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PROPOSED RECORD CARD FOR MASS SCREENING AND COMMUNICABLE EYE DISEASES PREVALENCE SURVEYS

by

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Introductory remark

In many enquiries, even in those covering only a few hundred people, it is often cumbersome to extract and tabulate data from existing recording forms. In fact, badly needed surveys are often abandoned merely for lack of a suitable recording and tabulating system. The use of a mark-sensing card, allowing for quick and fairly detailed analysis, is therefore suggested for mass screening campaigns and prevalence surveys.

It is pointed out that the new card does not replace the individual record card with marginal punch holes, which is mainly designed for longitudinal surveys and the follow-up of cases.

As this card may be used by many independent workers, some rules should be laid down for their use in order to assure satisfactory processing, uniformity and reliable results.

Method of use

In the mark-sensing card, the information to be processed mechanically is entered by filling in the appropriate ellipse with a soft pencil (special pencils available from IBM offices must be used (in exceptional cases a "4B" pencil will do)).This information can be entered on the card by a secretary, to whom the ophthalmologist dictates while examining each case. The card is then ready to be sent to an IBM mechanical office where holes corresponding to the information of each pencil mark are punched in the card, which is then ready for mechanical tabulation like any other punch card.

Following the examination of a geographical unit, or at the end of the day, the cards are packed with a "group identification sheet" supplying the information common to all inhabitants of the community or population group examined, such as date of examination, type of enquiry, geographical location of the community, socio-economic background, climatic conditions and other data of interest.

The proposed card does not provide specific spaces for all the information it might be useful to record in all possible types of enquiries. However, four columns have been left blank at the right side of the card to enable the ophthalmologist to record more information according to his particular needs, such as [redacted], marital status, family code number, etc. Before using the latter columns, the information to be recorded must be coded.

Instructions for recording of data

Name and address

From practical experience it appears that in a great number of surveys, identification by name and address is not necessary, although it may be useful for some enquiries, e.g. in mass screening and case-finding surveys, when the names and addresses of patients have to be transmitted to the dispensary for [redacted]tion, etc. This information should be entered in the space provided. preferably in ink, and it is essential that it be kept within this space.

Sex

Complete the appropriate ellipse.

Age

Complete the appropriate ellipses in both columns; e.g. for a 5-year-old patient "0" should be put in the tens, and "5" in the unit column; for a person of 30, put 3 in the tens and 0 in the units. The age of the patient may sometimes have to be estimated; if he is about 50, put 5 in the ten column and 0 in the unit column.

Trachoma

One and only one ellipse should be crossed in the trachoma columns. In case both eyes are not equally involved, record the condition of the more severely attacked one.

Recording in these columns follows the standard pattern used for WHO record cards, instructions for which are also given on the back of the group identification sheet.

Stages of trachoma:

0	Free from trachoma
I	Trachoma at onset
II	Progressive trachoma
III	Cicatrizing trachoma
IV	Cicatrized (healed) trachoma
D	Doubtful signs of trachoma

Conjunctiva

F (Follicles)

The relative intensity of the lesions in each case should be indicated by a number:

0 = Nil (-)
1 = Slight (+)
2 = Moderate (++)
3 = Severe (+++)
N.T. = Lesion of non-trachomatous origin whatever its intensity

P (Papillae)

C (Cicatrices)

Recording of the relative intensity of papillary hypertrophy and cicatrization follows the same rules.

Cornea

V (Neovascularization)

I (Infiltration)

Information should be indicated in each case by a number in terms of extension in millimetres from the upper limbus.

0 = none
1 = 1 mm
2 = 2 mm
.....
6 + = 6 mm or more

If, for one reason or other, the cornea has not been examined, or it has not been possible to measure or estimate the extent of neovascularization or infiltration, complete the ellipse N.E. (not examined) in both columns.

Trichiasis

Complete the ellipse NO if no trichiasis

MONO - if there is trichiasis in one eye (monolateral)
BILAT - " " " " " both eyes (bilateral)

Co. Conjunctivitis

One of the following ellipses should be completed:

Co. 0 - No clinical signs of bacterial conjunctivitis

Co. 1 - Mild or doubtful conjunctivitis (hyperaemia and no more than a small bead of secretion in the conjunctival sac)

Co. 2 - Subacute conjunctivitis (purulent or mucopurulent secretion without marked oedema of the tissue)

Co. 3 - Acute conjunctivitis (purulent or mucopurulent secretion with marked oedema of the tissue)

The following ellipses may be completed as well, if the clinical diagnosis so requires:

M.A. - Clinical signs of Morax-Axenfeld "angular" blepharo-conjunctivitis

Vern. - Vernal conjunctivitis

Vir. - Viral conjunctivitis (if this can be diagnosed in field conditions)

Complications resulting from trachoma or associated infections

Complications should always be recorded. If none are found, the ellipse "no complications" should be completed. If, for one reason or other, the cornea and the globe has not been examined, this fact should be recorded by completing the ellipse "not examined". Unless this rule is observed, accurate statistical evaluation cannot be made.

In this column records must be made for each eye separately.

In some cases several categories of complication may be present, and the corresponding number of ellipses should be completed in the same column. Although this may cause some difficulty in the mechanical tabulation of the data, these cases are rare, and should not present any serious trouble.

The nature, relative size and position of corneal and bulbar complications should always be indicated by drawing standard symbols in the two rings on the left side of the card. These drawings will facilitate evaluation of the degree of each recorded complication. Suggested symbols are printed on the back of the group identification sheet.

Other diseases

In mass screening it may in certain cases be useful to record others of the more frequent eye diseases liable to cause loss of vision. Two columns are reserved for this purpose. If, for some reason, it has not been possible to examine the eyes, the ellipse "not examined" should also be completed here. If none of these additional diseases has been found on examination, the ellipse "no other diseases" should be completed.

Some confusion may arise as some of the 'other diseases' can be detected at first sight, such as pterygium, anophthalmus etc., whereas others need more elaborate methods of examination, i.e. glaucoma, some cataracts etc. As it is often difficult to carry out thorough examinations in field conditions, and as artificial light is not always available, the conditions under which examination was made should be stated on the group identification sheet, e.g., inspection with naked eye, loupe, binocular loupe, portable slit lamp, etc.

(Ophthalmoscopy or tonometry are not regarded as practicable in any mass survey).

Vision

Visual status in relation to complications of trachoma and/or associated infections should also be recorded.

Under field conditions an accurate subjective examination of the vision is usually impossible. Only three easily determined degrees should be taken into account, therefore. Grouping under these categories of impairment should correspond to practical considerations. The classification can be based largely on objective examination, e.g.,

- clear cornea = "no impairment"
- faint central nebula, residual fine pannus vessels over pupillary area etc. = "moderate impairment" (i.e. able to perform rough work not requiring good vision)
- central leucoma, total pannus etc. = economic blindness (i.e. unable to perform any work for which vision is essential. Persons with vision less than 10/200 are usually classified in this group)

A column is provided for recording treatment need in each case. These data help to evaluate the real requirements before planning mass measures. Where medical treatment is required, the corresponding ellipse should be completed. If surgical treatment is needed, the ellipse for this purpose only should be completed, as it is assumed that in such cases drug treatment will also be necessary. Where no treatment is required, this should likewise be stated.

If the question whether treatment is required or not has not been considered in a particular survey, the ellipse N.E. (question not examined) should be completed.

Use of the group identification sheet

Each set of cards made out on the same occasion, coming from the same unit and forwarded to the mechanical centre must be accompanied by a group identification sheet, showing the following:

1. A code number stating the kind of survey made, e.g.,
   a. Prevalence survey of whole communities
   b. School screening and case-finding

c. Prevalence survey of other population groups as factory workers etc.

d., e., etc. Other items as required.

2. Indication as to whether this group of people has been examined for the first time or repeatedly.
3. Indication as to whether the population group examined has previously been treated or not.
4. Date of examination.
5. Geographical location of the group (by means of a geographical code number - in most countries such a code is in use at the Central Statistical Office and it would be practical to use the same code).
6. Other information on the population group examined. Individual serial numbers, if such are used on individual cards, e.g., from No. 1 to No. 1500.

An example of a group identification sheet is attached as an annex.

Punching

Punching of the recorded data and tabulations can usually be made by ad hoc arrangement with IBM representatives, local universities, governments or commercial units, who are usually willing to let outside bodies hire operator's time as well as machines. To ensure uniformity, the information should be punched in the following punching columns:

Group identification	col.	20 to 45
Sex	"	46
...		
...		
Treatment needed	"	63
Column mark sensing 24	"	64
25	"	65
26	"	66
27	"	67

The punching of data should be laid down in a written statement if bunches of cards originating from various sources have to be tabulated together.

Check for double punching will be made on all mark-sensing columns.

This card can be delivered in small quantities free of charge by WHO, EURO, for the purpose of studying its practicability. If it is found to be practical, a block could be provided for organizations wishing to print their own cards.

GROUP IDENTIFICATION SHEET

(to be attached to each set of cards)

Individual cards No. ____ to No. ____

	Indication of the coded columns in which data should be punched (Use these columns only for coding)
1. Type of enquiry 1. Prevalence survey of whole community*) ☐ 2. School screening ☐ 3. Prevalence survey of other groups ☐ 4. Others (specify) ☐	20
2. Examination Population group examined for the first time ☐ Population group examined previously ☐	21
3. Community previously treated No ☐ Yes ☐	22
4. Date of examination ...../...../..... (date) (month) (year)	date month year 23 24 25 26 27
5. Group examined Group of population or school: ..... in ..... (locality)	28 29 30 31 32 33
Other information Ethnic group, religion etc. (as required)	
Information recorded in supplementary mark-sensing columns: Column 24: ..... " 25: ..... " 26: ..... " 27:	

Name and signature of the examiner :

*) Fill in with an X

STAGES OF TRACHOMA (after MacCallan)

I. = Trachoma at onset

II. = Progressive Trachoma

III. = Cicatrizing Trachoma

IV. = Cicatrized (healed) Trachoma

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0. = Free from Trachoma

Dt. = Doubtful signs of Trachoma

CLINICAL TYPES OF CONJUNCTIVITIS

Co.0 = No clinical signs of bacterial conjunctivitis.

Co.1 = Mild or doubtful conjunctivitis (Hyperaemia and no more than a small bead of secretion in the conjunctival sac).

Co.2 = Subacute conjunctivitis (purulent or mucopurulent secretion without marked oedema of the tissue).

Co.3 = Acute conjunctivitis (purulent or mucopurulent secretion with marked oedema of the tissue).

M-A Clin = Clinical signs of Morax-Axenfeld 'angular' conjunctivitis.

CLINICAL FEATURES OF TRACHOMA

CONJUNCTIVA

F = FOLLICLES

P = PAPILLAE

C = CICATRICES

The relative intensity of the lesions in each case to be indicated by a number:

0 = Nil (= -)
1 = Slight (= +)
2 = Moderate (= ++)
3 = Severe (= +++)

If follicles, papillae or cicatrices of non-trachomatous origin are present, the letters 'N-T' should be written in the appropriate column.

CORNEA

V = NEOVASCULARIZATION

I = INFILTRATION

To be indicated in each case by a number, in terms of mms extension from the upper limbus

VISION

Visual Status in relation to complications of trachoma and/or associated infections should be recorded at the first and final examination in the spaces provided.
These records will be based largely on objective examination, for example:

- clear cornea = "no impairment";
- faint central nebulae, residual fine pannus vessels over pupillary area, etc. = "moderate impairment"(i.e. able to perform rough work not requiring good vision);
- central leucoma, total pannus etc.="economic blindness"(i.e. unable to perform any work for which vision is essential).

A space is also provided for the recording of visual status in respect of other diseases. This is reserved for special surveys. Since it requires subjective testing it is impracticable in ordinary mass campaigns.

Standard symbols to be used to indicate the nature, relative size and position of corneal and bulbar complications.

Pannus crassus

Simple ulcer

Perforating ulcer

Nebula

Simple leucoma

Adherent leucoma

Total leucoma

Staphyloma

Phthisis bulbi

Anophtalmus

Pterygion