

## 9. Selection of the fieldwork staff

Päivikki Koponen<sup>1</sup>, Hanna Tolonen<sup>1</sup>

<sup>1</sup> National Institute for Health and Welfare (THL), Helsinki, Finland



Competent and motivated fieldwork staff is a key to successful data collection. Characteristics of the staff members can influence nonresponse as well as validity and reliability of survey data, especially in public health surveys, which cover sensitive issues and topics prone to socially desirable responding (Davis et al 2010). In HES the selection of fieldwork staff has to be based on general requirements and competences needed to carry out the clinical measurements. Differences in the national health care systems as well as national guidelines for the responsibilities of different health professionals need to be considered.

### 9.1. General principles and criteria for recruitment

Interviewer and measurer effects have to be considered when selecting and recruiting fieldwork personnel. Existing literature on interviewer race and ethnicity effects fails to conclude whether respondents feel more comfortable with, trust, prefer or provide more accurate data to interviewers of their own race, sex and ethnicity (Davis et al 2010). However, it is clear that these effects should be taken into account and evaluated. The general principles for the selection and recruitment of fieldwork staff are (adapted from Tolonen et al 2008):

1. Legislation concerning medical practice and nursing in each country as well as the EU directives for the recognition of professional qualifications have to be taken into account.
2. The personnel should be motivated to strictly follow the survey protocols to ensure reliability and accuracy of the survey results.

3. General appearance (non-provocative, calm and neutral appearance and good manners), friendliness, respect, empathy, encouragement and interest shown towards participants may affect participation and the results of the measurements. Age, gender, and ethnicity of the fieldwork personnel need to be taken into account in respect to the national and the participants' culture. It is recommended that the fieldwork teams consist of personnel with a variety of backgrounds. For example a similar ethnic background of the nurse and the participants may help to build trust and understanding among participants from ethnic minority groups. Similarly male nurses may not be accepted to carry out measurements requiring light clothing for women.
4. Willingness and possibility to travel around the country with the survey team may be needed depending on survey logistics. For example, this may be a problem for persons with small children.
5. Professional competence of the staff members and service given to participants may also be an important factor affecting survey response. Feedback given to the participants during and after the measurements needs to be considered also in the selection of survey staff. For example physiotherapists may be better qualified than nurses to carry out some physical functioning tests, while registered nurses may be better qualified than nurse assistants to carry out blood pressure measurements.
6. Fluency in national language(s), and if needed, languages of the major migrant groups.

Fieldwork staff may be recruited specifically for the survey. An alternative is to use personnel from the local health care organizations (e.g. primary care units or health centers or hospitals) in the selected survey sites. It is usually easier to ensure standardization of measurements, if fieldwork staff is recruited specifically for the survey. When permanent personnel of the local health services are trained to carry out the survey fieldwork they may be tempted to follow their regular practices instead of the survey protocols. This may happen especially if they also have their regular tasks during the survey, and are only part time carrying out the survey fieldwork. In any case the use of the local personnel in each survey site increases substantially the time and efforts needed for training. The use of regular health service personnel may also effect survey results by the differences in willingness of the survey participants to disclose their personal issues to the practitioners they are familiar with. This familiarity may both enhance and restrict open communication.

A combination of the two groups of personnel may be considered. Specially recruited personnel travel from survey site to another is trained to carry out the measurements that are most challenging to standardize, such as blood pressure measurements. These specific survey staff members may also supervise the local personnel responsible for other tasks. The local personnel may also be more efficient in recruiting participants.

## **9.2. Professional groups**

From the point of view of these general requirements and implications to the survey budget different professional groups have both benefits and disadvantages (Table 9.1). The professional groups which should be considered for most of the measurements are physicians, nurses and other health care professionals. It is recommended that registered nurses carry out the EHES core measurements. The person performing the blood collection should be a certified phlebotomist. In most countries, this certification is offered through national accrediting agencies for clinical laboratory sciences. Employing a certified phlebotomist for the invasive blood collection procedure provides not only a measure of safety for the participant but also some medical-legal protection for the survey organizers, in case something should go wrong. A medical doctor is needed for back-up. Especially the person who takes the blood samples should know whom they can contact in case something happens with the participant during or after the blood drawing.

## **9.3 Fieldwork teams**

When estimating the number of survey personnel needed for the fieldwork, potential sick leaves and other absences need to be anticipated. In most cases it is recommended to train a few extra persons for substitutes to ensure that time schedules are kept, and the participants are served as well as possible. Especially when the fieldwork period lasts for several months and the examinations are carried out by a team consisting of specific personnel for each measurement, the possibility to rotate duties between staff members should be considered. Such rotation of duties helps to minimize measurer effects and to motivate the staff members to follow the standards. This requires staff members with broader competence, who can also substitute other team members in case of absences (e.g. sick-leaves).

**Table 9.1.** Requirements, benefits and disadvantages of different professionals in survey fieldwork

Professional group	Physicians (or dentists if oral health is measured)	Nurses	Certified phlebotomists	Interviewers	Other professional groups such as medical-technical assistants, nutritionists, Depending on selected measurements
<b>Specific requirements</b>	Needed if clinical or diagnostic examinations are carried out and if	Registered nurse generalists with training according to the Directive	Recommended for blood sample collection	Specific interviewer training recommended if personal (face-to-face)	on selected measurements
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• may increase</li> </ul>	<ul style="list-style-type: none"> <li>• better</li> </ul>	<ul style="list-style-type: none"> <li>• in-depth</li> </ul>	<ul style="list-style-type: none"> <li>• in-depth</li> </ul>	<ul style="list-style-type: none"> <li>• in-depth</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>• high salary level (effect on</li> </ul>				<ul style="list-style-type: none"> <li>• restricted roles/tasks</li> </ul>

Support and supervision needed from the survey organizers or from the survey core group ("the central survey office") need to be ensured. This is particularly important if different teams cover different parts of the country. Well-defined leadership within the team is also essential. Each fieldwork team should have a specified supervisor/leader who follows the work progress and adherence to standards among all team members. In addition to the medical back-up required for drawing the blood samples, physicians may be needed to interpret measurement results or to give medical advice when abnormal measurement results, which may need urgent consultation, are found. When physicians are not part of the field teams their availability for consultation has to be organized in another way.

In case of home visits, the fieldwork teams seldom include more than two persons (interviewer and a nurse) and therefore multi-professional fieldwork teams are not feasible. Instead, the personnel needs to be well trained generalists who have specific professional training for making home visits and whom the public easily accept to visit their homes. Typically public health nurses or health visitors are used for home visits. For surveys carried out in clinic settings the professionals selected for the fieldwork teams may vary. Two examples are presented here.

### **9.3.1 Team for a survey in clinic environments and with the EHES core measurements**

Nurse 1, tasks: reception of the participants, obtaining informed consent, short health interview or checking the self administered questionnaire.

Nurse 2, tasks: Blood pressure measurement, height, weight and waist circumference measurement.

Phlebotomist, tasks: drawing and processing blood samples

Nurse 1 can be selected with less professional competence and with lower salary level (e.g. medical receptionist, medical-technical assistant). However, if nurse 1 and nurse 2 are both registered nurses rotation of tasks e.g. with monthly intervals and substitution of the other nurse in case of is sudden absences is possible. A survey physician may be needed as a back-up person (on call), easily available for consultation This consulting physician can cover several fieldwork teams working in different locations.

### 9.3.2 Team for a survey in clinic environments and with several additional measurements

Nurse 1, tasks: reception of the participants, obtaining informed consent, short health interview or checking the self administered questionnaire.

Nurse 2, tasks: Blood pressure measurement, height, weight and waist circumference measurement, lung function test (spirometry).

Phlebotomist/bioanalyst, tasks: drawing and processing blood samples

Nurse 3, tasks: diagnostic mental health interview (e.g. CIDI)

Physiotherapist, tasks: hand grip strength measurement, test of standing balance and timed Chair stand test

Physician, tasks: clinical medical examination with e.g. auscultation of the heart and lungs, interpreting previous measurement results (e.g. spirometry), and diagnostic assessments

In this team it is possible to rotate tasks between several team members if the bioanalyst is trained also to cover the tasks of nurse 2 and nurse 2 is also certified/qualified to draw blood samples. Nurse 1 and nurse 3 can easily be trained for both tasks. The last professional whom the participants meet at the end of the examination is the physician who is checks all measurement results and may advice the participants to seek further medical help when needed.

## References

- Davis RE, Couper MP, Janz NK, Calwell CH, Resnicow K. Interviewer effects in public health surveys. *Health education research* 2010;25:14-26.
- Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications. *Official Journal of the European Union* 2005:22-142.
- Graves JW, Sheps SG. Does Evidence-based medicine suggest that physicians should not be measuring blood pressure in the hypertensive patient? *Am J Hypertension* 2004;17:354-360.
- Labinson PT, Giacco S, Gift H, Mansoor GA, White WB. The importance of the clinical observer in the development of a white-coat effect in African-American patients with hypertension. *Blood Press Monit* 2008 Jun;13(3):139-142.
- Tolonen H, Koponen P, Aromaa A, et al. (Eds.) Recommendations for the Health Examination Surveys in Europe. B21/2008, Publications of the National Public Health Institute, Helsinki 2008. Also available from <http://www>.

[ktl.fi/attachments/suomi/julkaisut/julkaisusarja\\_b/2008/2008b21.pdf](http://ktl.fi/attachments/suomi/julkaisut/julkaisusarja_b/2008/2008b21.pdf)

