

Change the Definition of Blindness

INTRODUCTION

The categorization of visual impairment currently in use worldwide is based on the ICD 10th Revision 1st and 2nd edition. This is derived from a WHO Study group on the Prevention of Blindness that was convened in 1972 to provide a standardized definition. This was to facilitate the collection of population based data on prevalence of vision impairment and blindness in a uniform and comparable manner. At the time of this meeting four major causes of vision loss had been identified. These were Trachoma, Onchocerciasis, Xerophthalmia and Cataract. There was no consideration of refractive error as an underlying cause of visual impairment, if not blindness.

CASE FOR REVISION

There are five issues that dictate the need for consideration of a revision of the current definition and categorization. These are:

- (1)The definition of visual impairment categories based on “best corrected” vision
- (2)The nomenclature
- (3)The categorization of BLINDNESS
- (4)The inconsistencies within H 54 subcategories
- (5)The ICO Resolution on Revision of ICD 10

Recommendations of WHO Consultation on “Development of Standards for Characterization of Vision Loss and visual functioning “

(1)Definition of Visual Impairment and Blindness

The currently used definition includes the term “best Corrected Vision” in the better eye.

The methodology followed for measuring visual acuity, particularly in population based studies, is to use a “pin hole” in patients whose “presenting” vision is below a certain cut off point (currently 6/18). Many recent studies have shown that the use of “best corrected” vision overlooks a large proportion of persons with visual impairment, including blindness, due to uncorrected refractive error, a common occurrence in many parts of the world.

Uncorrected refractive error is now considered to be a major cause of visual impairment and estimations are under way to calculate the loss in terms of DALYs (disability-adjusted life years) resulting from this cause.

The correction of refractive error is a cost effective intervention and is one of the priorities under the disease control component of the Global Initiative for the Elimination of Avoidable Blindness (VISION 2020, the Right to Sight).

(2)Nomenclature

The current ICD uses the words “LOW VISION” for categories 1, 2 and 3 of Vision impairment.

In the practice of eye care “LOW VISION” has a specific meaning as defined by WHO.

This is as follows:

”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 degree from the point of fixation, but who uses, or is potentially able to use, vision for planning and/or execution of a task. “

Under this definition persons who would benefit from low vision care also exist among those who are currently categorized as blind. This has led to miscalculations in the estimation of persons requiring LOW VISION care.

(3)Definition of Blindness

The current definition does not make a distinction between those who have “irreversible” blindness (NO perception of light) and those that have light perception but are still less than 3/60 in the better eye.

The management of these two categories is different and categorization based on this would be useful.

(4)Inconsistencies in H54 subcategories

The sub categories of **H54** have inconsistencies when describing “Monocular vision impairment” and “Monocular Blindness”; the fellow eye in these needs not necessarily to be “normal”. To add clarity to the sub-categories it is proposed to replace the current table (ICD - 10th Revision see below).

RECOMMENDATIONS

(1) The words “best corrected” be replaced by “presenting” in a revised definition

(2) Delete the term LOW VISION from the current ICD 10 definition to collectively describe categories of visual impairment 1, 2 and 3

(3) Categories as shown in the revised Table. 1.

(4) The wording in the **H54** subcategories be changed as follows in line with the proposed revised categories

H54.- Visual impairment including blindness (binocular or monocular)

Note: For definition of visual impairment categories see table below.

Excludes: amaurosis fugax (**G45.3**)

H54.0 Blindness, binocular

Visual impairment categories 3, 4 & 5

H54.1 Severe visual impairment, binocular

Visual impairment category 2

H54.2 Moderate visual impairment, binocular

Visual impairment category 1

H54.3 Mild or no visual impairment, binocular

Visual impairment category 0

H54.4 Blindness, monocular

Visual impairment categories 3, 4, 5 in one eye and categories 0, 1, 2 or 9 in the other eye.

H54.5 Severe visual impairment, monocular

Visual impairment category 2 in one eye and categories 0, 1 or 9 in other eye

H54.6 Moderate visual impairment, monocular

Visual impairment category 1 in one eye and categories 0 or 9 in other eye

H54.9 Unspecified visual impairment (binocular)

Visual impairment category 9

Note: The table below gives a classification of severity of visual impairment recommended by the Resolution of the International Council of Ophthalmology (2002) and the Recommendations of the WHO Consultation on “Development of Standards for Characterization of Vision Loss and Visual Functioning” (Sept 2003)

For characterizing visual impairment for codes **H54.0** to **H54.3**, visual acuity should be measured with both eyes open with presenting correction if any. For characterizing visual impairment for codes **H54.4** to **H54.6**, visual acuity should be measured monocularly with presenting correction if any. If the extent of the visual field is taken into account, patients with a visual field of the better eye no greater than 10° in radius around central fixation should be placed under category 3. For monocular blindness

(**H54.4**), this degree of field loss would apply to the affected eye.

Table 1 Proposed revision of categories of visual impairment

Presenting distance visual acuity		
Category	Worse than:	Equal to or better than:
Mild or no visual impairment 0		6/18 3/10 (0.3) 20/70
Moderate visual impairment 1	6/18 3/10 (0.3) 20/70	6/60 1/10 (0.1) 20/200
Severe visual impairment 2	6/60 1/10 (0.1) 20/200	3/60 1/20 (0.05) 20/400
Blindness 3	3/60 1/20 (0.05) 20/400	1/60* 1/50 (0.02) 5/300 (20/1200)
Blindness 4	1/60* 1/50 (0.02) 5/300 (20/1200)	Light perception
Blindness 5	No light perception	
9	Undetermined or unspecified	

* Or counts fingers (CF) at 1 metre.

Note: The term visual impairment in category **H54** comprises category 0 for mild or no visual impairment, category 1 for moderate visual impairment, category 2 for severe visual impairment, categories 3, 4 and 5 for blindness and category 9 for unqualified visual impairment. The term "low vision" included in the previous revision has been replaced by categories 1 and 2 to avoid confusion with those requiring low vision care.

Revise category title in Volume 2, page 126, ICD-10 2nd edition:

Chapter VII: Diseases of the eye and adnexa

H54.- Visual impairment including blindness (binocular or monocular)

This code is not to be used as the preferred code for the "main condition" if the cause is recorded, unless the episode of care was mainly for the blindness itself. When coding to the cause, **H54.-** may be used as an optional additional code.

Revise codes and add subterms in Volume 3:

Blindness (acquired)(congenital)(both eyes)(binocular) **H54.0**

....

- hysterical **F44.6**
- mind **R48.8**
- monocular **H54.4**
- night **H53.6**

- - vitamin A deficiency **E50.5**
- one eye (other eye normal) **H54.4**
- - low vision, other eye **H54.1H54.4**

Defect, defective

- vision NEC **H54.9**

Impaired, impairment (function)

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- tolerance, glucose **R73.0**
- vision NEC **H54.9**
- visual
- - binocular **H54.9**
- - - mild **H54.3**
- - - moderate **H54.2**
- - - severe **H54.1**
- - monocular
- - - moderate **H54.6**
- - - severe **H54.5**

Poor

- ...
- urinary stream **R39.1**
- vision NEC **H54.9**

Problem (related to)(with)

- ...
- sight **H54.9**

Vision, visual

- binocular, suppression **H53.3**
- blurred, blurring **H53.8**
- - hysterical **F44.6**
- defect, defective NEC **H54.9**
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- halos **H53.1**
- loss **H54.9**
- - both eyes **H54.3H54.1**
- - complete, with or without light perception— see *Blindness*
- - one eye **H54.5**
- - sudden **H53.1**
- low (both eyes) **H54.2**
- - one eye (other eye normal) **H54.6**
- - - blindness, other eye **H54.4**
- perception, simultaneous without fusion **H53.3**