



CODING INSTRUCTIONS FOR THE WHO/PBL EYE EXAMINATION RECORD (VERSION III)

The WHO/PBL Eye Examination Record has been developed by the WHO Programme for the Prevention of Blindness to facilitate the recording of data in field surveys on blindness. The purpose of the Eye Examination Record is to collect information suitable for estimating prevalences of blinding eye conditions, for national programme formulation, and for planning health services for blindness prevention. The present form has been elaborated as a revision of the previous Eye Examination Record from 1980, in accordance with the general guidelines given in the WHO Offset Publication No. 54 "Methods of Assessment of Avoidable Blindness". Recommendations are made for collection of data on general background characteristics of individuals examined in a survey using this form. The limited purposes of this form preclude collection of extensive or detailed background information in the survey.

The WHO/PBL Eye Examination Record (Version III) is meant for general prevalence surveys on blindness and major causes of visual loss. More detailed examination forms may be required for specific surveys on a particular disorder. Certain such forms are available, e.g., for onchocerciasis and xerophthalmia. The revised WHO Eye Examination Record, however, includes elements for assessment of trachoma and xerophthalmia.

The WHO/PBL Eye Examination Record (Version III) comprises seven different sections, as follows :

- A Census
- B Vision
- C Basic Eye Examination
- D Previous Eye Surgery
- E Additional Examinations (optional)
- F Causes of Low Vision or Blindness
- G Current Action Needed

Sections A to E can be filled in by any personnel adequately trained for this purpose. Section F should normally be completed only by personnel with special training and only in cases of visual loss. To save time and resources, Section G may be utilized only in selected cases, such as those with visual acuity less than 0.3 (6/18) in either or both eyes. In areas of known or suspected endemicity of trachoma and/or xerophthalmia, it is desirable that the corresponding Section E be filled in systematically, possibly on a sub-sample basis.

The revised WHO/PBL Eye Examination Record has been designed for flexible application. For example, in the absence of an ophthalmologist, Sections A - E can still be completed by auxiliary personnel, such as nurses or ophthalmic assistants, trained for this purpose, in order to provide basic information. If an ophthalmologist or other specialist personnel is available, priority should be given to completing Section F and, finally, if time is available, Section G. It is important, however that the specific sections are consistently used, or not used, throughout the survey.

These coding instructions would ordinarily be used in training field staff in the use of the WHO/PBL Eye Examination Record prior to commencing data collection, as well as serving 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 establish standardized diagnosis of conditions to be recorded on the forms.

The WHO/PBL Eye Examination Record is not designed to collect information about every eye condition likely to be encountered in field surveys. It provides for the recording of blinding eye conditions which are of public health significance. When conditions are observed that, in the opinion of the examiner, are striking or particularly noteworthy, they may be recorded in the "Remarks" section of the form. In addition, for several sections a category entitled "Other" is provided to cover conditions not listed for a given item. The details of the "Other" condition should be recorded under "Remarks". Finally, some listed conditions represent broad categories (e.g., other corneal opacity) and are marked by an asterisk (*). When those conditions are coded, additional details should be recorded under "Remarks".

SECTION A : CENSUS

It is strongly recommended that an updated separate census per household, or family, included in the sample be prepared, in order to assess absenteeism and possible bias in sample composition. Such a local census can be quite simple, identifying each family by its head, and each individual through his/her affiliation in the family. Name, age, sex and presence/absence can be registered in simple notebooks, numbering the families within each cluster. The WHO/PBL Eye Examination Record (Version III) does not include coding of social or ethnographic information or any specific mass treatment, which can, however, to a certain extent, be registered in the optional fields (position numbers 21-25).

Alternatively, an additional household roster form may be developed which can be completed for each household in the survey sites. An illustration of such a form is provided in Annex 1 to these coding instructions. The household roster would ordinarily be completed by specially trained enumerators or census takers and not by ophthalmologically trained staff.

When utilizing the WHO/PBL Eye Examination Record (Version III), it is envisaged that each usual resident, whether present or absent, is attributed a form, but in the case of absence, only the census section would be filled in.

A "usual resident" is normally defined as a person having resided in the household for six months or more over the past year.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
1 - 3	Country (optional)	The UN 3-figure code must be used if data processing is to take place outside the country. Part of this coding list is given in Annex 2, as per WHO region. Further coding instructions on this matter may be given on request.
4 - 5	Study Number	A reference number to be given to each specific study or sub-study conducted within the country. This number, as well as the country code, may be stamped on the forms prior to data collection.
6 - 9	Date	Day and month of examination to be entered. Example : 7 April would be 0704.
10 - 11	Administrative Division	A defined geographical or administrative area, such as a province, which can be further subdivided into administrative units.
12 - 13	Cluster	This may be a village or part of a village or town. Number to be given within secondary unit.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
14 - 15	Household	Number to identify each household within the cluster.
16 - 17	Person	Number to identify each person within the household.
	Name	To be written in local language, as appropriate. This item will not be included in the data processing.
18 - 19	Age	In years; estimated if no official certificate available; assessment of dental age can be used for children up to 12 years of age. Every person in the sample must be assigned an age, even if only an approximation. 00 = under 1 year 1 to 84 = age in years 85 = 85 years and over 99 = missing information
20	Sex	Mark the appropriate box, where : 1 = male; 2 = female.
21 - 25	Optional items	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.
26	Examination Status	1 = Examined; 2 = Refusal; 3 = Absent. This may be further specified in "Screening Examiner Remarks". Code 1 (Examined) refers to either complete or partial examination, which at least includes visual acuity. Code 3 (Absent) refers to usual residents not present during the entire survey period. This item should be filled in after all attempts to examine the patient have been made (in the case of "Refusal" or "Absent"), 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 standardized 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 the extent of the visual field is taken into account, the following applies : visual field restricted to less than 10° around central fixation equals blindness. This code applies even if central visual acuity is not impaired.

Some individuals cannot be tested using this procedure. In such cases, an assessment of whether the patient is blind or not should be made. This can be done both through the eye examination and subjective interviews with the patient (or parents in the case of children) or relatives.

If a person is not presenting for examination, but is reported as being blind, every effort should be made to verify this objectively by direct observation. If this is not possible, the person may be recorded as "Believed blind".

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
<u>Vision</u>		
27	Unaided or with glasses	Mark the appropriate box. If the patient wears glasses, it should be verified that they are for distance.
28 - 29	Vision in right and left eye	Mark the appropriate box for each eye.
<u>Refraction (optional)</u>		
30 - 31	Low vision or blindness improves with lens/pinhole	In all cases of low vision or blindness, vision should be further tested with pinhole (multiple if available). Mark if the vision improves to 0.3 (6/18) or better. Alternatively, when a limited set of trial lenses or other means of assessing refractive status is available, this position may be used to record a numerical code for a gross estimate of refraction or simply for presence of myopia or hypermetropia.

¹ The 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 : BASIC EYE EXAMINATION

In this Section, at least one box must be marked for each eye. If both eyes are normal, position numbers 32 - 33 may be marked, and the Section is then complete. If abnormalities are found, all which apply should be marked. If no useful information can be obtained, the "Not Examined" boxes should be marked (Positions 50 - 51). Examination with illuminated loupe is recommended; this should or should not be used consistently throughout the survey.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
32 - 33	Completed examination, no listed abnormality found	To be marked if none of the listed abnormalities is found in the eye.
<u>Eyelid</u>		
34 - 35	Inturned margin/trichiasis	Entropion : inturned margin. Trichiasis : at least one eyelash rubbing against the globe. Evidence of recent removal of lashes should also be coded as trichiasis.
<u>Globe</u>		
36 - 37	Phthisical/disorganized/absent	Refers to partial or complete phthisis bulbi, staphyloma, disorganized bulb after severe trauma, or enucleated eye.
<u>Cornea</u>		
38 - 39	Central 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. Note: This item refers to a major corneal opacity, frequently leading to a significant loss of vision. Section F to be filled in when appropriate.
40 - 41	Pterygium (corneal)	A typical wing-shaped lesion extending at least to the margin of the pupil. All other pterygia should be ignored.
<u>Lens</u>		
42 - 43	No view of lens	Mark if the lens cannot be seen because of dense corneal opacity or for other reasons.
44 - 45	Obvious opacity	A pupil which clearly appears grey or white when examined with oblique light in a shaded or darkened area. 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.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
46 - 47	Aphakia	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. Dislocated lens, as occurs with couching or trauma, should be recorded here.

Other

48 - 49	Other (specify)	Any significant sight-threatening lesion should be indicated, and described. Examples of such lesions might be corneal ulcer, shortening of upper lid in trachoma, or lagophthalmos.
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Not examined

50 - 51	Not examined	No useful information.
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SECTION D : PREVIOUS EYE SURGERY

This is ascertained through interview and or examination. If not asked or no useful information can be obtained, mark "No evidence of surgery" in position 52. Specify for "Other", if possible, under "Remarks".

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
52	No evidence of surgery	Mark if there are no signs of previous surgery, and if the patient reports no previous surgery; otherwise mark all boxes which apply in positions 53 - 57.
<u>Type of previous surgery</u>		
53	Eyelid	Refers particularly to previous surgery for trichiasis/entropion.
54	Cataract	Removal of lens by surgery, and <u>not</u> by traditional couching procedure (which should be indicated in position 56).
55	Glaucoma	May refer either to iridectomy or fistulizing procedures.
56	Couching	Refers to couching of cataract, as evidenced by dislocation of the lens and iris tremulousness, or as ascertained during interview.
57	Other*	May refer to other traditional procedures, such as cautery of eyelid, or other types of eye surgery, such as for retinal detachment.
58	Not assessed	No useful information.

SECTION E ADDITIONAL EXAMINATIONS (optional)

This Section may be utilized to record specific additional information on trachoma and xerophthalmia in areas where this might be appropriate. The target population for these examinations would be defined for each survey. For xerophthalmia this would normally be children less than 6 years of age; for intraocular pressure this might appropriately be persons aged 40 years and over.

Note : If information on xerophthalmia is collected, all cases with Bitot's spots or corneal xerosis should, if possible, be confirmed by examination by the ophthalmologist or other person responsible for the survey, even if there is no visual loss.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
<u>Xerophthalmia</u>		
59	No signs	Mark if no sign of xerophthalmia in either eye; otherwise mark all boxes which apply in positions 60 - 62.
60	Night blindness	A locally well-recognized term should be used in enquiry with parents or patient. Enquiry about patient's behaviour at dusk.
61	Bitot's spots	Presence of one or more typical Bitot's spots, with or without conjunctival xerosis, in either eye.
62	Corneal xerosis	Presence of superficial punctate lesions on the cornea, particularly the inferior nasal part. These lesions stain easily with fluorescein. Generally dull and grey appearance of the entire cornea.
63	Not examined	No useful information.

Note: Central corneal opacity and corneal ulcer included under Section C "Basic Eye Examination".

Trachoma

64 - 65	No signs	Mark if no signs of trachoma (as defined); otherwise mark all items in positions 66-71 that apply.
66 - 67	TF	There are 5 or more follicles in the upper tarsal conjunctiva. (Small follicles of less than 0.5mm should <u>not</u> be counted.)
68 - 69	TI	Pronounced inflammatory thickening of the upper tarsal conjunctiva with obscuration of more than half of the normal deep tarsal vessels.
70 - 71	TC	The presence of scarring in the upper tarsal conjunctiva.
72 - 73	Not examined	No useful information.

Note : Trichiasis and central corneal opacity included in Section C : Basic Eye Examination.

Intraocular pressure

If intraocular pressure is to be measured, the result is recorded here. As a general rule, in cases of intraocular pressure of 25mm Hg and above, the patient should, if possible, be referred for further examination, even if there is no visual loss.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
74 - 77	Intraocular pressure	Measured in mm of mercury, by either Schiötz or applanation tonometry, but the same type should be used consistently throughout a survey.
78 - 79	Not measured	No useful information.

Optional Examination

Space is provided for coding the results of an optional examination, using codes that would be specially developed for a particular survey. Examples of such optional examinations might be for vernal conjunctivitis or cup-disk ratio.

80 - 81	Result of examination	Either a numeric code may be entered or the box ticked.
82 - 83	Not examined	No useful information.

Screening Examiner Number

84 - 85	Screening examiner number	Each screening examiner should enter his/her assigned code. In this way, results for different examiners can be compared during analysis.
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SECTION F : CAUSES OF LOW VISION OR BLINDNESS

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, severe reduction of visual fields, or if the patient is believed to be blind but was not examined. This examination requires the use of a slitlamp or reflected light (ophthalmoscope).

The completion of this section can be divided into four activities : (1) for each eye, assess and mark all disorders which are responsible for or contribute to visual loss in that eye; (2) mark all listed underlying causes which led to or contributed to any of the blinding conditions; (3) mark one principal disorder and (4) mark one principal underlying cause of low vision or blindness in that individual.

Consider first all conditions responsible for or contributing to visual loss in each eye :

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
<u>Disorders</u>		
86 - 87	Phthisical/ disorganized/ absent globe	Include staphyloma as a type of disorganized globe. Mark an obvious underlying cause (e.g., trauma) below when identification possible.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
88 - 89	Refractive error/ amblyopia	Assessment should, at the very least, be made with pinhole (multiple openings if available) or by testing of refraction.
90 - 91	Cataract	Do not mark minor lens opacities which are unlikely to affect vision.
92 - 93	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, i.e., 0.3 (6/18) or better. For aphakia where visual acuity 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 "surgical procedure" should be marked as an underlying cause (boxes 124-125). In such a case, aphakia should have been recorded in Section C, but aphakia is not marked here as a cause of visual loss.
94 - 95	Trichomatous corneal opacity	Central 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.
96 - 97	Other corneal opacity	Also mark underlying cause, when applicable.
98 - 99	Anterior uveitis	Mark only if severe and long-lasting anterior uveitis, which it is thought has led to secondary cataract or secondary glaucoma.
100 - 101	Glaucoma	Mark if any of the following suggested criteria apply: (1) the horizontal cup-disk ratio is greater than 0.5; (2) intraocular tension (tonometry) is 30mm Hg or greater; (3) the eye is stone hard on digital palpation. If another set of criteria is used, this must be clearly stated and used consistently throughout the survey. N.B. : Detailed testing of visual fields is usually not practical under survey conditions, and thus was not suggested in these criteria.
102 - 103	Optic atrophy	Mark if there is obvious and striking pallor of the optic disk without glaucomatous cupping as defined for glaucoma above (100-101). This condition is often, but not necessarily, accompanied by sheathing of the central retinal vessels and increased pigmentation on or around the disk.
104 - 105	Vascular retinopathy	Mark only if the condition is a likely cause of visual loss and there is obvious involvement of the posterior pole.
106 - 107	Chorioretinitis	
108 - 109	Macular degeneration	

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
110 - 111	Other (specify)	Mark if condition responsible for or contributing to visual loss is not one of those listed previously, and describe the condition under "Remarks". Mark also if the patient is hysterical, mentally incapable, or otherwise unable to cooperate, and describe circumstances under "Remarks".
112 - 113	Not examined	Mark if patient was believed to be blind and not examined, or if the patient who completed vision testing was not examined.

The factors listed under positions 116-129 below may be underlying causes of the conditions listed for positions 86-111 above. The purpose of this sub-section is to identify some underlying causes of low vision or blindness that are of general public health significance. When local conditions suggest that another underlying cause may be important for a survey to identify, an optional underlying cause may be specified. In addition, if a particularly important or interesting finding occurs that is not covered by this list, it should be described under "Remarks". If the condition occurs frequently to warrant separate presentation, it can be added as an underlying cause during subsequent processing or analysis.

Underlying causes

114 - 115	No listed cause	This must be marked for all examined eyes which have low vision or are blind and which do not have one of the listed underlying causes.
116 - 117	Trauma	Mark if there is history of direct trauma to the eye associated with a previously marked condition and occurring immediately prior to visual loss.
118 - 119	Congenital/neonatal factor	Mark if there is evidence that the condition either existed at birth or appeared within the first month of life.
120 - 121	Onchocerciasis	Mark only if the patient has any clinical signs of systemic onchocerciasis (palpable nodules, known positive skin test, severe itching skin disease, or presence of microfilariae in the cornea or the anterior chamber) AND has at least one of the following : (1) corneal opacity in the form of typical sclerosing keratitis involving the central zone; (2) cataract secondary to long-standing and severe uveitis, including posterior synechiae; (3) optic atrophy with typical appearance of postneuritic optic atrophy with sheathing of central retinal vessels; (4) choroidoretinitis consistent with onchocerciasis.
122 - 123	Measles/ Vitamin A deficiency	Mark if there is clinical evidence and history of perforation of the eye (cornea) in infancy or childhood (but not during the first month of life) and if there is no evidence of trauma contributing to perforation.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
124 - 125	Surgical procedure	Refers to recognized cataract extraction or glaucoma surgical procedure. Mark only if there is clear evidence that the procedure led to visual loss.
126 - 127	Couching	Refers to couching of cataract; mark if there is evidence of dislocation of the lens and iris tremulousness, or if this has been ascertained during interview.
128 - 129	Optional	An additional underlying cause may be specified for each survey. Clear instructions for marking the optional underlying cause must be developed. For example, in areas where leprosy is prevalent, the optional underlying cause may refer to leprosy with the following instructions : "This underlying cause could apply to corneal opacity, anterior uveitis and secondary cataract in cases of known and long-standing leprosy."

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.

130	Principal disorder	<p>Mark the principal disorder responsible for visual loss in the individual after considering disorders in either eye which are <u>most amenable to treatment or prevention</u>. When there are two disorders, one of which is secondary to the other, the <u>primary</u> is to be selected as the principal disorder. For example, if the patient has cataract secondary to anterior uveitis, anterior uveitis 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 <u>most readily curable</u> or, if not curable, that which is <u>most easily preventable</u>. The following is a recommended ranking of the disorders with respect to these criteria :</p> <ol style="list-style-type: none">1. Uncorrected aphakia.2. Refractive errors/amblyopia.3. Cataract.4. Preventable corneal opacities and phthisis.5. (Primary) glaucoma.6. Anterior uveitis.7. Posterior segment disorders.
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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.

If an optional underlying cause has been used, the ranking system may need to be modified. For example, if diabetes is included as an optional underlying cause, vascular retinopathy may be listed as a preventable condition and placed among the ranked conditions.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
131	Principal cause	Once the principal disorder has been marked for the person, <u>only one</u> underlying cause (if applicable) associated with that disorder should be marked. If none is applicable, mark no listed underlying cause.

An example may help to illustrate the completion of the principal disorder and cause items. Consider a bilaterally blind patient with a severe corneal opacity due to trauma in the right eye and a senile uncomplicated mature cataract in the left eye. For the cause of low vision or blindness in the right eye, "Other corneal opacity" (position number 96) should be marked together with an underlying cause of "trauma" (position number 116). For the left eye, "Cataract" (position number 91) should be marked, together with "No listed underlying cause" (position number 115). For the principal cause of low vision in the patient, the principal disorder is "Cataract" (position number 130, box 3.). However, "No listed underlying cause" is marked (position number 131, box. 0.) since the trauma in the right eye is not an underlying cause of the cataract in the other eye.

SECTION G : CURRENT ACTION NEEDED

This section should be completed for persons with low vision or blindness who have already been examined by the ophthalmologist.

<u>Position Number</u>	<u>Item</u>	<u>Instructions</u>
132 - 133	No current action needed	
134 - 135	Eyelid surgery	Refers particularly to surgery for trichiasis.
136 - 137	Cataract surgery	It is presumed that cataract surgery is marked only if there is satisfactory light perception, localization of light, and pupillary reflex. Clearly specified criteria for cataract surgery, including the level of visual impairment, should be applied consistently to all persons in a survey.
138 - 139	Glaucoma treatment	Refers either to medication or surgery.
140 - 141	Spectacles	Refers either to correction of myopia, hypermetropia, or aphakia after cataract surgery; the need for presbyopic correction should not normally be considered under this item.
142 - 143	Medication	Refers only to treatment for major eye conditions, particularly trachoma, xerophthalmia and corneal disorders.
144 - 145	Other*	Specify under Remarks.
146 - 147	Special Examiner Number	Each screening examiner should enter his/her assigned code. In this way, results for different examiners can be compared during analysis.

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HOUSEHOLD ROSTER

The household form includes identifying information for the household, (i.e., study and country numbers, date of the initial visit, division, cluster and household numbers, and name of the head of household), a record of up to three visits to the household and space for remarks about contacts with the household. Provision for multiple visits to households is recommended to provide more complete coverage of the sample households. For survey purposes, all usual residents in the selected households should be included in the sample. A "usual resident" is normally defined as a person having resided in the household for six months or more over the past year.

The roster information for household members is nearly the same as that to be recorded on the Eye Examination Record. The household roster line number is the same as the person number of the Eye Examination Record. Household members should be listed in a particular order to ensure that all members are listed. For example, in the illustrative form, the head of the household is listed first. The spouse and children of the head can be listed next, recording children by gender (males first, then females) and by age within gender group. Other relatives of the head and other non-relatives would follow the children. Alternatively, household members may be listed by gender and age (from oldest to youngest) within gender group without regard to relationship to the head of the household. In any roster ordering, enumeration staff should be instructed that once the roster is completed they should probe for additional household members who might have been missed (e.g., infants, older adults such as grandparents). Once the roster is completed, the enumeration staff can prepare an Eye Examination Record form for each listed person, transcribing information from the roster to the top of the Eye Examination Record form.

The study staff may also consider collecting additional household and cluster level background information to provide additional insight into the distribution and determinants of blinding eye conditions. For example, the back of a household roster may contain questions concerning such household characteristics as social or economic status, water supply, and nutrition. A separate form may also be developed to collect cluster level information, such as presence or distance to schools and the availability of electricity, transportation and health services. The household and cluster level information can later be merged into the person level information collected on the Eye Examination Record to provide more detailed background information for analysis of survey findings. It is recommended that the advice or assistance of a social scientist such as a sociologist or anthropologist be sought to help develop suitable indicators and questions for the background items. Much cluster level information may also be available from a recent census or from government agencies, such as public health and medical facilities at the national, regional or local levels.

<u>Item</u>	<u>Instructions</u>
Country No.	The UN 3-figure code must be used if data processing is to take place outside the country. Part of this coding list is given in Annex 2, as per WHO region. Further coding instructions on this matter may be given on request.
Study No.	A reference number to be given to each specific study or sub-study conducted within the country. This number, as well as the country code, may be stamped on the forms prior to data collection.
Date	Day and month of examination to be entered. Example : 7 April would be 0704.
Division	A defined geographical or administrative area, such as a province, which can be further subdivided into administrative units.

ANNEX 1

<u>Item</u>	<u>Instructions</u>
Cluster	This may be a village or part of a village or town. Number to be given within secondary unit.
Household	Number to identify each household within the cluster.
Name of Head	This refers only to the name of the head of the household, for identification of the families concerned.
Visit Record	This refers to the interview with the head or representative of the household. The form should not be considered complete before code 1 ("completed interview") has been obtained, after a maximum of three attempts.

Household Roster

No.	This number is the same as that appearing in positions 16-17 on the Eye Examination Record. It should always be filled in as two digits : 01, 02, <u>et seq.</u>
Relationship to head Age Sex	Please see codes on the household roster form itself.
Examination status	<p>It is essential that this item is completed, to allow absenteeism to be assessed. Codes 1-3 concur with those of the Eye Examination Record, but codes 4 and 5 are for additional, temporary use as follows :</p> <p>4. Unable to attend = refers to cases having difficulty in presenting themselves for examination, particularly severe disability (often the blind), confinement, or social/cultural reasons (mourning, funeral, etc.). The use of this code should be strictly limited to specific and defined circumstances, as mentioned above.</p> <p>5. Temporarily absent = for residents present in the village but temporarily involved in other activities. These people should be urged to come forward for a complete examination.</p> <p>Please note that it is convenient to fill in codes 4 and 5 with a pencil, awaiting the final outcome with regard to examination.</p>
Optional	<p>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.</p> <p>If optional codes are used, they should be defined <u>before</u> the beginning of the survey, and used consistently.</p>
Remarks	For additional remarks.
Identification No.	A number given to each enumerator or census taker involved.

HOUSEHOLD ROSTER FOR WHO PBL EYE EXAMINATION RECORD

Country No. Study No. Date
 Division Cluster Household

Name of Head _____

Visit Record :

Visit	1	2	3
Result			

Result Code :

- 1 = Completed Interview
- 2 = Partial Interview
- 3 = Refused
- 4 = Not at home
- 5 = Other

Household Roster

No.	Name	Rel. to head	Age	Sex	Exam Status	Optional				
						1	2	3	4	5
01		1								
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Relationship to head :

- 1 = Head
- 2 = Spouse
- 3 = Child
- 4 = Grandparent
- 5 = Grandchild
- 6 = In-law
- 8 = Other
- 9 = Unknown

Age :

- 00 = Under 1 year
- 01-84 = Age in years
- 85 = 85 years and over
- 99 = Missing information

Sex :

- 1 = Male
- 2 = Female

Exam status :

- 1 = Present
- 2 = Refused
- 3 = Absent during survey
- 4 = Unable to attend
- 5 = Temporarily absent

IF MORE THAN 20 PERSONS IN HOUSEHOLD, CONTINUE LISTING ON ANOTHER ROSTER.

Remarks :

Identification No.

ANNEX 2

UN 3-FIGURE CODES AS PER WHO REGIONAFRICAN REGION

Algeria	012	Gabon	266	Rwanda	646
Angola	024	Gambia	270	Sao Tome and Principe	678
Benin	204	Ghana	288	Senegal	686
Botswana	072	Guinea	324	Seychelles	690
Burkina Faso	854	Guinea-Bissau	624	Sierra Leone	694
Burundi	108	Kenya	404	South Africa	710
Cameroon	120	Lesotho	426	Swaziland	748
Cape Verde	132	Liberia	430	Togo	768
Central African Republic	140	Madagascar	450	Uganda	800
Chad	148	Malawi	454	United Republic of Tanzania	834
Comores	174	Mali	466	Zaire	180
Congo	178	Mauritania	478	Zambia	894
Côte d'Ivoire	384	Mauritius	480	Zimbabwe	716
Equatorial Guinea	226	Mozambique	508	Namibia	516
Ethiopia	230	Niger	562		
		Nigeria	566		

REGION OF THE AMERICAS

Antigua and Barbuda	028	Dominican Republic	214	Peru	604
Argentina	032	Ecuador	218	Saint Christopher and Nevis	659
Bahamas	044	El Salvador	222	Saint Lucia	662
Barbados	052	Grenada	308	Saint Vincent and the Grenadines	670
Bolivia	068	Guatemala	320	Suriname	740
Brazil	076	Guyana	328	Trinidad and Tobago	780
Canada	124	Haiti	332	United States of America	840
Chile	152	Honduras	340	Uruguay	858
Colombia	170	Jamaica	388	Venezuela	862
Costa Rica	188	Mexico	484		
Cuba	192	Nicaragua	558		
Dominica	212	Panama	590		
		Paraguay	600		

EASTERN MEDITERRANEAN REGION

Afghanistan	004	Jordan	400	Saudi Arabia	682
Bahrain	048	Kuwait	414	Somalia	706
Cyprus	196	Lebanon	422	Sudan	736
Democratic Yemen	720	Libyan Arab Jamahiriya	434	Syrian Arab Republic	760
Djibouti	262	Morocco	504	Tunisia	788
Egypt	818	Oman	512	United Arab Emirates	784
Iran, Islamic Republic of	364	Pakistan	586	Yemen	886
Iraq	368	Qatar	634		

EUROPEAN REGION

Albania	008	Iceland	352	Switzerland	756
Austria	040	Ireland	372	Turkey	792
Belgium	056	Israel	376	Ukrainian SSR	804
Bulgaria	100	Italy	380	USSR	810
Byelorussian SSR	112	Luxembourg	442	United Kingdom of	
Czechoslovakia	200	Malta	470	Great Britain and	
Denmark	208	Monaco	492	Northern Ireland	826
Finland	246	Netherlands	528	Yugoslavia	890
France	250	Norway	578		
German Democratic		Poland	616	<u>Non Member States</u>	
Republic	278	Portugal	620		
Germany, Federal		Romania	642	Holy See	336
Republic of	280	San Marino	674	Liechtenstein	438
Greece	300	Spain	724		
Hungary	348	Sweden	752		

SOUTH-EAST ASIA REGION

Bangladesh	050	India	356	Nepal	524
Bhutan	064	Indonesia	360	Sri Lanka	144
Burma	104	Maldives	462	Thailand	764
Democratic People's		Mongolia	496		
Republic of Korea	408				

WESTERN PACIFIC REGION

Australia	036	Kiribati	296	Republic of Korea	410
Brunei Darussalam	096	Lao People's		Samoa	016
China	156	Dem. Rep.	418	Singapore	702
Cook Islands	184	Malaysia	458	Solomon Islands	090
Democratic Kampuchea	116	New Zealand	554	Tonga	776
Fiji	242	Papua New Guinea	598	Vanuatu	548
Japan	392	Philippines	608	Viet Nam	866

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