as needed	d85 Remunerative employment; d830 0 Higher education;
		d82 Vocational training; d820 School 5 education; d210
		Undertaking a single task; d220 Undertaking multiple tasks

6:  
Participation How much of a problem do you have:

6.1	Joining in community activities	d91 0 Community life
6.2	Because of barriers or hindrances in the world	d9 Community, social and civic life
6.3	Living with dignity	d94 0 Human rights
6.4	From time spent on health condition	Not applicable (impact question)
6.5	Feeling emotionally affected	b15 2 Emotional functions
6.6	Because health is a drain on your financial resources	d870 0 Personal economic resources
6.7	With your family facing difficulties due to your health	Not applicable (impact question)

6.8 Doing things for relaxation or pleasure by yourself d92  
0 Recreation and leisure

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a The WHO DAS 2.0 also includes two preliminary sections that ask about demographic variables and general health. These sections are to be used if the WHO DAS 2.0 is used alone, but may be dropped or modified if WHO DAS 2.0 is used in conjunction with other instruments that already collect such information. A final optional section asks about the attributes and impact of identified problems

## **Annex 8. Body Structures as Per ICF Classification**

### **Chapter 1 Structures of the nervous system**

- s110 Structure of brain
- s120 Spinal cord and related structures
- s130 Structure of meninges
- s140 Structure of sympathetic nervous system
- s150 Structure of parasympathetic nervous system
- s198 Structure of the nervous system, other specified
- s199 Structure of the nervous system, unspecified

### **Chapter 2 The eye, ear and related structures**

- s210 Structure of eye socket
- s220 Structure of eyeball
- s230 Structures around eye
- s240 Structure of external ear
- s250 Structure of middle ear
- s260 Structure of inner ear
- s298 Eye, ear and related structures, other specified
- s299 Eye, ear and related structures, unspecified

### **Chapter 3 Structures involved in voice and speech**

- s310 Structure of nose
- s320 Structure of mouth
- s330 Structure of pharynx
- s340 Structure of larynx
- s398 Structures involved in voice and speech, other specified
- s399 Structures involved in voice and speech, unspecified

### **Chapter 4 Structures of the cardiovascular, immunological and respiratory systems**

- s410 Structure of cardiovascular system
- s420 Structure of immune system
- s430 Structure of respiratory system
- s498 Structures of the cardiovascular, immunological and respiratory systems, other specified
- s499 Structures of the cardiovascular, immunological and respiratory systems, unspecified

### **Chapter 5 Structures related to the digestive, metabolic and endocrine systems**

- s510 Structure of salivary glands
- s520 Structure of oesophagus
- s530 Structure of stomach
- s540 Structure of intestine
- s550 Structure of pancreas
- s560 Structure of liver
- s570 Structure of gall bladder and ducts
- s580 Structure of endocrine glands
- s598 Structures related to the digestive, metabolic and endocrine systems, other specified
- s599 Structures related to the digestive, metabolic and endocrine systems, unspecified

## **Chapter 6 Structures related to the genitourinary and reproductive systems**

- s610 Structure of urinary system
- s620 Structure of pelvic floor
- s630 Structure of reproductive system
- s698 Structures related to the genitourinary and reproductive systems, other specified
- s699 Structures related to the genitourinary and reproductive systems, unspecified

## **Chapter 7 Structures related to movement**

- s710 Structure of head and neck region
- s720 Structure of shoulder region
- s730 Structure of upper extremity
- s740 Structure of pelvic region
- s750 Structure of lower extremity
- s760 Structure of trunk
- s770 Additional musculoskeletal structures related to movement
- s798 Structures related to movement, other specified
- s799 Structures related to movement, unspecified

## **Chapter 8 Skin and related structures**

- s810 Structure of areas of skin
- s820 Structure of skin glands
- s830 Structure of nails
- s840 Structure of hair
- s898 Skin and related structures, other specified
- s899 Skin and related structures, unspecified

## **Annex 4. Body Functions**

### **Chapter 1 Mental functions**

#### **Global mental functions (b110-b139)**

- b110 Consciousness functions
- b114 Orientation functions
- b117 Intellectual functions
- b122 Global psychosocial functions
- b125 Dispositions and intra-personal functions
- b126 Temperament and personality functions
- b130 Energy and drive functions
- b134 Sleep functions
- b139 Global mental functions, other specified and unspecified

#### **Specific mental functions (b140-b189)**

- b140 Attention functions
- b144 Memory functions
- b147 Psychomotor functions
- b152 Emotional functions
- b156 Perceptual functions
- b160 Thought functions
- b163 Basic cognitive functions

- b164 Higher-level cognitive functions
- b167 Mental functions of language
- b172 Calculation functions
- b176 Mental function of sequencing complex movements
- b180 Experience of self and time functions
- b189 Specific mental functions, other specified and unspecified
- b198 Mental functions, other specified
- b199 Mental functions, unspecified

## **Chapter 2 Sensory functions and pain**

### **Seeing and related functions (b210-b229)**

- b210 Seeing functions
- b215 Functions of structures adjoining the eye
- b220 Sensations associated with the eye and adjoining structures
- b229 Seeing and related functions, other specified and unspecified

### **Hearing and vestibular functions (b230-b249)**

- b230 Hearing functions
- b235 Vestibular functions
- b240 Sensations associated with hearing and vestibular function
- b249 Hearing and vestibular functions, other specified and unspecified

### **Additional sensory functions (b250-b279)**

- b250 Taste function
- b255 Smell function
- b260 Proprioceptive function
- b265 Touch function
- b270 Sensory functions related to temperature and other stimuli
- b279 Additional sensory functions, other specified and unspecified

### **Pain (b280-b289)**

- b280 Sensation of pain
- b289 Sensation of pain, other specified and unspecified
- b298 Sensory functions and pain, other specified
- b299 Sensory functions and pain, unspecified

## **Chapter 3 Voice and speech functions**

- b310 Voice functions
- b320 Articulation functions
- b330 Fluency and rhythm of speech functions
- b340 Alternative vocalization functions
- b398 Voice and speech functions, other specified
- b399 Voice and speech functions, unspecified

## **Chapter 4 Functions of the cardiovascular, haematological, immunological and respiratory systems**

### **Functions of the cardiovascular system (b410-b429)**

- b410 Heart functions
- b415 Blood vessel functions
- b420 Blood pressure functions
- b429 Functions of the cardiovascular system, other specified and unspecified

### **Functions of the haematological and immunological systems (b430-b439)**

b430 Haematological system functions

b435 Immunological system functions

b439 Functions of the haematological and immunological systems, other specified and unspecified

### **Functions of the respiratory system (b440-b449)**

b440 Respiration functions

b445 Respiratory muscle functions

b449 Functions of the respiratory system, other specified and unspecified

### **Additional functions and sensations of the cardiovascular and respiratory systems (b450-b469)**

b450 Additional respiratory functions

b455 Exercise tolerance functions

b460 Sensations associated with cardiovascular and respiratory functions

b469 Additional functions and sensations of the cardiovascular and respiratory systems, other specified and unspecified

b498 Functions of the cardiovascular, haematological, immunological and respiratory systems, other specified

### **Two-level classification ICF-CY**

b499 Functions of the cardiovascular, haematological, immunological and respiratory systems, unspecified

## **Chapter 5 Functions of the digestive, metabolic and endocrine systems**

### **Functions related to the digestive system (b510-b539)**

b510 Ingestion functions

b515 Digestive functions

b520 Assimilation functions

b525 Defecation functions

b530 Weight maintenance functions

b535 Sensations associated with the digestive system

b539 Functions related to the digestive system, other specified and unspecified

### **Functions related to metabolism and the endocrine system (b540-b569)**

b540 General metabolic functions

b545 Water, mineral and electrolyte balance functions

b550 Thermoregulatory functions

b555 Endocrine gland functions

b560 Growth maintenance functions

b569 Functions related to metabolism and the endocrine system, other specified and unspecified

b598 Functions of the digestive, metabolic and endocrine systems, other specified

b599 Functions of the digestive, metabolic and endocrine systems, unspecified

## **Chapter 6 Genitourinary and reproductive functions**

### **Urinary functions (b610-b639)**

b610 Urinary excretory functions

- b620 Urination functions
- b630 Sensations associated with urinary functions
- b639 Urinary functions, other specified and unspecified

### **Genital and reproductive functions (b640-b679)**

- b640 Sexual functions
- b650 Menstruation functions
- b660 Procreation functions
- b670 Sensations associated with genital and reproductive functions
- b679 Genital and reproductive functions, other specified and unspecified
- b698 Genitourinary and reproductive functions, other specified
- b699 Genitourinary and reproductive functions, unspecified

## **Chapter 7 Neuromusculoskeletal and movement-related functions**

### **Functions of the joints and bones (b710-b729)**

- b710 Mobility of joint functions
- b715 Stability of joint functions
- b720 Mobility of bone functions
- b729 Functions of the joints and bones, other specified and unspecified

### **ICF-CY Two-level classification**

#### **Muscle functions (b730-b749)**

- b730 Muscle power functions
- b735 Muscle tone functions
- b740 Muscle endurance functions
- b749 Muscle functions, other specified and unspecified

#### **Movement functions (b750-b789)**

- b750 Motor reflex functions
- b755 Involuntary movement reaction functions
- b760 Control of voluntary movement functions
- b765 Involuntary movement functions
- b770 Gait pattern functions
- b780 Sensations related to muscles and movement functions
- b789 Movement functions, other specified and unspecified
- b798 Neuromusculoskeletal and movement-related functions, other specified
- b799 Neuromusculoskeletal and movement-related functions, unspecified

## **Chapter 8 Functions of the skin and related structures**

### **Functions of the skin (b810-b849)**

- b810 Protective functions of the skin
- b820 Repair functions of the skin
- b830 Other functions of the skin
- b840 Sensation related to the skin
- b849 Functions of the skin, other specified and unspecified

### **Functions of the hair and nails (b850-b869)**

- b850 Functions of hair
- b860 Functions of nails
- b869 Functions of the hair and nails, other specified and unspecified
- b898 Functions of the skin and related structures, other specified

b899 Functions of the skin and related structures, unspecified

## **Two-level classification ICF-CY**

### **Annex 5. Activities and Participation**

#### **Chapter 1 Learning and applying knowledge**

##### **Purposeful sensory experiences (d110-d129)**

d110 Watching

d115 Listening

d120 Other purposeful sensing

d129 Purposeful sensory experiences, other specified and unspecified

##### **Basic learning (d130-d159)**

d130 Copying

d131 Learning through actions with objects

d132 Acquiring information

d133 Acquiring language

d134 Acquiring additional language

d135 Rehearsing

d137 Acquiring concepts

d140 Learning to read

d145 Learning to write

d150 Learning to calculate

d155 Acquiring skills

d159 Basic learning, other specified and unspecified

##### **Applying knowledge (d160-d179)**

d160 Focusing attention

d161 Directing attention

d163 Thinking

d166 Reading

d170 Writing

d172 Calculating

d175 Solving problems

d177 Making decisions

d179 Applying knowledge, other specified and unspecified

d198 Learning and applying knowledge, other specified

d199 Learning and applying knowledge, unspecified

#### **Chapter 2 General tasks and demands**

d210 Undertaking a single task

d220 Undertaking multiple tasks

d230 Carrying out daily routine

d240 Handling stress and other psychological demands

d250 Managing one's own behavior

d298 General tasks and demands, other specified

d299 General tasks and demands, unspecified

#### **Chapter 3 Communication**

##### **Communicating - receiving (d310-d329)**

d310 Communicating with - receiving - spoken messages

- d315 Communicating with - receiving - nonverbal messages
- d320 Communicating with - receiving - formal sign language messages
- d325 Communicating with - receiving - written messages
- d329 Communicating - receiving, other specified and unspecified

#### **Communicating - producing (d330-d349)**

- d330 Speaking
- d331 Pre-talking
- d332 Singing
- d335 Producing nonverbal messages
- d340 Producing messages in formal sign language
- d345 Writing messages
- d349 Communication - producing, other specified and unspecified

#### **Conversation and use of communication devices and techniques (d350-d369)**

- d350 Conversation
- d355 Discussion
- d360 Using communication devices and techniques
- d369 Conversation and use of communication devices and techniques, other specified and unspecified
- d398 Communication, other specified
- d399 Communication, unspecified

### **Chapter 4 Mobility**

#### **Changing and maintaining body position (d410-d429)**

- d410 Changing basic body position
- d415 Maintaining a body position
- d420 Transferring oneself
- d429 Changing and maintaining body position, other specified and unspecified

#### **Carrying, moving and handling objects (d430-d449)**

- d430 Lifting and carrying objects
- d435 Moving objects with lower extremities
- d440 Fine hand use
- d445 Hand and arm use
- d446 Fine foot use
- d449 Carrying, moving and handling objects, other specified and unspecified

#### **Walking and moving (d450-d469)**

- d450 Walking
- d455 Moving around
- d460 Moving around in different locations
- d465 Moving around using equipment
- d469 Walking and moving, other specified and unspecified

#### **Moving around using transportation (d470-d489)**

- d470 Using transportation
- d475 Driving
- d480 Riding animals for transportation
- d489 Moving around using transportation, other specified and unspecified
- d498 Mobility, other specified

d499 Mobility, unspecified

## **Chapter 5 Self-care**

d510 Washing oneself

d520 Caring for body parts

d530 Toileting

d540 Dressing

d550 Eating

d560 Drinking

d570 Looking after one's health

d571 Looking after one's safety

d598 Self-care, other specified

d599 Self-care, unspecified

## **Chapter 6 Domestic life**

### **Acquisition of necessities (d610-d629)**

d610 Acquiring a place to live

d620 Acquisition of goods and services

d629 Acquisition of necessities, other specified and unspecified

### **Household tasks (d630-d649)**

d630 Preparing meals

d640 Doing housework

d649 Household tasks, other specified and unspecified

### **Caring for household objects and assisting others (d650-d669)**

d650 Caring for household objects

d660 Assisting others

d669 Caring for household objects and assisting others, other specified and unspecified

d698 Domestic life, other specified

d699 Domestic life, unspecified

## **Chapter 7 Interpersonal interactions and relationships**

### **General interpersonal interactions (d710-d729)**

d710 Basic interpersonal interactions

d720 Complex interpersonal interactions

d729 General interpersonal interactions, other specified and unspecified

Particular interpersonal relationships (d730-d779)

d730 Relating with strangers

d740 Formal relationships

d750 Informal social relationships

d760 Family relationships

d770 Intimate relationships

d779 Particular interpersonal relationships, other specified and unspecified

d798 Interpersonal interactions and relationships, other specified

d799 Interpersonal interactions and relationships, unspecified

## **Chapter 8 Major life areas**

### **Education (d810-d839)**

d810 Informal education

- d815 Preschool education
- d816 Preschool life and related activities
- d820 School education
- d825 Vocational training
- d830 Higher education
- d835 School life and related activities
- d839 Education, other specified and unspecified

**Work and employment (d840-d859)**

- d840 Apprenticeship (work preparation)
- d845 Acquiring, keeping and terminating a job
- d850 Remunerative employment
- d855 Non-remunerative employment
- d859 Work and employment, other specified and unspecified

**Economic life (d860-d879)**

- d860 Basic economic transactions
- d865 Complex economic transactions
- d870 Economic self-sufficiency
- d879 Economic life, other specified and unspecified
- d880 Engagement in play
- d898 Major life areas, other specified
- d899 Major life areas, unspecified

**Chapter 9 Community, social and civic life**

- d910 Community life
- d920 Recreation and leisure
- d930 Religion and spirituality
- d940 Human rights
- d950 Political life and citizenship
- d998 Community, social and civic life, other specified
- d999 Community, social and civic life, unspecified

**Annex 6. Environmental Factors**

**Chapter 1 Products and technology**

- e110 Products or substances for personal consumption
- e115 Products and technology for personal use in daily living
- e120 Products and technology for personal indoor and outdoor mobility and transportation
- e125 Products and technology for communication
- e130 Products and technology for education
- e135 Products and technology for employment
- e140 Products and technology for culture, recreation and sport
- e145 Products and technology for the practice of religion and spirituality
- e150 Design, construction and building products and technology of buildings for public use
- e155 Design, construction and building products and technology of buildings for private use
- e160 Products and technology of land development
- e165 Assets
- e198 Products and technology, other specified
- e199 Products and technology, unspecified

## **Chapter 2 Natural environment and human-made changes to environment**

- e210 Physical geography
- e215 Population
- e220 Flora and fauna
- e225 Climate
- e230 Natural events
- e235 Human-caused events
- e240 Light
- e245 Time-related changes
- e250 Sound
- e255 Vibration
- e260 Air quality
- e298 Natural environment and human-made changes to environment, other specified
- e299 Natural environment and human-made changes to environment, unspecified

## **Chapter 3 Support and relationships**

- e310 Immediate family
- e315 Extended family
- e320 Friends
- e325 Acquaintances, peers' colleagues, neighbors and community members
- e330 People in positions of authority
- e335 People in subordinate positions
- e340 Personal care providers and personal assistants
- e345 Strangers
- e350 Domesticated animals
- e355 Health professionals
- e360 Other professionals
- e398 Support and relationships, other specified
- e399 Support and relationships, unspecified

## **Chapter 4 Attitudes**

- e410 Individual attitudes of immediate family members
- e415 Individual attitudes of extended family members
- e420 Individual attitudes of friends
- e425 Individual attitudes of acquaintances, peers, colleagues, neighbors and community members
- e430 Individual attitudes of people in positions of authority
- e435 Individual attitudes of people in subordinate positions
- e440 Individual attitudes of personal care providers and personal assistants
- e445 Individual attitudes of strangers
- e450 Individual attitudes of health professionals
- e455 Individual attitudes of other professionals
- e460 Societal attitudes
- e465 Social norms, practices and ideologies
- e498 Attitudes, other specified
- e499 Attitudes, unspecified

## **Chapter 5 Services, systems and policies**

- e510 Services, systems and policies for the production of consumer goods
- e515 Architecture and construction services, systems and policies
- e520 Open space planning services, systems and policies
- e525 Housing services, systems and policies
- e530 Utilities services, systems and policies
- e535 Communication services, systems and policies
- e540 Transportation services, systems and policies
- e545 Civil protection services, systems and policies
- e550 Legal services, systems and policies
- e555 Associations and organizational services, systems and policies
- e560 Media services, systems and policies
- e565 Economic services, systems and policies
- e570 Social security services, systems and policies
- e575 General social support services, systems and policies
- e580 Health services, systems and policies
- e585 Education and training services, systems and policies
- e590 Labour and employment services, systems and policies
- e595 Political services, systems and policies
- e598 Services, systems and policies, other specified
- e599 Services, systems and policies, unspecified

## **Annex 7. Speech and Language ICF Assessments**

### **PART 1a: IMPAIRMENTS of BODY FUNCTIONS**

- Body functions are the physiological functions of body systems (including psychological functions).
- Impairments are problems in body function as a significant deviation or loss.

#### **First Qualifier: Extent of impairments**

0. No impairment means the person has no problem
1. Mild impairment - means a problem that is present less than 25% of the time, with an intensity a person can tolerate and which happens rarely over the last 30 days.
2. Moderate impairment - means that a problem that is present less than 50% of the time, with an intensity, which is interfering in the persons day to day life and which happens occasionally over the last 30 days.
3. Severe impairment - means that a problem that is present more than 50% of the time, with an intensity, which is partially disrupting the persons day to day life and which happens frequently over the last 30 days.
4. Complete impairment - means that a problem that is present more than 95% of the time, with an intensity, which is totally disrupting the persons day to day life and which happens every day over the last 30 days.
5. Not specified - means there is insufficient information to specify the severity of the impairment.
6. Not applicable - means it is inappropriate to apply a particular code (e.g., b650 Menstruation functions for woman inpre-menarche or post-menopause age).

#### **Short List of Body Functions Qualifier**

##### **b1. MENTAL FUNCTIONS**

- b110Consciousness
- b114Orientation (time, place, person)

- b117Intellectual (incl. Retardation, dementia)
- b130Energy and drive functions
- b134Sleep
- b140Attention
- b144Memory
- b152Emotional functions
- b156Perceptual functions
- b164Higher level cognitive functions
- b167Language

## **b2. SENSORY FUNCTIONS AND PAIN**

- b210Seeing
- b230Hearing
- b235Vestibular (incl. Balance functions)
- b280Pain

## **b3. VOICE AND SPEECH FUNCTIONS**

- b310Voice

## **b4. FUNCTIONS OF THE CARDIOVASCULAR, HAEMATOLOGICAL, IMMUNOLOGICAL AND RESPIRATORY SYSTEMS**

- b410Heart
- b420Blood pressure
- b430Haematological(blood)
- b435Immunological (allergies, hypersensitivity)
- b440Respiration (breathing)

## **b5. FUNCTIONS OF THE DIGESTIVE, METABOLIC AND ENDOCRINE SYSTEMS**

- b515Digestive
- b525Defecation
- b530Weight maintenance
- b555Endocrine glands (hormonal changes)

## **b6. GENITOURINARY AND REPRODUCTIVE FUNCTIONS**

- b620Urination functions

## ANNEX 9: LIST OF CONTRIBUTORS

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PUBLISHED BY:  
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Ministry of Health Kenya. Disability Medical Assessment and Categorization Guidelines, aims at empowering service providers to provide quality, affordable, available, acceptable and accessible services.

# **DISABILITY MEDICAL ASSESSMENT AND CATEGORIZATION GUIDELINES**

2022

This policy is intended as a guide for the health sector on Disability Medical Assessments & Categorization in Kenya towards the provision of quality health care

