TABULATION OF DATA AND SURVEY REPORT

There are many advantages in preliminary rapid tabulation of survey results, even at the cost of some loss of detail in presentation. At the time of an immunization survey, the Health Officer has the interest of the medical and lay community leaders and immediate presentation of the findings is most effective in stimulating action on the problems revealed by the survey. In epidemiological surveys an early examination of findings may reveal a need for additional information which could not be obtained at a later date.

With careful selection of items to be tabulated and preparation of suitable work sheets, the results can be summarized day by day as the survey progresses and a preliminary report prepared within hours of completion of the field work. The preliminary tabulation can usually be made available more rapidly than the data could be prepared for the input of automatic data processing equipment although for later detailed analysis, automatic processing equipment will usually be essential. Hand tabulations as the survey progresses also provide an additional safeguard against undetected misunderstandings on the part of the interviewers. Any unlikely results can be observed early in the survey and immediate checking of field procedures initiated.

Examples of hand tabulation sheets based on an immunization survey are illustrated and described below. Three Tabulation Forms, "A" for immunization data on persons one year of age and older, "B" for similar data on children under one year of age, and "C" for analysis of methodology, are required.

Headings for Tabulation Form A are shown in Figure 12, page 106. Alternative formats, A-1 and A-2, are presented. In format A-1, oral poliovaccine (OPV) status and inactivated poliovaccine (IPV) status are tabulated independently. The format A-2 is designed to enable determination of the number of persons with a
### Figure 12. Headings for Tabulating Sheets

**Tabulating Sheet A-1** for Interview Questionnaires

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**Age 1-34**

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<tr>
<th>Tot.</th>
<th>OPV</th>
<th>IPV</th>
<th>Smplx</th>
<th>NP</th>
<th>Age 40 and Over</th>
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**Tabulating Sheet A-2**

**for Interview Questionnaires**

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**Age 1-34**

<table>
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<tr>
<th>Tot.</th>
<th>OPV</th>
<th>IPV</th>
<th>Smplx</th>
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<th>Age 40 and Over</th>
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**Age 15-34**

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<th>IPV</th>
<th>Smplx</th>
<th>NP</th>
<th>Age 40 and Over</th>
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<td>32</td>
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complete series of both vaccines, either vaccine, or neither.

Tabulating Sheet B (Figure 13, page 110) is a line listing of immunization information for children under 1 year of age. Infants are separated from the rest of the sample population since practices in administration of the various antigens to children under 1 year of age are not uniform from one part of the country to another so that criteria for adequate immunization at specified ages in months under one year must be established locally. Furthermore, if the sample size is set at 50 children in the 1-4 age group, the number under 1 year of age will be very small. The percentage immunized will be of statistical significance only if nearly all of the infants are either adequately or inadequately immunized.

Tabulating Sheet C (Figure 14, page 110) provides information for analysis and evaluation of methodology and field work.

Tabulating Procedures

The rather detailed instructions which follow, outline a procedure which enables checking as the work proceeds, avoiding lengthy search for errors if final totals do not balance.

Tabulating Sheets A-1 and A-2 for Poliovaccine Status of Members of Households

On tabulating sheet A-1, data are obtained for all immunizations by two classifications, Yes and No, as defined below. These definitions classify all persons with "number of doses unknown" and "immunization status unknown" as not vaccinated so that estimates of minimum immunization levels are obtained. The definitions are as follows:

a. Oral Poliomyelitis Vaccine (OPV)
   Yes -- 3 doses.
   No -- 0, 1, 2, Number Unknown (Nu) and Status Unknown (Su)

b. Inactivated Poliomyelitis Vaccine (IPV)
   Yes -- 3 or more inoculations.
   No -- 0, 1, 2, Nu and Su

c. Smallpox Vaccination
   Yes -- check mark on Interview Form.
   No -- dash or "U" on Form

d. DPT Primary Series <5 years of age
   Yes -- check mark on Interview Form.
   No -- dash or "U" on Form

e. DPT (or DT) booster, 5-14 years of age
   Yes -- check mark on Interview Form.
   No -- dash or "U" on Form
Tabulating sheet A-2 has been designed for recording combined protection by both oral and inactivated poliovaccines. This tabulation will provide estimates of the sample population who have received a complete series of both OPV and IPV, a complete series of OPV but an incomplete series of IPV, or a complete series of IPV but an incomplete series of OPV, and those with an incomplete series of both IPV and OPV (none or less than the required number in either series).

Definitions are the same as for tabulating sheet A-1 but each person is classified by poliovaccine as follows:

- OPV-Yes and IPV-Yes
- OPV-Yes and IPV-No
- OPV-No and IPV-Yes
- OPV-No and IPV-No

The data for each survey area should be entered on a separate group of tabulating sheets with questionnaire forms arranged in sequence by Interview Sector Code Number and Housing Unit Number within Sectors. In a survey of all families, columns 1-2 may be completed in advance. The remaining entries are made day by day as forms completed on first visit or by call-back are returned. (In a preschool immunization index survey, tabulation should be deferred until complete information is obtained for each Interview Sector since approximately 75 percent of the households visited will not include any children under 5 years of age).

1. Enter the socioeconomic area code under Area on the left of the heading strip of each tabulating form.

2. Enter the Interview Sector code in column (1).

3. The H.U. No. (housing unit number) is entered in column (2) on each line. (In a preschool immunization index survey, entries are made only for completed interviews at housing units with children under 5 years of age).

4. In column (3), Tot. in HU, enter the total number of persons in the housing unit.
5. Entries are then made in columns (4), (5), (14), (23) and (30), Tot. Pers. for each age grouping, < 1, 1-4, 5-14, 15-39 and 40 and over. Check: Before proceeding further, add these to check with the total number of persons in the housing unit, column (3).

6. Count the number of persons in each age group, 1-4, 5-14, 15-39, 40 and over, with respective "yes" and "no" immunization status, and enter the numbers in the appropriate Yes and No columns. Check: For each type of immunization the entries in the Yes and No columns must add to the total number of persons previously entered in columns (5), (14), (23) and (30).

7. Area total on tabulating sheets.
   a. If the checks mentioned above have been made, the only errors at this point will be a misplaced entry in a Yes or No column. To check, review the questionnaire forms to verify the entries.
   b. Prepare totals for each area, proceeding as above by first adding the total housing unit members (column 3), then adding each age group total and checking that the age totals add to total number of housing unit members. Next, total each pair of immunization status columns and check their total against the total for the age group.

Tabulating Sheet B—Vaccination Status of Children Under 1 Year of Age.

A line listing for each child under 1 year of age is transcribed directly from the interview questionnaire to Tabulating Sheet B, Figure 13. These data provide an insight into local practices for comparison with immunization schedules and procedures recommended by the local or State Health Department, or national agencies and associations.