

CODING INSTRUCTIONS FOR CATARACT SURGICAL SERVICES SURVEY RECORD

The Cataract Surgical Services Survey Record (Version I) is developed by the Prevention of Blindness and Deafness Unit of the WHO to facilitate the collection of data in population based Rapid Assessments for Cataract Surgical Services (RACSS). A copy of the Cataract Surgical Services Survey Record is given in Annex 2.

The purpose of the Cataract Surgical Services Survey Record is to collect essential information that will provide estimates of the following indicators:

- prevalence of blinding cataract and other major causes of low vision and blindness;
- prevalence of aphakia and pseudophakia;
- cataract surgical coverage;
- visual outcome of cataract surgery;
- major causes of poor visual outcome
- barriers to cataract surgery;
- age at time of surgery, place of surgery, use of glasses, reasons for not using glasses and type of surgery.

All indicators are subdivided by sex and in many cases also by age group. The indicators thus obtained can be used as baseline information for the formulation of eye care programmes and for regular monitoring of ongoing cataract intervention programmes.

The present form has been modified from the form used in more than 52 district-level population based surveys in India during the period 1995 to 1998.

The Cataract Surgical Services Survey Record (Version I) comprises seven different sections:

- A General Information
- B Vision and Pinhole Examination
- C Lens Examination
- D Principle cause of vision < 6/18
- E History, if not examined
- F Why cataract operation has not been done
- G Details about cataract operation

The revised Cataract Surgical Services Survey Record has been designed for use by ophthalmologists and experienced paramedical ophthalmic staff. All sections, except Section D, can be completed by auxiliary personnel, such as nurses or ophthalmic assistants, trained for this purpose. If an ophthalmologist or other specialist personnel is available, priority should be given to completing Section D. It is important, however, that Section D is consistently used, or not used, throughout the survey. If skilled personnel is not available code 12 (not examined) can be used for this section. To save time and resources, Section D should be completed only for those patients with visual acuity less than 0.3 (6/18) without pinhole in either or both eyes.

These coding instructions will be used to train field staff in the use of the Cataract Surgical Services Survey Record prior to commencing data collection and will serve as a permanent reference throughout the survey. Standard slides or photographic material are recommended for training purposes to illustrate the definitions provided in these instructions and to facilitate standardisation of findings to be recorded on the forms.

The Cataract Surgical Services Survey Record (Version I) is meant for surveys that focus on cataract blindness with some additional information on other major causes of visual loss. In case information is required on causes of blindness and low vision in general, the revised WHO/PBL Eye Examination Record (Version III) and the Management of Eye Survey Data software are recommended.

SECTION A: GENERAL INFORMATION

The selection of clusters is discussed in chapter 2, page 6. The teamleader will select the first household to be examined in each cluster using a standardised technique (see Instructions for surveyors, point 5: page 19). In each household all persons that meet the age criteria and have

resided in the household for six months or more over the past year are examined and interviewed. Residing in the household can be defined as sharing meals from the same kitchen with the other members of the household.

For each eligible person a Cataract Surgical Services Survey Record has to be completed, whether the person is examined, is absent or refused examination. In the case of absence or refusal, only 'Part A. General Information' and 'Part E. History, if not examined' are filled.

Boxes need to be filled with a number. Circles have to be tick marked or made black. Always use a pencil to fill the records. In case of an error, the wrong entry can be erased and the correct entry be made.

<u>Section</u>	<u>Item</u>	<u>Instructions</u>
A	Month + Year	Month and year of the date of examination to be entered. Example: December 1999 would be 199912
	Survey area	A defined geographical or administrative area, such as a district, from where the clusters are selected. Write the name and a two-digit ID code.
	Cluster No.	This may be a village or part of a village or town. Clusters will be identified and numbered at the design stage.
	Individual No.	Sequential number of eligible persons in a cluster. It is advisable to select a cluster size of less than 90 people, since the design effect tends to become high with larger clusters.
	Name	Person name, to be written in local language, as appropriate. This item will not be included in the data processing.
	Sex	Mark the appropriate box, where 1 = male; 2 = female.
	Age	In years; estimated if no official certificate available. Every person in the sample must be assigned an age, even if only an approximation. 50 to 98 = age in years 99 = age 99 and above
	Optional 1 and 2	These fields may be used for collection of additional information, such as ethnic groups, occupation, literacy, etc. Appropriate codes for these items should be given by survey staff.
	Examination Status	1 = Examined; 2 = Absent; 3 = Refused. Code 1 (Examined) refers to either complete or partial examination, which at least includes visual acuity. Code 2 (Absent) refers to residents not present during the entire survey period. Code 3 (Refused) is for residents refusing to be examined. This item should be filled in after all attempts to examine the patient have been made (in the case of "Absent / refused"), or after the examination process has been completed.

SECTION B: VISION

Vision should be tested separately for each eye with the patient's own glasses if normally worn for seeing at distance. The test system and distance must be uniform throughout each study.

Vision corresponding to visual acuity of 0.3 (6/18) or better is not dealt with further, in accordance with the International Classification of Diseases (ICD), 1975.

"Low Vision" refers to the ICD categories of visual impairment 1 and 2, with visual acuity less than 0.3 (6/18) but at least 0.1 (6/60), and less than 0.1 (6/60) but at least 0.05 (3/60).

"Blind" refers to ICD categories of visual impairment 3, 4 and 5, implying visual acuity less than 0.05 (3/60). It is desirable that this level be verified by means of optotypes rather than finger counting.

The vision testing procedure should be carefully explained to each person to be examined. It is recommended to use single optotypes in the form of the standardised Landolt C, or Snellen E chart, at the levels of 0.3 (6/18) and 0.1 (6/60)¹. The 0.1 (6/60) optotype should be used at half the test distance to assess the visual acuity level of 0.05 (3/60).

The criteria for vision at a certain level are:

- 4 correct consecutive showings
- 5 correct out of 6 showings
- 6 correct out of 8 showings

If a person cannot see 3/60 in one or both eyes, the examiner should take the person to a shaded or dark area and see if the pupil(s) constrict on light (Pupillary Reaction present = PR+) or not (PR-). The person should be asked whether he can see light (Perception of Light present = PL+) or nor (PL-).

All eyes with a visual acuity level better than 0.3 (6/18) do not require pinhole examination (mark 1). All persons with a visual acuity level of less than 0.3 (6/18) have to be tested with a pinhole. If the visual acuity obtained with pinhole should be marked for each eye.

<u>Section</u>	<u>Item</u>	<u>Instructions</u>
B	Unaided – or With glasses	Mark the appropriate circle for each eye.
	Vision in right and left eye	Mark the appropriate circle for each eye.
	Pinhole examination	In all cases of low vision or blindness, vision should be further tested with pinhole (multiple if available). If vision was tested with glasses, these should be used here as well. Mark the vision with pinhole.

The simplified optotypes (Landolt C/Snellen E) provided by WHO with these coding instructions are for use at a test distance of 6 metres. At this distance, the cards measure visual acuity levels of 0.3 (6/18) and 0.1 (6/60). For the assessment of blindness, the 0.1 (6/60) optotypes should be used at a distance of 3 metres, thus giving the level 0.05 (3/60).

SECTION C: LENS EXAMINATION

In this Section, only one circle must be marked for each eye. If the lens in both eyes is normal, circle (1) of each eye must be marked, and the examination is then complete. No other sections need to be filled.

<u>Section</u>	<u>Item</u>	<u>Instructions</u>
C	Normal lens	Crystal clear lens, clear red reflex.
	Obvious lens opacity	A pupil that clearly appears grey or white when examined with oblique light in a shaded or darkened area. With distant direct ophthalmoscopy an obvious dark shading of the red reflex is visible. Note: This item refers to a major opacification of the lens, leading to low vision or blindness. Section F to be filled in when appropriate.
	Lens absent (aphakia)	Absence of lens from the central pupil. May be judged to be present when there is a reliable history of cataract extraction and/or if other evidence of absence of the lens from the central pupillary area, such as iris tremulousness. A dislocated lens, as occurs with couching or trauma, should also be recorded here.

Pseudophakia without PCO	As aphakia, but with Intra-Ocular Lens (IOL) inserted. No Posterior Capsule Opacification (PCO) to be seen with the unaided eye.
Pseudophakia with PCO	As aphakia, but with Intra-Ocular Lens (IOL) inserted. Obvious Posterior Capsule Opacification (PCO) to be seen with the unaided eye.
No view of lens	Mark if the lens cannot be seen because of dense corneal opacity or for other reasons.

SECTION D: PRINCIPAL CAUSE OF VISION <6/18

This section is to be completed only in the case of visual loss, i.e., vision less than 0.3 (6/18) in either eye. The abnormality causing low vision or blindness should be marked. Examination with illuminated loupe as well as direct ophthalmoscope is recommended; this should or should not be used consistently throughout the survey.

The completion of this section can be divided into two activities: (1) for each eye, assess and mark one principal disorder that is responsible for visual loss in that eye; (2) mark one principal disorder responsible for or contributing to visual loss in the person.

Mark the principal disorder responsible for visual loss in each eye as well as in the individual after considering disorders in either eye, which are most amenable to treatment or prevention. When there are two disorders, one of which is secondary to the other, the primary is to be selected as the principal disorder. For example, if the patient has cataract secondary to glaucoma, glaucoma is the principal disorder. When there are co-existing primary disorders in the same or different eyes, mark as the principal disorder that which is most readily curable or, if not curable, that which is most easily preventable. The following is a recommended ranking of the disorders with respect to these criteria:

1. Cataract
2. Surgery related complications
3. Preventable corneal opacities and phthisis
4. (Primary) glaucoma
5. Posterior segment disorders.

The ranking may be modified to suit particular local circumstances. If this is done, the same modification should be applied consistently throughout the survey by all examiners involved, as well as in all other surveys in the same country.

<u>Section</u>	<u>Item</u>	<u>Instructions</u>
D	Cataract	Do not mark in cases of minor opacities, unlikely to affect vision.
	Refractive error	VA < 6/18, improving with pinhole.
	Uncorrected aphakia	This condition is defined as aphakia (absence of lens from the central pupil) which, with proper correction, improves vision to satisfactory visual acuity (6/18 or better). For aphakia where VA does not improve with proper correction, other causes of visual loss should be determined and recorded appropriately, while uncorrected aphakia should <u>not</u> be marked. If there is clear evidence that a surgical procedure has led to a blinding condition, e.g. secondary glaucoma, then "surgery related complication" should be marked as an underlying cause.
	Surgery related complications	If there is clear evidence that a surgical procedure has led to a blinding condition, e.g., secondary glaucoma, then this box should be marked. Uncorrected aphakia must be recorded as above.

Phthisis or absent globe	Refers to partial or complete phthisis bulbi, staphyloma, disorganised globe after severe trauma, or enucleated eye.
Trachomatous corneal opacity	Central corneal scarring in the presence of at least one of the following signs of trachoma: (1) trichiasis / entropion, (2) conjunctival scarring, (3) pannus, or (4) Herbert's pits.
Other corneal opacity	Easily visible corneal opacity present over the pupil. The corneal opacity is so dense that at least part of the pupil margin is blurred when seen through the opacity.
Glaucoma	<p>Mark if any of the following suggested criteria apply:</p> <ol style="list-style-type: none"> 1. the vertical cup-disk ratio is greater than 0.8; 2. the eye is stone hard on digital palpation. <p>This is <u>not</u> a complete diagnosis for glaucoma, but only used for the purpose of this survey, since tonometry and testing of visual fields is not practical under field conditions and glaucoma is not the focus of this survey.</p>
Diabetic retinopathy	<p>Applies only for persons with retinal findings attributable to confirmed diabetes. Check only if the condition is a likely cause of visual loss and there is obvious involvement of the posterior pole.</p> <p>Refers essentially to proliferative retinopathy (growth of new blood vessels with or without haemorrhages) or diabetic macular oedema (extensive swelling of the central retina).</p>
Macular degeneration	<p>The macula is defined as the area of increased brownish-black pigmentation surrounding the fixation point. It is slightly larger than one disc diameter in size. It is also slightly larger than the vascular free zone of the posterior fundus.</p> <p>Macular degeneration refers to all obvious or severe pigment disturbances or any other deviations from what is considered a "normal" aspect of the macula area, as defined above, in the absence of diabetes or other diseases which may cause these lesions.</p> <p>Check if any of the following suggested criteria apply:</p> <ol style="list-style-type: none"> 1. the regularity of the pigment epithelium is disturbed either by atrophy, proliferation, migration, deposits, haemorrhage, mottling, scarring, clumping. 2. existence of elevation/swelling or oedema of the central retina. 3. presence of drusen (small yellow colloid-like dots, sometimes larger lesions) or hard exudates. 4. presence of circinate exudates. 5. presence of holes
Other posterior segment disorders	<p>Check only if the condition is a likely cause of visual loss and there is obvious involvement of the posterior pole in a non-diabetic patient.</p> <p>Refers to any easily visible lesions in:</p> <ul style="list-style-type: none"> • the vitreous (haemorrhages, ...) • the optic disk (except horizontal cup-disk ratio > 0.5 to be checked under the "Glaucoma" section) or • the retina (except any lesion of the macula area to be checked under the "Macular Degeneration" section).
Not examined	Mark if the patient has vision < 6/18 in this eye and was not examined.

Once the disorders and underlying causes have been marked for each eye, an assessment is made of the principal cause of low vision in the person.

SECTION E: HISTORY, IF NOT EXAMINED

<u>Section</u>	<u>Item</u>	<u>Instructions</u>
E	Believed not blind	Vision in either eye allows subject to move around freely and participate in social life.
	Believed blind due to cataract	Visual impairment inhibits social interaction. Use the local name for cataract to assess whether blindness is attributed to cataract.
	Believed blind due to other causes	Visual impairment inhibits social interaction. Blindness is not attributed to cataract (use local name).
	Believed operated for cataract	Visual impairment inhibited social interaction in the past. Subject was operated reportedly for cataract.

SECTION F: WHY CATARACT OPERATION HAS NOT BEEN DONE

Not all patients, blind due to cataract, present themselves for operation. Many patients do not get operated because of certain problems. These can be poor accessibility, costs, fear for operation, etc. Knowing these barriers makes it possible to address them effectively and thereby increase the utilisation of cataract surgical services.

Section F of the Cataract Surgical Services Survey Record (Version I) shows a list of the barriers most commonly brought forward by patients. Read this list carefully before you start the fieldwork. People with low vision or blindness in one or both eyes, and obvious lens opacity in the same eye(s) are asked the standard question: "Why have you not been operated for cataract?" The answer of the patient should be matched with the barriers mentioned in the list and the answer closest to the patient's answer should be marked. At least one and a maximum of four barriers can be marked.

SECTION G: DETAILS ABOUT CATARACT OPERATION

Operated patients are asked about their age at the time of cataract surgery.

"Eye camp" should be marked if the surgery was performed by qualified ophthalmic staff in an improvised operation theatre. If conducted in a well-equipped designated operating theatre, one of the three hospitals should be marked. Mark "Traditional setting" if the operation was done at home or in the premises of a traditional healer or coucher.

Services are totally free if the patient did not pay anything in cash or kind towards the surgery or for boarding. Partial payment may cover the costs of an IOL or meals only. In case of full payment, the patients pay all costs on surgery and stay.

Under "Spectacles", mark whether the operated patient is using spectacles or not. If not one of the "Reasons for not using glasses" should be marked.

Mark "Non IOL" if the patient did not get an IOL implanted at the time of surgery. Mark "IOL implant" for PC-IOL and for AC-IOL, also when these IOLs are dislocated.

Mark "Couching" if there is evidence of dislocation of the lens and iris tremulousness, or if couching has been ascertained during interview.