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> असाधारण EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii) PART II—Section 3—Sub-section (ii)

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सामाजिक न्याय और अधिकारिता मंत्रालय

(दिव्यांगजन सशक्तिकरण विभाग)

अधिसूचना

नई दिल्ली, 12 मार्च, 2024

**का.आ. 1338(अ).**—केन्द्रीय सरकार दिव्यांगजन अधिकार अधिनियम, 2016 (2016 का 49) की धारा 56 द्वारा प्रदत्त शक्ति का प्रयोग करते हुए और सामाजिक न्याय और अधिकारिता मंत्रालय, दिव्यांगजन सशक्तिकरण विभाग द्वारा तारीख 25 अप्रैल 2016 को जारी की गई अधिसूचना संख्या 16-21/2013-डीडी-3 और संख्या 16-9/2014-डीडी-3 [का. आ. 76 (अ) तारीख 4 जनवरी, 2018] को अधिक्रांत करते हुए, इसके द्वारा किसी व्यक्ति में विविनिर्दिष्ट दिव्यांगताओं की सीमा का निर्धारण करने के लिए विशेषज्ञों की उप-समितियों की सिफारिशों पर विचार करने के बाद, किसी व्यक्ति में निम्नलिखित विनिर्दिष्ट दिव्यांगताओं की सीमा का निर्धारण करने के प्रयोजन के लिए मार्गदर्शी सिद्धांत अधिसूचित करती है, जिनका ब्यौरा उपाबंध में दिया गया है, अर्थात् -

i. गतिविषयक दिव्यांगता;

ii. दृष्टि बाधिता;

iii. श्रवण बाधिता और वाक् एवं भाषा दिव्यांगता

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# MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT

# [Department of Empowerment of Persons with Disabilities (Divyangjan)]

#### NOTIFICATION

#### New Delhi, the 12th March, 2024

**S.O. 1338(E).**—In exercise of the power conferred by Section 56 of the Rights of Persons with Disabilities Act, 2016 (49 of 2016) and in supersession of notification issued vide No. 16-21/2013-DD-III dated 25<sup>th</sup> April, 2016 and No. 16-9/2014-DD-III [S.O. 76 (E) Dated 4<sup>th</sup>January, 2018] of the Ministry of Social Justice and Empowerment, Department of Empowerment of Persons with Disabilities (Divyangjan), the Central Government hereby notifies the guidelines for the purpose of assessing the extent of following specified disabilities in a person after having considered the recommendations of the sub-committees of experts to assess the extent of specified disabilities in a person, detailed in the ANNEXURE, namely:-

- i. Locomotor disability ;
- ii. Visual Impairment;
- iii. Hearing Impairment and Speech & Language Disability ;
- iv. Specific Learning Disability, Intellectual Disability and Autism Spectrum Disorder ;
- v. Mental illness ;
- vi. Blood Disorder;
- vii. Multiple Disorder ; and
- viii. Chronic Neurological Disorder.

**Note 1:-** In terms of Section 57 of the Rights of the Persons with Disabilities Act, 2016 (49 of 2016), the State Government or Union Territory Administrators or as the case may be shall designate persons, having requisite qualifications and experience, as certifying authorities, who shall be competent to issue the certificate of disability and also notify the jurisdiction within which and the terms and conditions subject to which, the certifying authority shall perform its certification functions.

**Note 2:-**The Director General of Health Services, Ministry of Health and Family Welfare, Government of India shall be the authority to decide upon cases where any controversy or doubt arises in matters relating to interpretation of the definitions or classifications or evaluation procedure regarding the said guidelines.

[F. No. P-13013/12/2023-UDID/IT/Statistics]

RAJEEV SHARMA, Jt. Secy.

#### ANNEXURE

Guidelines for Purpose of Assessing the Extent of Specified Disability in a Person Included under the Rights of Persons with Disabilities Act, 2016 (49 of 2016)

I. LOCOMOTOR DISABILITY

**Definition:** "Locomotor disability" means a person's inability to execute distinctive activities associated with movement of self and objects resulting from affliction of musculoskeletal, nervous system, or both.

# **SECTION A:**

Guidelines for Evaluation of Permanent Physical Impairment (PPI) of Extremities (Upper and Lower Extremities)

#### 1.1. Guidelines for Evaluation of Permanent Physical Impairment (PPI) of Upper Extremities

(a) The estimation and measurement shall be made when the clinical condition has reached the stage of maximum improvement from the medical treatment. Normally the time period is to be decided by the medical doctor who is evaluating the case for issuing the PPI Certificate as per standard format of the certificate.

(b) The upper extremity is divided into two components: the arm component and the hand component.

(c) Measurement of the loss of function of arm component consists of measuring the loss of range of motion, muscle strength and co-ordinated activities.

(d) Measurement of loss of function of hand component consists of determining the prehension, sensation and strength. For estimation of prehension opposition, lateral pinch, cylindrical grasp, spherical grasp and hook grasp have to be assessed.

(e) The impairment of the entire extremity depends on the combination of the impairments of both components.

(f) Total disability % will not exceed 100%.

(g) Disability is to be certified as whole number and not as a fraction.

(h) Disability % is to be stated in relation to that extremity which has been in use in India for the past many years (in the absence of a generally agreed upon system in India of reflecting Disability % in relation with the whole body).

(i) For Locomotor Disability except Section C (Permanent Physical Impairment in Persons with Amputation), Temporary Disabilities Certificate will be issued after 6 months of symptoms. For permanent disability, certificate after 18 years of age, re-assessment every 10 years should be done, where requested by the PwD or recommended by a subject expert.

#### **1.2.1. ARM (UPPER EXTREMITY) COMPONENT**

Total value of the arm component assigned is 90%.

#### 1.2.2. Principles of evaluation of range of motion (ROM) of joints

(a) The value of maximum ROM in the arm component assigned is 90%.

(b) The weightage given to involvement of different joints is as mentioned below:

Shoulder = up to 20%, Elbow = up to 20%, Wrist = up to 10%, Hands = up to 40%

Further calculation is done depending upon the extent of involvement (mild – less than 1/3, moderate – up to 2/3, or severe – almost total).

If more than one joint of the upper extremity is involved, the loss of percentage in each joint is calculated separately as above and then added together.

#### **1.2.3.** Principles of evaluation of strength of muscles:

(a) Strength of muscles can be tested by manual method and graded from 0-5 as advocated by Medical Research Council (MRC), London, UK depending upon the strength of the muscles (Appendix -I).

(b) Loss of muscle power can be given percentages as follows:

- (i) The mean percentage of loss of muscle strength around a joint is multiplied by 0.30.
- (ii) If loss of muscle strength involves more than one joint the mean loss of percentage in each joint is calculated separately and then added together as has been described above for loss of range of motion.

#### 1.2.4. Principles of evaluation of coordinated activities:

- (a) The total value for coordinated activities assigned is 90%.
- (b) Ten different coordinated activities should be tested as given in the Form A. (Appendix

#### II - assessment proforma for upper extremity).

(c) Each activity has been assigned a value of 9%.

(d) Average normal range of different joints for reference is at Appendix III.

#### 1.2.5. Combining values for the Arm Component:

The total value of loss of function of arm component is obtained by combining the value of loss of ROM, muscle strength and coordinated activities, using the combining formula

$$a + \frac{b(90-a)}{90}$$

where a = higher value and b = lower value

#### **1.3.1. HAND COMPONENT:**

(a) Total value of hand component assigned is 90%.

#### **1.3.2.** Principles of evaluation of prehension:

Total value of prehension assigned is 30%.

It includes:

- (a) Opposition 8%
- Tested against Index finger 2%
  - Middle finger 2%
  - Ring finger 2%
  - Little finger 2%

(b) Lateral pinch - 5%

- Tested by asking the patient to hold a key between the thumb and lateral side of index finger.

(c) Cylindrical grasp - 6%

-Tested for

(i). Large object of approx. 4 inches size - 3%

(ii). Small object of 1-2 inch size - 3%

(d) Spherical grasp - 6%

- Tested for

(i) Large object of approx. 4 inches size - 3%

(ii) Small object of 1-2 inch size - 3%

(e) Hook grasp - 5%

- Tested by asking the patient to lift a bag.

# **1.3.3.** Principles of Evaluation of Sensations:

(a) Total value of sensation in hand is 30%.

(b) It shall be assessed according to the distribution given below:

(i) Complete loss of sensation

Thumb ray - 9%

Index finger - 6%

Middle finger - 5%

Ring finger - 5%

Little finger - 5%

(ii) Partial loss of sensation:

Assessment should be made according to percentage of loss of sensation in thumb/finger(s).

# 1.3.4. Principles of Evaluation of Strength

(a) Total value of strength is 30%.

- (b) It includes:
  - (i) Grip strength 20%
  - (ii) Pinch strength 10%

Strength of hand should be tested with hand dynamometer or by clinical method (grip method).

10% weightage to be added in case of persons with **involvement ofdominant upper extremity** (mostly right upper extremity) **due to acquired conditions** (diseases/ injuries etc.) and not to those with congenital anomalies, conditions, loss, or deformities.

For shortening of upper extremity, addition weightage is as follows:

First 1" - No additional weightage

For each 1" beyond the first 1" - 2% additional weightage.

Additional weightage -

A total of up to 10% additional weightage can be given to following accompanying factors if they are significant, continuous and persistent despite standard treatment.

(i) Deformity:

In functional position - 3%

In non-functional position - 6%

(ii) Pain:

Mild (slightly interfering with function) - 3%

Moderate (interfering with function) - 6%

Severe (grossly interfering with function) - 9%

(iii) Loss of sensations:

Partial Loss – up to 6%

Complete Loss - 9%

(iv) Complications:

Superficial complications - 3%

Deep complications - 6%

Total % of PPI will not exceed 100% in any case.

Disability % is to be stated in relation to that extremity which has been in use in India for the past many years (in the absence of a generally agreed upon system in India of reflecting in relation with the whole body).

Disability % is to be mentioned as whole number, and not as a fraction.

#### 1.3.5. Combining values of hand component:

The final value of loss of function of hand component is obtained by summing up values of loss of prehension, sensation and strength.

#### **1.3.6.** Combining values for the Extremity:

Value of impairment of arm component and impairment of hand component is to be computed by using the combining formula:

$$a + \frac{b(90-a)}{90}$$

where a = higher value and b = lower value.

#### 2. Guidelines for Evaluation of Permanent Physical Impairment in Lower Extremity

The measurement of loss of function in lower extremity is divided into two components, namely, mobility and stability components.

#### 2.1.1. MOBILITY COMPONENT

Total value of mobility component is 90% which includes range of movement (ROM) and muscle strength.

#### 2.1.2. Principles of Evaluation of Range of Movement:

(a) The value of maximum range of movement in mobility component is 90%

(b) The appropriate weightage given to involvement of proximal and middle joints is as follows:

Hip= up to 35%, Knee= up to 35%, Ankle= up to 20%,

Further calculation is done depending upon the extent of involvement (mild – less than 1/3, moderate – up to 2/3, or severe – almost total).

If more than one joint of the limb is involved the mean loss of ROM in percentage should be calculated in relation to individual joint separately and then added together to calculate the loss of range of motion and strength in relation to that particular limb.

#### 2.1.3. Principle of Evaluation of Muscle Strength:

(a) The value for maximum muscle strength in the extremity is 90%.

(b) Strength of muscles can be tested by Manual Method and graded 0-5 depending upon the residual strength in the muscle group.

(c) Manual muscle strength grading can be given percentage as below:

Numerical Score of Muscle Power	Qualitative Score	Loss of strength in %
0	Zero	100
1	Trace activity	80
2	Poor	60
3	Fair	40
4	Good	20
5	Normal	0

(d) Mean percentage of muscle strength loss around a joint is multiplied by 0.30 to calculate loss in relation to limb.

(e) If there has been a loss muscle strength involving more than one joint the final value is then computed by adding up as has been described above.

**2.1.4.** Combining values for mobility component: The value of loss of ROM and loss of muscle strength is to be computed with the help of the combining formula:

$$a + \frac{b(90-a)}{90}$$

where a = higher value, b = lower value.

# 2.2. Stability Component

(a) Total value of the stability component is 90%

(b) It shall be tested by clinical method as given in Form **B** (Assessment Proforma for lower extremity) in Appendix II. There are Ten activities, which need to be tested, and each activity has a value of nine per cent (9%). The percentage valued in relation to each activity depends upon the percentage of loss stability in relation to each activity.

#### 2.3. Extra Points

Extra points (% of impairment) are given for deformities, pain, contractures, loss of sensations and shortening etc.

For Shortening (true shortening and not apparent shortening):

First 1/2" - Nil

Every 1/2" beyond first 1/2" - 4%

Maximum extra points for associated problems such as deformity, pain, contractures etc. to be added are 10% (excluding shortening).

(a) Deformity

In functional position - 3%

In non-functional position - 6%

Mild (slightly interfering with function) - 3%

Moderate (interfering with function) - 6%

Severe (grossly interfering with function) - 9%

(c) Loss of sensation

Partial Loss - 6%

Complete Loss - 9%

(d) Complications

Superficial complications - 3%

Deep complications - 6%

# **SECTION B:**

# 3. Guidelines for Evaluation of Permanent Physical Impairment of the Spine

# **Basic guidelines:**

3.1. Permanent physical impairment caused by spinal injuries or deformity may change over the years, the certificate issued in relation to spine may have to be reviewed as per the standard guidelines for disability certification.

3.2. Permanent physical impairment is stated in relation to the Spine which has been in use in India for the past many years (in the absence of a generally agreed upon system in India of reflecting in relation with the whole body).

# **3.3 TRAUMATIC LESIONS**

# 3.3.1 Cervical Spine Injuries:

No.	Cervical Spine Injuries	Percentage of PPI in relation to the 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 dislocation/subluxation including whiplash injury.	
	A) With fusion healed, No permanent motor or sensory changes	10%
	B) Persistent pain with radiologically demonstrable instability.	
		25%
iii.	Severe Dislocation:	
	A) Fair to good reduction with or without fusion with no residual motor or sensory involvement	10%
	B) Inadequate reduction with fusion and persistent radicular pain	15%

# 3.3.2 Cervical Intervertebral Disc Lesions:

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

No.	Thoracic and Thoracolumbar Spine Injuries	Percentage of PPI In relation to 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 (ii) with fusion, pain only on heavy use of back	15%
iv.	Radiologically demonstrable instability with fracture or fracture dislocation with persistent pain	30%

# 3.3.3 Thoracic and Thoracolumbar Spine Injuries:

# 3.3.4 Lumbar and Lumbosacral Spine: Fracture

No.	Lumbar and/or Lumbosacral Spine Fracture	Percentage of PPI In relation to Spine
i.	Compression of 25% or less of one or two adjacent Vertebral bodies, No definite pattern, No neurological Deficit	10%
ii.	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.	20%
iii.	Radiologically demonstrable instability in low lumbar or Lumbosacral spine with pain	30%

# 3.3.5 Intervertebral Disc lesion:

No.	Intervertebral Disc lesion	Percentage of PPI In relation to Spine
i.	Treated case with persistent pain	10%
ii.	Treated case with persistent pain and instability	20%
iii.	Treated case with persistent pain and activities of lifting moderately modified	25%
iv.	Treated case with persistent pain and stiffness, aggravated by heavy lifting necessitating modification of all activities requiring heavy weightlifting	30%

#### 4. Non-Traumatic Lesions:

# Scoliosis and/or Kyphoscoliosis:

4.1. Scoliosis is a condition in which an individual's spine has lateral, or side to side curvature. Although scoliosis is a three-dimensional deformity, on an x-ray, scoliosis curves can often look like a simple "S" or a "C" shape.

4.2. Scoliosis is defined with radiographs that include a standing x-ray of the entire spine antero-posterior view, as well as the lateral view. Curve magnitude is measured in degrees using the Cobb method.

A straight spine has a curve of 0°; any curve greater than 10° is considered scoliosis.

Between 0° and 10° is considered "postural asymmetry" which is not true scoliosis.

The lateral radiograph is used to determine the thoracic kyphosis (or round back appearance) and the amount of lumbar lordosis (swayback).

4.3. In general, the severity of the scoliosis depends on the degree of the curvature and whether it adversely affects functioning of vital organs, specifically the lungs and heart.

|--|

Group	Cobb Angle	% of permanent physical impairment
Group 1	10-20 degrees	1 to 5%
Group 2	21-30 degrees	6 to 9%
Group 3	31-50 degrees	10 to 19%
Group 4	51-75 degrees	20 to 29%
Group 5	76-100 degrees	30 to 39%
Group 6	101-125 degrees	40 to 60%
Group 7	126 degrees or greater	61 to 70%

4.4. A person with scoliosis or kyphoscoliosis should be assessed for cardiorespiratory limitations if present. Additional weightage in % of permanent is to be given according to severity of involvement as assessed clinically or relevant investigations mentioned in the Guidelines under respective section.

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

#### (a) Chest Expansion

Chest expansion is a simple, inexpensive, and non-invasive clinical/bedside test for assessing chest mobility. Its intrarater and inter-rater reliability have been largely demonstrated in healthy populations and in individuals with respiratory disease. A correlation between chest expansion and lung function has been reported in subjects with ankylosing spondylitis, pneumothorax, pleural effusion, asbestos-related pleural fibrosis, and chest wall distortion.

Chest expansion is to be measured using a measuring tape at 2 different levels of the rib cage. The anatomical markers used to define upper chest expansion are the third intercostal space at the level of the clavicular line and the spinous processes of the fifth thoracic vertebrae. To define lower chest expansion, the tip of the xiphoid process and the spinous process of the tenth thoracic vertebrae are used as markers.

Instructions are given to the subjects and the procedure is demonstrated to ensure adequate understanding. The 2 measurements of chest diameter are taken at the end of deep inspiratory and expiratory manoeuvres. Upper and lower chest expansions are obtained by subtracting the inspiratory diameter from the expiratory diameter, according to the designated anatomical markers. Subjects are sitting with their arms at their sides, with the trunk and chest uncovered. The examiner performs 1 measurement of upper chest expansion and then 1 measurement of the lower chest expansion consecutively, holding the measuring tape at both ends with thumb and index finger around the subject's body. The measuring tape has to be snug but not tight.

In the absence of another standardised universally acceptable method with respect to chest expansion and the extent of physical impairment, the following is proposed as it has been in use for past many years.

No.	Maximum Chest Expansion	%Permanent Physical Impairment
1.	More than 4 cm	Nil
2.	3 cm. to 4 cm.	5
3.	2 cm. to less than 3 cm	10
4.	1 cm. to less than 2 cm	15
5.	Less than 1 cm.	20

#### (b) Counting in a single breath:

It is a simple non-invasive clinical/bedside screening test sometimes used to assess respiratory muscle strength. It is performed by inhaling maximally and counting as far/high a number as possible in normal voice in a single breath. Two attempts may be recorded following a one-minute rest in between measurements. It may be useful when formal Vital Capacity measurement is difficult or not possible.

In the absence of a standardised universally acceptable method with respect to single breath count, the following is proposed as it has been in use for past many years.

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No.	Single breath count (SBC)	% Permanent Physical Impairment
1	More than 40	Nil
2.	31 to 40	5
3.	21 to 30	10
4.	11 to 20	15
5.	5 to 10	20
6.	Less than 5	25

The additional weightage is to be added using combining formula:

$$a + \frac{b(90-a)}{90}$$

where a = higher value, b = lower value.

# 4.6. Torso Imbalance:

In addition to the above PPI should also be evaluated in relation the torso imbalance.

In the absence of a standardised universally acceptable method with respect to torso imbalance, the following is proposed as it has been in use for past many years.

The torso imbalance should be measured by dropping a plumb line from C7 spine and measuring the distance of plumb line from gluteal crease.

No.	Deviation of Plumb line	%of Permanent Physical Impairment
1.	Up to 1.5 cm	4
2.	1.6 - 3.0  cm	8
3.	3.1 – 5.0 cm	16
4.	5.1cm or more	32
No.	Head Tilt over C7 spine	%of Permanent Physical Impairment
1.	Up to 15°	4
2.	More than 15°	10

Associated Problems as given below: To be added directly but the total value of PPI in relation to trunk should not exceed 100%.

# (a) Pain

No.	Extent of Activity (ADL*) Limitation	%ofPermanent Physical Impairment
1.	Mild limitation of ADLs	4
2.	Moderate limitation of ADLs	6
3.	Severe limitation of ADLs	10

\* ADL - Activities of Daily Living

# (b) Cosmetic Appearance:

- no obvious disfiguration with clothes on - Nil

- mild disfigurement - 2%

- severe disfigurement - 4%

# (c) Leg Length Discrepancy:

- First1/2" shortening Nil
- Every1/2" beyond first1/2" 4%

(d) Neurological deficit - Neurological deficit should be calculated as per established method of evaluation of PPI in such cases. Value thus obtained should be added using the combining formula.

# 4.7. Kyphosis:

Kyphosis is a larger-than-normal forward bend in the spine, most commonly in the upper back. The normal range of thoracic kyphosis (according to the Scoliosis Research Society) is between  $20^{\circ}-40^{\circ}$ , and any curvature higher than  $40^{\circ}$  is considered abnormal.

Evaluation should be done on the similar guidelines as used for scoliosis stated above with the following modifications:

Spinal Kyphotic Deformity	Permanent Physical Impairment
Less than 40°	Nil
41-50°	10%
51-60°	20%
61-70°	30%
71-80°	40%
81-90°	50%
91-100°	60%

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

Distance from ankle anterior joint line to the plumb line	% of permanent physical impairment
Less than 5 cm	Up to 4%
5 to 10 cm	Up to 8% depending on distance
10 to 15 cm	Up to 16% depending on distance
More than 15 cm	Up to 32% depending on distance

It is added directly.

#### 4.9. Miscellaneous conditions:

Those conditions of the spine which cause stiffness and pain etc. but are not listed above are rated as follows:

No.	Condition	% of permanent physical impairment
1.	Subjective symptoms of pain, no involuntary muscle spasm, not substantiated by demonstrable structural pathology	Nil
2.	Pain, persistent muscles spasm and stiffness of spine, substantiated by mild radiological changes, and regular need for treatment (medications and non- pharmacological measures)	20
3.	Same as ii. above with moderate radiological changes and regular need for treatment (medications and non-pharmacological measures)	25
4.	Same as ii. above with severe radiological changes involving any one of the regions of spine and regular need for treatment (medications and non- pharmacological measures, interventions)	30
5.	Same as iv. above involving the whole spine and regular need for treatment (medications and non-pharmacological measures, interventions)	40

# **SECTION C:**

# 5. Guidelines for Evaluation of Permanent Physical Impairment in Persons with Amputation (Amputees):

# 5.1. Basic Guidelines:

(a) In cases of multiple amputees, the % of permanent impairment is to be computed by using the combining formula:

$$a + \frac{b(90-a)}{90}$$

Where a = higher value, b = lower value.

(b) If the stump is unfit for satisfactorily fitting the prosthesis, an additional weightage of 5% should be added to the value.

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

(d) Involvement of dominant upper limb (right upper limb in majority of individuals) in acquired amputation should be given 10% additional weightage.

No.	Level of Upper Limb Amputation	% of permanent physical impairment
1.	Fore-quarter amputation	100
2.	Shoulder Disarticulation	90
3.	Trans Humeral (Above Elbow) up to upper 1/3 of arm	85
4.	Trans Humeral (Above Elbow) up to lower 1/3 of arm	80
5.	Elbow disarticulation	75
6.	Trans Radial (Below Elbow) up to upper 1/3 of forearm	70
7.	Trans Radial (Below Elbow) up to lower 1/3 of forearm	65
8.	Krukenberg Operation or Amputation	65
9.	Wrist disarticulation	60
10.	Hand through carpal bones	55
11.	Partial amputation of hand (at the level of shafts of all the metacarpals); thumb intact	30
12.	Thumb through C.M. or though 1st MC joint	30
13.	Thumb disarticulation through metacarpophalangeal Joint or through proximal phalanx	25
14.	Thumb disarticulation through inter phalangeal joint or through distal phalanx	15
15.	Amputation through Proximal phalanx or Disarticulation through MP joint of Index finger	15
	Amputation through Proximal phalanx or Disarticulation through MP joint of Middle finger	5
	Amputation through Proximal phalanx or Disarticulation through MP joint of Ring finger	3
	Amputation through Proximal phalanx or Disarticulation through MP joint of little finger	2
16.	Amputation through Middle phalanx or Disarticulation	10

# 5.2. Upper Limb Amputations:

	through PIP joint of Index finger	
	Amputation through Middle phalanx or Disarticulation through PIP joint of Middle finger	4
	Amputation through Middle phalanx or Disarticulation through PIP joint of Ring finger	2
	Amputation through Middle phalanx or Disarticulation through PIP joint of little finger	1
17.	Amputation through Distal phalanx or disarticulation through DIP joint of Index finger	5
	Amputation through Distal phalanx or disarticulation through DIP joint of Middle finger	2
	Amputation through Distal phalanx or disarticulation through DIP joint of Ring finger	1
	Amputation through Distal phalanx or disarticulation through DIP joint of little finger	1

#### 5.3. Lower Limb Amputations:

No.	Level of Lower Limb Amputation	% of permanent physical impairment
1.	Hind quarter	100
2.	Hip disarticulation	90
3.	Trans Femoral (Above knee) up to upper 1/3 of thigh	85
4.	Trans Femoral (Above knee) up to lower 1/3 of thigh	80
5.	Through knee	75
6.	Trans Tibial (Below Knee) up to upper 1/3 of leg	70
7.	Trans Tibial (Below Knee) up to lower 1/3 of leg	60
8.	Through ankle	55
9.	Syme's	50
10.	Up to mid-foot (proximal to tarso-metatarsal joints level)	40
11.	Up to forefoot (distal to tarso-metatarsal joints level)	30
12.	Loss of all toes	20
13.	Loss of first toe	10
14.	Loss of second toe	4
15.	Loss of third toe	3
16.	Loss of fourth toe	2
17.	Loss of fifth toe	1

# 6. Guidelines for Evaluation of Permanent Physical Impairment of Congenital deficiencies of the extremities

Congenital limb deficiency simply means the partial or total absence of a limb at birth. These may be sporadic or syndromic.

A variety of limb classification systems have been used over the years. The current and accepted form of classification that has been adopted internationally since 1998 is the ISPO (International Society for Prosthetics and Orthotics) classification system.

Common examples of congenital limb deficiencies include congenital femoral deficiency, proximal focal femoral deficiency and congenital tibial deficiency in lower limb and congenital radial longitudinal deficiency (radial club hand) and congenital ulnar longitudinal deficiency in upper limb.

#### 29.1. Requirement for the multispecialty board if following organ/system involvement is assessed

- 1. Vision impairment
- 2. Growth failure
- 3. Locomotor disability
- 4. Neurological involvement cognitive impairment
- 5. Hearing impairment

#### 29.2. Medical Authority\*:

Certifying authority (from Government or others) for certification and evaluation of disability due to blood disorder shall comprise of the following: -

(a) Chairperson -Chief District Medical Officer or the Chief Medical Officer or Medical Superintendent of the hospital.

(b) Members-

- i. Treating doctor Hematologist (adult or pediatric) or General Medicine or Paediatricianor General physician or as the case may be and the availability of experts.
- ii. PMR expert or Orthopaedic surgeon, if required.
- iii. Other Specialists: In case of sequelae relating to visual abnormality, hearing problem, cerebral dysfunction, etc. In case of limitation of availability of any expert, which ever additional experts are available can be included.
- iv. End organ damage (if doubt or difficulty in assessment) then only if needed additional specialist may be included as per the discretion of chairperson. But undue delay or inconvenience to patient is to be avoided.

**Note\*** - In view of shortage of the specialist doctors resulting in huge pendency in disability assessment, the chairperson (Who compulsorily has to be a Government Doctor e.g. Chief Medical Officer or Civil Surgeon or as specified) of the disability assessment board may, if required, include private medical practitioner(s) (duly qualified in the respective medical domain) as a board member.

A Benchmark disability of 40% is assigned to the patients fulfilling the diagnostic criteria of severe hemophilia, thalassemia major or intermedia, transfusion-dependent thalassemia intermedia, homozygous sickle cell disease, and severe forms of compound heterozygous sickle cell syndromes (Sickle-Beta Thalassemia and Sickle-HbD). With respect to permanent disabilities, the reassessment, if requested by PwD shall be considered after five years if progression is noted (as per the format given below).

The individual would no longer be eligible for disability certificate post successful treatment with gene therapy/ gene editing (whenever applicable).

#### Application for reassessment of disability

# (To be submitted to the certifying authority which issued the existing certificate or the certifying authority at the current place of residence of the applicant with disability)

(1) Name :			(as mentioned in the existing certificate
of disability)			
(2) Father's Name :		Mother's Nam	le:
(3) Date of Birth :	/	/	(Date) (Month) (Year)
(4) Sex: Male/Female/Tr	ansgender		
(5) Address:			
(a) Permanent address :			
(b) Current address, if the	e applicant ha	s shifted outside the	jurisdiction of the certifying authority of the existing

certificate of disability (Please enclose proof thereof (e.g. transfer of the parent/ legal guardian/ shifting of residence (allotment of house/ rent agreement, any other relevant document) :

(d) Contact details of the person with disability or legal guardian or the person who can be contacted when required : Mob/telephone number :\_\_\_\_\_ Email Id, if available :\_\_\_\_\_

(6) Type of disability :

(7) Percentage of disability :

(8) Name and address of the hospital/ certifying authority which issued the existing certificate of disability (enclose a copy of the existing certificate of disability) :

(9) Reason for reassessment : (Please strike off the reasons that are not applicable)

(i) Validity of my existing certificate has expired on\_\_\_\_\_

(ii) Validity of my existing certificate will be expiring on \_\_\_\_\_

(iii) My disability has worsened

(iv) My disability has improved

(v) I am no longer eligible for disability certificate post successful bone marrow transplant or post Gene Therapy conducted on\_\_\_\_\_(Please enclose the copy of the certificate/ record pertaining to transplant/ gene therapy / gene editing

duly signed by the treating doctor).

(10) Declaration:

I hereby declare that all particulars stated above are true to the best of my knowledge and belief, and no material information has been concealed or misstated. I further state that if any inaccuracy is detected in the application at any stage, I shall be liable to forfeiture of any benefits derived and other action as per law.

(signature or left thumb impression of the person with disability or of his/her legal guardian in case of persons with multiple disabilities, etc)

Date :

Place:

Enclosures:

1. Copy of existing certificate of disability.

2. Copy of the certificate/ record pertaining to successful bone marrow transplant or Gene Therapy duly signed by the treating doctor.

3. Proof of change of residence {Please see Sl. Number (5) (b)}. In case of an inmate of a residential institution for persons with disabilities or destitute, etc., a certificate of residence from head of such institution be enclosed.

4. Two recent passport size photographs.

(For office use only)

Upon reassessment of the disability:

(i) A fresh certificate of disability with \_\_\_\_\_\_ percentage of disability (mention type of disability) issued on \_\_\_\_\_\_ and the existing disability certificate \_\_\_\_\_\_ dated \_\_\_\_\_ has been cancelled.

(ii) Issuance of fresh certificate of disability is not considered necessary.

Signature of issuing authority

Official Stamp

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Vision impairment

Hearing impairment

Growth failure

Locomotor disability

Neurological involvement

# SICKLE CELL DISEASE

# Checklist:

**1. Complete Blood Counts HPLC** test of the patient (not transfused in last 3 months) or both parents HPLC showing HbS carrier status and symptoms in the patient for sickle homozygous. Or one parent who is sickle carrier and one who is either beta thalassemia trait (carrier) or HbDcarrier. (*The HPLC/molecular report should include the person's name and age, the laboratory's name and address, the date of performing the test, and the full name and qualifications of the signatory. The report should be available at the time of certification and a copy of the same should be retained for the records). Or government approved Hb electrophoresis/POC with supportive documentation of SCD complications or healthcare visits for treatment.* 

2. Documentation of treatment for crises, and hospitalization for complications

Or documentation of regular treatment with hydroxyurea or other approved etc. or records of blood transfusions from the sickle cell treating centre/ day-care/hospital (government or non-Government)

3. Documentation for blood transfusion

4. Investigation to support -Endocrine dysfunction- if any

5. NYHA questionnaire (Appendix XVII)

6. For patients with liver dysfunction- Bilirubin, Albumin, and Prothrombin report (CTP calculation) required if claiming. (Appendix XVIII)

7. For patients with Kidney dysfunction- Serum creatinine report (EGFR calculation) will be required if claiming. (Appendix XIX)

8. Investigation to support transfusion-transmitted infection- (HIV, HBV, HCV)

9. PDQ questionnaire (Appendix XX)

10. Multiple disability (see section VIII) board assessment for persons with additional disabilities as per guidelines-

Vision impairment

Hearing impairment

Growth failure

Locomotor disability

Neurological involvement, cognitive impairment

# VIII. MULTIPLE DISABILITIES

# **30.1. DEFINITION**

Multiple Disabilities means a combination of two or more types of disabilities, namely

(i) Locomotor disability (due to any cause including orthopaedic, cardiac, respiratory, burn injuries including burn injuries due to acid exposure/attack)

(ii) Visual impairment;

(iii) Hearing impairment;

(iv) Disability associated with blood related disorders.

(v) Developmental disorders (including Global Developmental Delay, Intellectual Disability, Specific Learning Disability, Autism Spectrum Disorder etc.

(vi) Mental illness

(vii) Chronic Neurological Disorders

ASSESSMENT

# 30.2. Guidelines for Assessment:

The guidelines used for individual disability shall be used for assessment of each specific disability of a person having multiple disability, in the first instance. Each disability will be evaluated and the degree of disability will be calculated by the notified Specialists. Based on the score received for each disability, they will be graded from the most severe to the least severe. Only individual disability is more than or equal to 25% will be included for assessment of composite disability due to multiple disabilities.

If disability due to a particular disability is given as range and not as a discrete number, then midpoint of the range will be used while calculation of multiple disability. For example, if disability due to mental illness is determined to be moderate i.e., 40 to 70 %, then for calculation of severity of multiple disability, mental disability of 55% will be used. Similarly, if disability due to mental illness is determined to be severe i.e., 71 to 99%, then for calculation of severity of multiple disability, mental disability of 85% will be used.

Subsequently, in order to arrive at the composite total percentage due to multiple disabilities, the following combining formula shall be used

$$\mathbf{x} = \mathbf{a} + \frac{b(100-a)}{100}$$

where

"x" is the composite total percentage due to multiple disabilities.

"a" is the percentage disability with higher score and

"b" is the percentage disability with lower score.

However, the composite total percentage due to multiple disabilities shall not exceed 100%.

**Example 1:** If the percentage of hearing disability is 40% and the percentage of visual disability is 30%, then by applying the combining formula given above, the total percentage of multiple disabilities due to hearing disability and visual disability will be calculated as follows: -

$$40 + \frac{30(100 - 40)}{100} = 58\%$$

If a person has more than two disabilities, the above formula will be successively applied beginning with the two disabilities with the highest percentage scores and proceeding further by including the next lower percentage score in the calculation.

**For example**, a person has 3 Disabilities. The percentage score for first disability is the highest equal to "a"; the score for the second disability is equal to "b" (second highest); and score for third disability is equal to "c" the lowest score. According to the above formula:

$$X = a + \frac{b(100-a)}{100}$$

(score of disability 1 and 2 = x)

This(x) will become (a) for the purpose of calculation of composite disability due to the three disabilities which is y.

$$y = x + \frac{c(100 - x)}{100}$$

Such calculation will continue till the last disability (with severity score more than or equal to 25%) is covered. The final figure will be the composite disability due to all the multiple disabilities.

The maximum composite disability score is 100%.

**Example 2:** If the percentage of intellectual disability is 50%, percentage of hearing disability is 40% and the percentage of visual disability is 30%, percentage of locomotor disability is 10%, then by applying the combining formula given above, the total percentage of multiple disabilities will be calculated as follows: -

Step 1: intellectual disability 50%, hearing disability 40%

Step 2: Composite of intellectual disability and hearing disability 70% plus visual disability 30%

$$50+\frac{40(100-50)}{100}=70\%$$

$$70 + \frac{30(100-70)}{100} = 79\%$$

**Step 3:** In case of persons having more than two disabilities, this formula will be applicable starting from disability having the highest percentage and taking two disabilities at a time. For the third disability, the resultant of above formula, as applied to the two higher % disabilities, will become the higher disability "x" in the above-mentioned formula. Such calculation will continue till the last disability is covered subject to a maximum of 100%.

The certificate due to multiple disabilities will provide the composite disability due to all the multiple disabilities, as above. Further, all the different multiple disabilities will be listed in the disability certificate.

#### **30.3 MEDICAL AUTHORITY\*:**

There shall be a standing medical board in all government institutions certifying for multiple disability. The standing medical board will convene periodically depending on the applications received for assessment of multiple disabilities.

The standing medical board shall comprise of the following: -

(a) The Medical Superintendent or Chief Medical Officer or Civil Surgeon or Plastic Surgeon or any other equivalent authority as notified by the State Government – Chairperson

(b) Specialists required for assessing the individual disabilities as per the requirement of respective guidelines for Locomotor disability, Visual impairment, Hearing impairment, Disability associated with blood related disorders, Developmental disorders, Mental illness and Chronic Neurological Disorders.

**Note\*** - In view of shortage of the specialist doctors resulting in huge pendency in disability assessment, the chairperson (Who compulsorily has to be a Government Doctor e.g. Chief Medical Officer or Civil Surgeon or as specified) of the disability assessment board may, if required, include private medical practitioner(s) (duly qualified in the respective medical domain) as a board member.

List of Appendices for Inclusion in the Guidelines for Purpose of Assessing the Extent of Specified Disabil	ity
in a Person included under the Rights of Persons with Disabilities Act, 2016 (49 of 2016)	

Appendix No	Subject	If Free or Copy righted
I.	Muscle Strength Grading (Medical Research Council- MRC scale)	Freely Available**
II.	Form A Assessment Proforma for Upper Extremity	Freely Available**

	Form B Assessment Proforma for Lower Extremity	
III.	Average Normal Range of Motion (degrees) at Different Joints:	Freely Available**
IV.	Perceptual Speech Intelligibility Rating Scale (AYJNISHD, 2022)	Freely Available**
V.	Consensus Auditory Perceptual Evaluation of Voice (CAPE-V)	Freely Available**
VI.	Vineland Social Maturity Scale	Copyrighted
VII.	Malin's Intelligence Scale for Indian Children (MISIC)	Copyrighted
VIII.	A.WISC -IV Wechsler's Scale for Children B. Binet Kamat Test ( BKT) C. NIEPID IQ TEST	Copyrighted Copyrighted Freely Available**
IX.	NIMHANS Index for SLD	Copyrighted
Х.	Grade Level Assessment Device for Children with Learning Problems in School- GLAD (NIEPID)	Freely Available**
XI.	AIIMS-Modified INCLEN Diagnostic Tool for ASD	Freely Available**
XII.	Indian Scale for Assessment of AUTISM	Freely Available**
XIII.	Indian Disability and Assessment Scale(IDEAS)	Freely Available**
XIV.	Scale for the Assessment and Rating of Ataxia (SARA)	Freely Available**
XV.	Modified Hoehn and Yahr Scale	Freely Available**
XVI.	ALS Functional Rating Scale Revised (ALS-FRS-R)	Freely Available**
XVII.	The New York Heart Association (NYHA) Functional Classification	Freely Available**
XVIII.	CTP Calculation	Freely Available**
XIX.	EGFR Calculation	Freely Available**
XX.	Pain Disability Questionnaire (PDQ)	Freely Available**

Note\*\*:- The Latest versions of freely available tests should be used as updated from time to time.

#### APPENDICES

#### APPENDIX- I

# MUSCLE STRENGTH GRADING (MEDICAL RESEARCH COUNCIL- MRC

# SCALE):

Grade	Description
0	No contraction of muscle being tested
1	Flicker or trace of contraction of muscle being tested
2	Active contraction of the muscle with gravity eliminated
3	Active contraction of the muscle against gravity
4	Active contraction of the muscle against gravity and resistance
5	Normal strength

APPENDIX- II

#### FORM A:

# ASSESSMENT PROFORMA FOR UPPER EXTREMITY Name

Valline and a second
Age Gender (Sex)
Department
OPD Reg. No.
Diagnosis
Address

#### ARM COMPONENT (Total Value 90%)

ARM COMPON ENT	Component	Norma l Value (Degre es)	Rt. Sid e	Lt. Sid e	Lo ss of % Rt. Sid e	Lo ss of % Lt. Sid e	Me an % loss Rt. Lt.	Su m of % los s Rt. Lt.	Combin ing value Rt. Lt.	% Summa ry value for compon ent
ROM Value 90% Shoulder										
ROM Value 90% elbow										
ROM Value 90% Wrist								2 <u> </u>		

5	2	5
Э	L	Э

Muscle Strength Value 90% Shoulder	1. Flexion 2. Extension 3. Rotation - External 4. Rotation - Internal 5. Abduction 6. Adduction				
Muscle Strength Value 90% Elbow	<ol> <li>Flexion</li> <li>Extension</li> <li>Pronation</li> <li>Supination</li> </ol>				
Muscle Strength Value 90% Wrist	1. Dorsi Flexion 2. Palmar Flexion 3. Radial Deviation 4. Ulnar deviation				
Coordinate d Activities Value 90% (Please also see below)	<ol> <li>Lifting overhead objects, removing and placing at the same place</li> <li>Touching tip of the nose with tip of a finger</li> <li>Eating by oneself</li> <li>Grooming, Combing and Plaiting</li> <li>Putting on a shirt/kurta/ upper garment</li> <li>Activity of ablution (cleaning self after toileting)</li> <li>Drinking water holding a Glass/tumble r 8. Buttoning/ unbuttoning b</li> </ol>				

9. Putting on trouser/pant/l		
ower		
garment/Tie		
Nara, Dhoti,		
using the Zip		
as the case		
may be		
10. Holding a		
Pen/Pencil		
and Writing		 

# HAND COMPONENT (TOTAL VALUE 90%)

HAND COMPONE NT	Compon ent	Normal Value (Degre es)	Rt. Sid e	Lt. Sid e	Los s of % Rt. Sid e	Los s of % Lt. Sid e	Mea n % loss Rt. Lt.	Su m of % los s Rt. Lt.	Combini ng value Rt. Lt.	% Summar y value for compon ent
30% prehension 1. Hand Component A. Opposition (8%) B. Lateral Pinch (5%) C. Cylindrical Grasp D. Spherical Grasp E. Hook Grasp 2. Sensation										
30% Strength										-

#### **Coordinated Activities Value 90%**

S. No.	Activity tested	No limitation	Mildly impaired	Moderately impaired	Severely impaired	Totally impaired
1.	Lifting overhead objects, removing and placing at the same place	0%	3%	5%	7%	9%
2.	Touching tip of the nose with tip of a finger	0%	3%	5%	7%	9%
3.	Eating by oneself	0%	3%	5%	7%	9%

4.	Grooming, Combing and Plaiting	0%	3%	5%	7%	9%
5.	Putting on a shirt/kurta/ upper garment	0%	3%	5%	7%	9%
6.	Activity of ablution (cleaning self after toileting)	0%	3%	5%	7%	9%
7.	Drinking water holding a Glass/tumbler	0%	3%	5%	7%	9%
8.	Buttoning/unbuttoning	0%	3%	5%	7%	9%
9.	Putting on trouser/pant/lower garment/Tie Nara, Dhoti, using the Zip as the case may be	0%	3%	5%	7%	9%
10.	Holding a Pen/Pencil and Writing	0%	3%	5%	7%	9%

Summary value for upper extremity is calculated from arm component and hand component values

values. 10% to be added in case of significant involvement of dominant extremity due to an acquired condition.

Up to 10% may be added in cases with significant and persistent infection, deformity, malalignment, contracture, cosmetic disfigurement, and abnormal mobility etc.

#### Form B ASSESSMENT PROFORMA FOR LOWER EXTREMITY

Department .....

OPD Reg. No. ..... Diagnosis Address

.....

#### **MOBILITY COMPONENT (Total Value (90%)**

ROM = Range of Motion Rt = Right Lt = Left

Active Range of Motion is to be considered and not the Passive Motion.

Joint	Compon ent	Normal Value	Rt. Side	Lt. Side	Loss of % Rt. Side	Lo ss of % Lt. Sid e	Mean % Rt. Lt.	Mea n Rt. Lt.	Comb ining value Rt. Lt.	% Summary value of mobility compone nt
ROM HIP										
ROM Knee										
ROM Ankle &										

Foot				
Muscl es Stren gth HIP				
Musel es Stren gth KNE E				
Muscl es Stren gth ANK LE & FOO T				

# STABILITY COMPONENT (Total Value 90%)

No.	Activity	No. limitation	Mildly limited	Moderately limited	Severely limited	Unable to perform
1.	Standing on both legs	0	2	4	7	9
2.	Standing on the affected leg	0	2	4	7	9
3.	Walking on plain surfaces	0	2	4	7	9
4.	Sitting on a Chair	0	2	4	7	9
5.	Climbing Up Stairs	0	2	4	7	9
6.	Getting Downstairs	0	2	4	7	9
7.	Taking turns to right and left side	0	2	4	7	9
8.	Squatting on floor	0	2	4	7	9
9.	Kneeling down	0	2	4	7	9
10.	Sitting Cross leg	0	2	4	7	9

Maximum Total 90%. Up to 10% may be added in cases with complications like significant and persistent (i) Infection, (ii) Deformity (iii) Loss of sensation(s).

# APPENDIX III

Average Normal Range of Motion (degrees) at different Joints:

Joint	Movement	Average Normal Range (degrees)		
Shoulder	Flexion	0-180		
	Extension (hyper)	0-50		
	Abduction	0-180		
	Adduction	0-50		
	Medial (Internal) rotation	0-80		
	Lateral (External) rotation	0-90		
Elbow	Flexion	0-150		
	Extension	0		
Forearm	Pronation	0-80		
	Supination	0-85		
Wrist	Flexion	0-80		
	Extension	0-70		
	Radial deviation	0-20		
	Ulnar deviation	0-50		
Thumb CMC	Abduction	0-70		
Thund Offic	Flexion	0-15		
	Extension	0-20		
	Opposition	Tip of thumb to base or tip fifth digit		
Thumb MCP	Flexion	0-50		
Thumb IP	Flexion	0-80		
Digits 2-5 MCP	Flexion	0-90		
	Extension	0-30		
PIP	Flexion	0-90		
DIP	Flexion	0-90		
	Hyperextension	0-10		
Joint	Movement	Average Normal Range (degrees)		
Hip	Flexion	0-125		
	Extension (hyper)	0-15		
	Abduction	0-45		
	Adduction	0-30		
	Lateral (External) rotation	0-45		
	Medial (Internal) rotation	0-40		
Knee	Flexion	0-135		
	Extension (hyper)	0-10		
Ankle	Dorsiflexion	0-20		
5.77.77.75. <sup>7</sup> .	Plantarflexion	0-50		
Ankle/Foot	Inversion	0-35		
	Eversion	0-25		
	Adduction	0-20		
	Abduction	0-10		

MTP joints	Flexion	0-30		
	Extension	0		
IP joints of toes	Flexion	0-50		
	Extension	0		
Thoracolumbar spine (Back)	Flexion	0-100 (Thoracic = 40, Lumbar = 60)		
	Extension	0-60 (Thoracic = 25, Lumbar = 35)		
	Lateral flexion	0-30 (Thoracic and Lumbar are almost equal)		
	Rotation	0-45 (on either side, left and right)		
Neck	Flexion	0-50		
	Extension	0-60		
	Lateral bending	0-45		
	Rotation	0-80		

# APPENDIX IV

Perceptual Speech Intelligibility Rating Scale (AYJNISHD(D), 2022)

Description of speech sample
Normal
Can understand without difficulty ;however feel speech is not normal
Can understand with little effort occasionally need to ask for repetition
Can understand with concentration and effort specially by sympathetic listener, require a minimum of two or three repetition.
Can understand with difficulty and concentration by family but not others
Can understand with effort if content is known
Cannot understand at all even when content is known