3.1 Length

Adequate time must be allowed for the interviewer to solicit the correct responses to all the questions included in a questionnaire. The time that an interview will take may be difficult to estimate and may depend on the inherent interest of the subject matter to respondents, as well as the amount of time they can spare. The likely duration of an interview can be evaluated during pilot testing. Neither the interviewer nor the respondent should feel under time pressure to complete the interview. Also, the questionnaire should be long enough to allow the required information to be collected, but without unduly inconveniencing the respondent. The work schedule of interviewers should be planned, such that they are not tempted to hurry through interviews. In general, it is not a good policy to pay interviewers according to the number of interviews completed, unless it is certain that this will not compromise quality. Sufficient time must be allocated to allow the interviewer to explain why the survey is being conducted, to emphasize the importance of truthful responses, and to reassure the respondent regarding the procedures undertaken to ensure the confidentiality of any information divulged in the interview.

Interviews lasting an hour or more are rarely feasible in the context of a large-scale survey; usually, it is more realistic to aim for a maximum of around 30 minutes per interview. Respondents may not complete an interview that is too long, and this may be particularly problematic if crucial questions are towards the end of the questionnaire. Problems of compliance may also grow, as the interviewers' reputations go before them. Brevity is especially important if repeated follow-up questionnaires are planned.

It is a good practice to have the interviewers record the time that each interview starts and finishes. This is one way of checking how interviewers spend their days (though it is obviously susceptible to manipulation), and, more importantly, it provides a measure, for example, of whether different degrees of attention are being given to those in the intervention or...
control groups, with a consequent possibility of bias.

### 3.2 Order of questions

The initial questions in an interview will seek to verify the identity of the respondent (to ensure the correct person is being questioned) and to collect basic demographic information (for example, age, sex, marital status). The most sensitive questions should usually be asked in the second half of the questionnaire. This is done to give the interviewer time to establish a rapport with the respondent and also so that, if the respondent should be upset by the questions and withdraws from the interview, at least this happens after most other information has been collected (though such questions should have been weeded out during pilot testing). However, it is usually best not to have the most sensitive questions last, to avoid the respondent ending the questionnaire with these at the top of their mind. Questions which are not judged to be sensitive should tend to be asked in their order of importance (to the study objectives), the most important ones being asked first, to minimize the losses due to any premature cessation of an interview.

Responses to some questions may condition the responses to other questions, and this should be taken into account in their ordering. For example, a question asking if the respondent is generally ‘well’, which produces a ‘yes’ response, may bias questions about specific illnesses if the respondent feels obliged to justify their overall ‘wellness’. If the interest of the study is in specific diseases, it might be better to focus on these first, before questions about general health.

Some questions may seek to obtain the same information in different ways as a validation procedure. If this is done, the questions should not be too close together in the questionnaire.

### 3.3 Layout

A questionnaire should be able to be used in the field with, at most, infrequent reference to manuals or instructions. It should provide the interviewer with sufficient information to conduct the interview smoothly and without difficulty, after suitable training (see Section 4.2). At the same time, it should not be a bulky document, as this may alarm the respondent (in terms of the time they think it will take to complete), and it may add to the problem of paper storage (see Section 5). Instructions to interviewers may be distinguished from questions to respondents by printing them in a different typeface (for example, italics). Each interviewer should be issued with an interviewer’s manual (see Section 4.4), which contains information to supplement instructions to interviewers on the questionnaire itself. Interviewers should be instructed to consult their manual if they are uncertain about how to ask a question or how to record responses or carry out any other procedure.

It is especially important that the initial introduction the interviewer gives a respondent is clear and consistent from interview to interview. It is common for the text of this introduction to be printed at the start of the questionnaire. Usually, interviewers will be instructed to ask questions exactly as they are written in the questionnaire. This is an important way to achieve greater reproducibility and standardization between interviewers.

Whether printed on paper or on an electronic device, the questionnaire should be well designed. If paper is being used, the size and quality should be chosen to suit field conditions. Cards are often easier to work with in the field than paper sheets but may be unsuitable if more than one is required for an interview and they are also bulky to carry around. The layout of the questionnaire should be sufficiently spaced to allow those with large handwriting to record all the required
information. If whether or not a question is asked depends on the response to a previous question, this should be indicated on the questionnaire with clear instructions and appropriate ‘branch and skip’ explanations (see Appendix 14.4). If the questionnaire is being administered from an electronic device, it is essential that such branches and skips have been correctly pre-programmed (see Section 5.2).

All questions should be assigned a number. For questions that are repeated several times, such as questions about each of a mother’s children, a tabular layout can be used (see Appendix 14.5), but this should be designed with care, as such a layout puts more demands on the interviewer, or on the respondent if the questionnaire is self-completed.

To facilitate later checking and coding, it may be useful to include, on the questionnaire, the names that variables are going to be assigned for computer processing (see Section 3.4). These are often typed in capital letters and placed just to the right of the coding boxes on the questionnaire.

### 3.4 Coding

Coding is discussed in detail in Chapter 20, Sections 5.4 and 7.3, and only a few points pertinent to questionnaire design are covered here. Coding is the process of converting the recorded answers to questions into a numerical or alphabetical code. The answers may be numeric (for example, age) or be the replies to closed questions. For closed questions, there are two possible ways of coding, depending upon whether only one answer, out of the list of possible responses, can be given or whether several are possible. Examples of the former are any ‘yes/no/don’t know’ answers or answers to questions such as relationship to the head of household (for example, wife, child, brother, or sister, etc., where only one answer is allowed). An example of where several answers on the list are possible for a single respondent is a question about food consumed on the previous day. In the first case, the possible responses are each given a code, usually a letter or a digit, and a respondent’s answer is coded accordingly. In the second, each possible response must be coded for the answer ‘no’ or ‘yes’ (often coded as ‘0’ or ‘1’, respectively, or as ‘N’ or ‘Y’) or ‘don’t know’ (if applicable) (often coded as ‘9’), and the codes for each of them will make up the respondent’s reply.

It is important to allow codes for ‘don’t know’, rather than leaving the code blank. On paper questionnaires, answers to questions that are skipped (i.e. which are not relevant) are normally left blank during the interview. It may be convenient to leave the codes blank as well, or a specific code for ‘not applicable’ (for example, ‘8’) can be used. The choice depends on data processing requirements (see Chapter 20). With lists of possible responses, a category ‘Other (specify)’ is often included and needs to have its own code. There should be space on the questionnaire to write or type in the actual reply, but, as mentioned in Box 14.2, the pre-testing and pilot work should ensure that the ‘Other (specify)’ category is uncommonly used for a reply.

Appendices 14.1 to 14.10 give some examples of different ways of designing a questionnaire and examples of different types of questions.