Nurse Protocols

for

Measurements and samples used by the National Centre for Social Research

Nurse Protocol, Version 2, Feb. 10, 2010

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1 HOW TO USE THIS MANUAL

This manual sets out the protocols and procedures for all measurements and samples that nurses will follow on *Understanding Society*.

Protocols are of paramount importance in collecting data and measurements. Having such strict protocols and procedures means that the information that is collected from respondents is valid, reliable and consistently obtained. It further allows the results to be compared across various factors such as age and location and ultimately means that the highest quality research is conducted and accurate information is given to our clients and policy makers.

The protocols and procedures outlined in this manual have been used by NatCen on various occasions and have been found to be successful. Not only do they provide valid and reliable results but they are also the safest way for the measures to be conducted for both the respondents and the nurses.

All protocols and procedures in this manual must be strictly adhered to and must be used in conjunction with existing Clinical Procedure Guidelines (CPGs) and the nurse project instructions which provide additional information such as age limits, which are survey specific.

This is to be used as an instruction book and a quick reference guide when in field.

Points to Note before starting

1.1 Consent

The issue of consent is of key concern in any of the projects conducted by NatCen. We are required to seek ethical approval for all of the projects we undertake involving nurse measures, and as a result the protocols pertaining to consent within this manual are based on recommendations by the National Research Ethics Committee (NRES).

Consent must always be obtained for every measurement and sample taken. As a general guideline the measurements require verbal consent, while the samples, which are more invasive, require written consent. Written consent may also be asked to store a sample of blood.

All of the measurements and samples outlined require at least verbal consent. Unless otherwise stated, in the protocol for a particular measurement/ sample, only verbal consent is required. If written consent is required it will be clearly stated in the protocol.

1.2 Exclusion criteria and eligibility

Most of the procedures in this manual have exclusion criteria that need to be considered when conducting a measurement or taking a sample. These criteria are listed under each measurement and sample heading. It is important that the exclusion criteria are followed as they help to ensure the safety of, and prevent injury to both the respondent and the nurse.

Note that no measurements or samples are taken from pregnant women.

Each of the measurements and samples also has eligibility rules to consider.

1.3 General equipment care

All of the measurements and samples require some type of equipment. Please take care when using the equipment. In each protocol is a list of the equipment required as well as information on how to use it. Please follow these guidelines.

This equipment is expensive and most of it is easily damaged if it is not transported and/or stored correctly. Please use the bags and boxes provided to store and transport the equipment as it will help to prevent it from being damaged.

Calibrated instruments are particularly fragile and if they are knocked it could cause them to provide inaccurate measurements. Please handle the calibrated instruments with care and maintain them according to guidelines in the manual.

Always ensure that the equipment is in good working order before you go to an interview e.g. batteries are fully charged.

If you suspect that any of the equipment is faulty and/or damaged, please report this to Brentwood who will be able to advise you on what action to take.

1.4 Recording measurements

The anthropometric measurements require the results to be recorded in the metric format. Within the metric system, there are 10 millimetres (mm) in a centimetre (cm) and 100 centimetres (cm) in a metre (m). CAPI requires that measurements be recorded in the form 123.4cm (to one decimal place only). If a reading falls between two millimetres, it should be rounded and recorded to the **nearest even millimetre**. For example if a respondent has a height reading that falls between 166.7 and 166.8, the reading of 166.8 should be recorded. Similarly, if the reading falls between 166.6 and 166.7, 166.6 should be recorded. By doing it this way, we ensure that our final data is not biased due to always rounding up or down.

1.5 Respondent feedback

Understanding Society provides immediate feedback to respondents of some measurements by recording the results on a Measurement Record Card. If the respondent wishes to know their results they should be recorded here.

Please do not comment on the meaning of a respondent's results in general or on their results in relation to other people taking part in the survey. The only exception to this rule is the blood pressure measurement where some comments can be given to the respondent, according to the instructions outlined in the blood pressure protocol (see section 11.7).

No feedback is provided regarding blood samples.

2 HEIGHT MEASUREMENT

2.1 Introduction

The height measurement is a measure of anthropometry, which provides information on the size and proportions of the human body. When taken in conjunction with other anthropometric measures it is an indicator of, and can predict, the nutritional status, performance, health and survival of a population and can thus be used to determine public health policies. Moreover, height is often used as an indicator of people's quality of life. This is based on evidence that final height is a combination of genetic and environmental factors, where a taller population is indicative of a better quality of life due to access to health services and nutrition.

2.2 Exclusion criteria

Respondents are excluded from the height measurement if:

- They are pregnant
- They are too stooped to obtain a reliable measurement
- After a discussion with the respondent it becomes clear that that they are too unsteady on their feet
- They are chairbound
- If the respondent finds it painful to stand or sit up straight

2.3 Equipment

You will need:

- A portable stadiometer (see figure 2 below)
- A Frankfort Plane card.

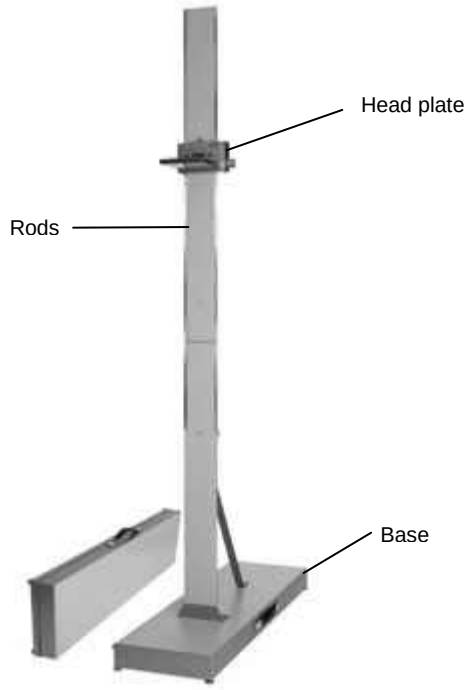


Figure 1 The stadiometer

2.3.1 Caring for the stadiometer

The stadiometer will be sent to you in a box. Always store the stadiometer in the box when it is not in use and always pack the stadiometer carefully in the box whenever you are sending it on by courier. Inside the box with the stadiometer is a special bag that you should use for carrying the stadiometer around when you are out on assignment.

The rods

There are three rods marked with a measuring scale divided into centimetres and then further subdivided into millimetres. The rods are made of aluminium or plastic and are susceptible to bending if any pressure is put on them. Be careful not to damage the corners of the rods as this will prevent them from fitting together properly and will lead to a loss of accuracy in the measurements.

The base plate

Be careful not to damage the corners of the base plate as this could lead to a loss of accuracy in the measurements.

Protruding from the base plate is a pin onto which you attach the rods in order to assemble the stadiometer. With a metal stadiometer, damage to the corners of this pin may mean that the rods do not stand at the correct angle to the base plate when the stadiometer is assembled and the measurements could be affected.

The head plate

There are two parts to the head plate, the blade and the cuff. The blade is the part that rests on the respondent's head while the measurement is taken and the cuff is the part of the head plate that slips over the measurement rods and slides up and down the rods. The whole unit is made of plastic and will snap if subjected to excessive pressure. Grasp the head plate by the cuff whenever you are moving the headplate up or down the rods, this will prevent any unnecessary pressure being applied to the blade which may cause it to break.

2.3.2 Assembling the stadiometer

Practise assembling your stadiometer before you visit a respondent’s home.

You will receive your stadiometer with the three rods banded together and the head plate attached to the pin so that the blade lies flat against the base plate. Do not remove the head plate from this pin.

Note that the pin on the base plate and the rods are numbered/have symbols to guide you through the stages of assembly. (There is also a number engraved onto the side of the rods, this is the serial number of the stadiometer). The stages are as follows:

1. Lie the base plate flat on the floor area where you are to conduct the measurements. It should be as flat as possible, ideally on an uncarpeted floor or with a thin carpet; you should avoid a deep pile carpet or rug if at all possible.

2. Take the rod marked number 2. Making sure the measuring scale is on the right hand side of the rod as you look at the stadiometer face on, place rod 2 onto the base plate pin. It should fit snugly without you having to use force.

3. Take the rod marked number 3. Again make sure that the measuring scale connects with the scale on rod 2 and that the numbers run on from one another. (If they do not, check that you have the correct rod). Put this rod onto rod number 2 in the same way you put rod 2 onto the base plate pin.

4. Take the remaining rod and put it onto rod 3.

2.3.3 Dismantling the stadiometer

Follow these rules:

1. Before you begin to dismantle the stadiometer you must remember to lower the head plate to its lowest position, so that the blade is lying flat against the base plate.

2. Remove one rod at a time.

2.4 Procedure

1. Ask the respondent to remove their shoes.

2. Assemble the stadiometer, near a wall if possible, and raise the headplate to allow sufficient room for the respondent to stand underneath it. Double check that you have assembled the stadiometer correctly.

3. Ask the respondent to stand with their feet flat on the centre of the base plate, feet together and heels against the rod as this helps people to ‘be at their highest’. The respondent's back should be as straight as possible, preferably against the rod but NOT leaning on it. They should have their arms hanging loosely by their sides. They should be facing forwards.

4. Move the respondent's head so that the Frankfort Plane is in a horizontal position (i.e. parallel to the floor). The Frankfort Plane is an imaginary line passing through the external ear canal and across the top of the lower bone of the eye socket, immediately under the eye (see Figure 3). This position is important if an accurate reading is to be obtained. An additional check is to ensure that the measuring arm rests on the crown of the head, i.e. the top back half. To make sure that the Frankfort Plane is horizontal, you can use the Frankfort Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankfort Plane is horizontal when the card is parallel to the stadiometer arm.

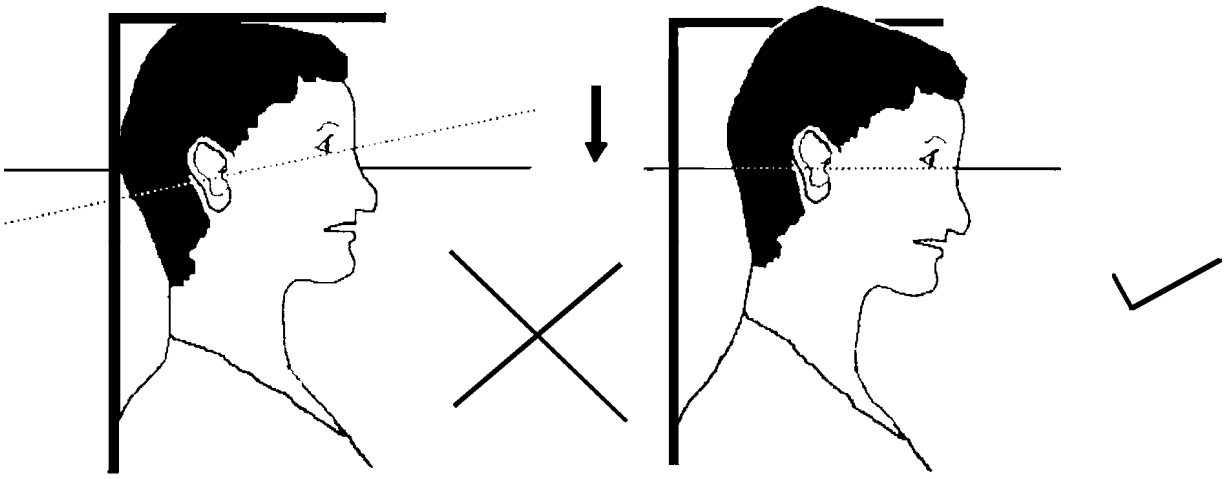


Figure 2 The Frankfort Plane

5. Instruct the respondent to keep their eyes focused on a point straight ahead, to breathe in deeply and to stretch to their fullest height. If after stretching up the respondent's head is no longer horizontal, repeat the procedure. It can be difficult to determine whether the stadiometer headplate is resting on the respondent's head. If so, ask the respondent to tell you when s/he feels it touching their head.

6. Ask the respondent to step forwards. If the measurement has been done correctly the respondent will be able to step off the stadiometer without ducking their head. Make sure that the head plate does not move when the respondent does this.

7. Look at the bottom edge of the head plate cuff. There is an arrowhead pointing to the measuring scale. Take the reading from this point and record the respondent's height in centimetres and millimetres. If a measurement falls between two millimetres, it should be recorded to the **nearest even millimetre** (see section 2.4).

8. If the respondent wishes, record their height onto the measurement record card.

9. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured. Once you have finished measuring everyone, lower the head plate to its lowest position, ready for dismantling.

2.5 Additional points

- If the respondent cannot stand upright with their back against the stadiometer and have their heels against the rod (e.g. those with protruding bottoms) then give priority to standing upright.
- If the respondent has a hair style which stands well above the top of their head, or is wearing a religious head dress, with their permission, bring the headplate down until it touches the hair/head dress. You should never ask someone to remove a religious head dress. With some hairstyles you can compress the hair

to touch the head. If you cannot lower the headplate to touch the head and think that this will lead to an unreliable measure, record this on CAPI. If it is a possible that can be altered e.g. a bun, if possible ask the respondent to change/undo it.

- If the respondent is tall, it can be difficult to line up the Frankfort Plane in the way described. When you think that the plane is horizontal, take one step back to check from a short distance that this is the case.
- You may need to tip the stadiometer to read the height of tall respondents.
- If the respondent has long hair then they may need to tuck it behind their ear in order for the head to be positioned properly. Always ask the respondent to tuck their hair behind their ears.

3. WEIGHT AND BODY FAT MEASUREMENT

3.1. The equipment

You are provided with Tanita scales for the weight and body fat measurement.

At the same time as measuring weight, the scales measure body fat percentage by sending a weak electrical current around the body from one foot to the other. This is safe and painless. The electrical current cannot be felt at all. The scales measure the amount of resistance encountered by the current as it travels round the body. As muscle and fat have different levels of resistance, the scales use this to calculate body fat percentage.

The scales can also be used in 'weight only' mode. This does not involve an electrical current. If the participant does not wish for his/her body fat percentage to be measured but they are happy to have their weight measured, you should use the scales in 'weight only' mode. A separate protocol is given below.

3.2. Looking after and carrying the equipment

The scales will be supplied in or with a padded shoulder bag. They should always be carried in this bag.

The Tanita scales have a hand-held console with a display screen. The weight and body fat percentage appear in the window on the display screen. **Weight is measured to the nearest 0.1kg and body fat percentage to the nearest 0.1%.**

It is **extremely important** that the cord to which the hand-held console is attached is not wrapped around the scales or the console as this can cause damage to the scales.

The scales were checked for accuracy (calibrated) before being issued.

The scales are battery powered.

You should keep the scales in their padded bag when they are not in use.

Brentwood will contact you to discuss calibration requirements if necessary.

These scales must **not** be used on any other projects.

3.3. Measuring protocol

3.3.1. Preparing the equipment

Place the scales on a firm, level surface. Make a note on the computer if only a soft carpeted surface is available (*WtSc*).

3.3.2. Preparing the participant

Ask the participant to:

- Remove his/her shoes and socks. It is essential for the measurement of body fat that the person is barefoot as the electrical current is sent around their body through their feet. Although the scales may sometimes work through thin socks, they will not give an accurate reading.

- Ensure that they are wearing light indoor clothing (e.g. t-shirt and shorts), with items in their pockets removed.

3.3.3. Taking the measurements – weight and body fat

Before asking the person to step on the scales, it is necessary to enter age, gender and height in whole centimetres into the scales. The age, gender and height will be displayed in CAPI[1]. This is in order that body fat percentage can be correctly calculated. This means that the **height measurement MUST be taken before the weight and body fat measurements**.

1. Switch the scales on by pressing the yellow ON/SET button on the right hand side of the hand-held console. The console will beep and the display screen will flash with the default age (30).

2. Enter the age in years. Use the yellow arrow keys to scroll down to the desired age. Holding down the up/down arrow button will enable you to do this quickly. Press the 'SET' key to confirm the selection. The console will beep.

3. Select the appropriate gender by using the yellow arrow keys. Press the up or down arrow once to reach 'female' and the up or down arrow again to reach 'male'. Then press the 'SET' key to confirm the selection. The console will beep.

4. Next enter height in whole centimetres. The console will display the default height (170). Use the arrow keys to scroll up/down to the desired height. Holding down the up/down arrow button will enable you to do this quickly Press the 'SET' key to confirm the selection. The console will beep.

5. If you make a mistake when entering these numbers, turn off the scales (using the red OFF button) and start again.

6. The console will beep twice and the display will show '0.0'. Ask the person to step onto the scales.

7. The person should stand with both feet flat on the surface of the foot pads. Make sure their feet are positioned touching the front and back foot pads. This is essential in order for the current to be passed through the body. The person should face forward with their legs straight and should stand still.

[1] The body-type is also displayed in CAPI and will always say 'STANDARD'.

8. Once stabilised, the weight measurement will appear in the display and the scales will beep. You should not attempt to note the weight at this point.

9. The participant should remain on the scales while their body fat is measured. Five zeros (00000) will appear on the display. They will disappear one by one from left to right. After they have all disappeared, the scales will beep twice to indicate that body fat has been measured. The person may then step-off the scales. This should take about 10 seconds.

10. The body fat percentage will appear in the display. The display will rotate between body fat percentage and the weight for about 30 seconds. You should note both the weight and body-fat percentage at this point.

11. The scales will turn off automatically after about 30 seconds. Press the OFF button to turn the scales off before 30 seconds. In order to take the measurement again, you should turn the scales off and back on again.

12. The kg/lb key can be pressed when the scales are turned off to change the measurement settings. There are 3 possible options: kilograms (kg), pounds (lb) and stones and pounds (st-lb). However, you should always use the scales in 'kg mode' as we want to enter height in centimetres and measure weight in kilograms. If you are asked to enter height in feet and inches or the weight is displayed in stones and/or pounds, this means that the measurement settings are incorrect and should be changed. Once the scales are in 'kg mode', they should stay in this mode unless the kg/lb button is pressed.

3.3.4. Taking the measurements – weight only

1. To turn the scales on in weight only mode, press the red WEIGHT button.

2. The display will show '8888.8' (and beep) and then display '0.0' (and beep).

3. Ask the person to step onto the scales.

4. The person should stand with both feet flat on the surface of the foot pads. The participant should face forward with their legs straight and should stand still.

5. Once stabilised, the weight measurement will appear on the display and the scales will beep and the display will flash.

6. Read the weight from the display and then ask the person to step off the scales. The weight will remain on the display for a few seconds after the person steps off but will remain on the display as long as the person remains on the scales.

3.3.5. Recording the measurements

1. Read the measurements from the display, immediately record the measurements on the computer (*wtcm/bfpc*), the number of attempts made (*wtat*), together with any special circumstances (*wtrl*). In addition, record whether the scales were placed on an uneven floor or carpet (*wtsc*).

2. Remember to thank the participant. You should write the measurements on the record card which is on the back of the leaflet about their involvement in the study.

3. If the person is very overweight, the weight or body fat percentage you enter may trigger a prompt for you to check the weight and body fat percentage again. Please be sensitive.

3.3.6. Weight and/or body fat refused, or not obtained

At *Wtdn* you are asked to code whether the measurement was taken, refused, or not obtained. If for any reason you cannot get a weight and body fat measurement, enter the appropriate code at this question and you will automatically be routed to the relevant follow up questions (*Nowt*) which will allow you to say why no measurement was obtained. If you measure weight only, you will be asked to record why body-fat was not measured (*nobf*).

3.3.7. Additional points

- IMPORTANT: Anyone who is fitted with a pacemaker should not have their body-fat measured as the electrical signal could cause such devices to malfunction.
- These scales are not advised for use with pregnant women since the body-fat measurement may be inaccurate. There is no risk to the unborn child'
- If you need glasses to read the scales please remember to put them on.
- Make a single measurement for weight and body fat where possible – but repeat if unhappy with the first measurement (perhaps because the person moved or was not standing as straight as they could), provided the participant is happy for you to do so.
- If for some reason the participant's weight/body fat percentage was not entered in the computer at the time of measurement, make a note of the weight/body fat percentage on the measurement leaflet for later entry.
- The maximum weight registering accurately on the scales is 150kg (330lb/23½ stone).
- For measuring body fat using these scales, the **minimum height** that can be entered is 100cm (3ft 3in) and the **minimum age** that can be entered is 7 years.

- When using the scales with adults (18 and over), you will also be asked to enter body-type in combination with gender. There are two body types: standard and athlete. Athlete mode should only be used for individuals who are extremely fit. For adults, the scales will also give the total body water percentage and the display will rotate between all three measurements (weight, body fat percentage and body water percentage).

4 WAIST CIRCUMFERENCES

4.1 Introduction

There has been increasing interest in the distribution of body fat as an important indicator of increased risk of cardiovascular disease. The waist circumferences are measures of the distribution of body fat (both subcutaneous and intra-abdominal). Analyses suggest that waist circumference is a predictor of health risk like the body mass index (weight relative to height).

4.2 Exclusion criteria

Respondents are excluded from the waist circumference measurement if they:

- Are pregnant
- Are chairbound
- Have a colostomy / ileostomy

4.3 Equipment

You will need:

- An insertion tape calibrated in millimetres

4.3.1 Using the insertion tape

The tape is passed around the circumference and the end of the tape is inserted through the metal buckle at the other end of the tape. To check the tape is horizontal you have to position the tape on the right flank and look round the participant's back from his/her left flank to check that it is level. This will be easier if you are kneeling or sitting on a chair to the side of the respondent. When taking the reading, be sure not to lift the tape, hold it flat against the body otherwise you will get an inaccurate measurement.

4.4 Preparing the respondent

The respondent needs to be wearing light clothing. Explain to the respondent the importance of this measurement and that clothing can substantially affect the reading. If possible the respondent needs to remove:

- All outer layers of clothing, such as jackets, heavy or baggy jumpers, cardigans and waistcoats
- Shoes with heels
- Tight garments intended to alter the shape of the body, such as corsets, lycra body suits and support tights/underwear
- Belts

Pockets should be emptied and if possible ask the respondent to empty their bladder before taking the measurement.

Some respondents may be wearing religious or other symbols which they cannot remove and which may affect the measurement. Do not embarrass or offend the

respondent by asking them to remove such items. Record in CAPI if the measurement is likely to be affected by this.

4.5 Procedure

1. Ensure that the respondent is standing erect in a relaxed manner and breathing normally. Weight should be evenly balanced on both feet and the feet should be about 25-30cm (1 foot) apart. The arms should be hanging loosely at their sides. This position will provide the most accurate measurement of both the waist and the hip, and will allow for them to be measured easily.

2. If possible, kneel or sit on a chair to the side of the respondent.

3. With assistance from the respondent pass the tape around the respondent's body, or if they are able to, get them to pass the tape around themselves and check that it is not twisted. Insert the plain end of the tape through the metal ring at the other end of the tape.

4.5.1 Measuring waist circumference

4. The respondent's waist is located midway between the iliac crest and the costal margin (lower rib). To locate the levels of the costal margin and the iliac crest, ask the respondent if you can touch them, and use the fingers of your right hand held straight and pointing in front of the participant to slide upward over the iliac crest.

5. Position the tape at the respondent's waist, ensuring that it is horizontal.

6. Ask the respondent to breathe out gently and to look straight ahead. This is to prevent the respondent from contracting their muscles or holding their breath.

7. Take the measurement at the end of a normal expiration by holding the buckle flat against the body and flattening the end of the tape to read the measurement from the outer edge of the buckle.

8. Record the measurement in CAPI in centimetres and millimetres. Always record to a one decimal place. If the result falls between two millimetres, record to the **nearest even millimetre** (see section 2.4).

9. Repeat steps 1-8 to record a second measurement. If the second reading differs significantly from the first, CAPI will report an error message. At this point check that you have entered the results into CAPI correctly. Otherwise take a third measurement, following the procedure above. Enter this result into CAPI, the computer will know which two results to use.

4.6 Additional points

- If you have problems palpating the rib, ask the respondent to breathe in very deeply. Locate the rib and as the respondent breathes out, follow the rib as it moves down with your finger.
- The tape should be tight enough so that it doesn't slip but not tight enough to indent clothing.

- If the respondent is large, ask him/her to pass the tape around rather than 'hug' them. Remember to check that the tape is correctly placed to take the measurement and horizontal all the way around.
- Some respondents will be wearing clothing where the waistband of the trousers/skirt sits on the waist. Do not attempt to move the clothing or take the measurement at a different position. Measure the waist circumference over the waistband and make a note of this in CAPI. If the waistband is not horizontal all the way around the body i.e. it may be lower at the front, always ensure that the tape is horizontal which may mean that it passes over the waist band in some places and not in others. If there are belt loops, thread the tape through the loops so that they don't add to the measurement.
- We only want to record problems that will affect the measurement by more than would be expected when measuring over light clothing. As a rough guide only record a problem if you feel it affected the measurements by more than 0.5cm. We particularly want to know if waist and hip are affected differently.

5 LUNG FUNCTION

5.1 Introduction

Lung function tests objectively assess respiratory function and are widely used in clinical practice to diagnose and monitor the progress of respiratory diseases such as asthma and chronic obstructive airways disease. A lung function test produces values across the various measures tabled below (Table 2). A wide range of variables can affect these factors, for example physical unfitness, smoking, chronic bronchitis, poorly controlled asthma, some muscular disorders and many other conditions. At a population level, these measures tell us a lot about the respiratory health of the population and are also indicators of general health.

Table 1 Lung function test values

Test	Abbrev	Definition
Forced Vital Capacity	FVC	The total amount of air that can forcibly be blown out after a full inspiration, measured in litres.
Forced Expiratory Volume in 1 Second	FEV_1	The amount of air that can be blown out in one second, measured in litres.
FEV1%	FEV_1/ FVC	The ratio of FEV_1 to FVC.
Peak Expiratory Flow	PEF	The speed of air moving out of your lungs at the beginning of expiration, measured in litres per second.
Forced Expiratory Flow	FEF	The average flow (or speed) of air coming out of the lung during the middle portion of expiration.
Forced Inspiratory Flow	FIF	Similar to FEF except the measurement is taken during inspiration.
Forced Expiratory Time	FET	The length of expiration in seconds.
Tidal Volume	TV	The specific volume of air that is drawn into the lungs and then expired during a normal respiratory cycle.

5.2 Exclusion criteria

Respondents are excluded from the lung function measurement if they:

- Are pregnant
- Have had abdominal or chest surgery in the preceding three weeks
- Have been admitted to hospital with a HEART complaint in the preceding six weeks
- Have had eye surgery in the preceding 4 weeks
- Have a tracheostomy

5.3 Equipment

You will need:

- A Vitalograph Escort spirometer and case
- A 1 litre calibration syringe
- Disposable cardboard mouthpieces

5.3.1 Caring for the spirometer

1. For the purposes of hygiene and accuracy, once a month or after every 50 respondents remove the flowhead and clean it in hot soapy water and allow it to dry overnight before refitting.

2. When necessary clean the exterior with a lint free damp cloth. DO NOT clean the two white cylindrical filters on the top of the unit.

5.3.2 Using the spirometer

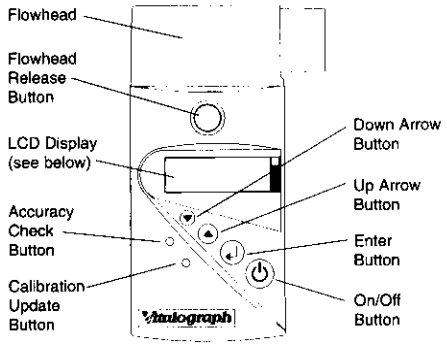
1. Take a spare battery with you in case of battery failure. The spirometer uses a 9v pp3 battery.

2. Whenever the 'ON' button is pressed to perform a new test, ensure that the spirometer is placed on a flat surface with the mouthpiece pointing upwards.

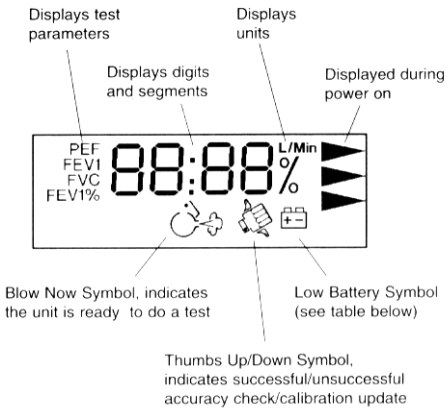
3. Unpack the spirometer as soon as possible and keep it away from direct heat. Allow the spirometer to equilibrate to room temperature **before** the lung function tests are performed.

4. See Figure 6 for the spirometer unit and the display

Vitalograph micro Unit



Vitalograph micro Display



Symbol *(on or flashing)*	Condition	Result	Action
	Battery Low	You can perform test	Replace PP3 battery
	Battery nearly dead	You cannot perform test	Replace PP3 battery

Figure 3 The Spirometer

5.3.3 Calibration/accuracy test

1. Before using the spirometer its accuracy must be checked by calibrating it. This procedure can be done **in your own home** at the start of each day when you are working. If you have more than one visit in the same day you need to calibrate

the spirometer **only once.** You should not need to take the calibration syringe with you when you make a visit.

2. Ensure that the spirometer and syringe have been in the same temperature environment for at least an hour.

3. Connect the spirometer, by the flow head, to the syringe. Pump through a few litres of air, then disconnect the spirometer.

4. Switch on the spirometer and press the small top most button to the left of the arrow keys (the accuracy check button). The display will show a number.

5. Check display is 01. If not, adjust with up/down arrow keys (see figure 6).

6. Press the left arrow key (the enter button) and wait until display shows 'blow now' and 'thumbs down' symbols.

7. Making sure the syringe piston is fully withdrawn, connect the syringe to the flow head. The handle of the spirometer should be pointing upwards.

8. Using one swift, smooth stroke pump in the volume of air (about 1 second). Don't cover the outlet with your hand.

9. Wait for a double beep then withdraw the piston fully and repeat step 8 until five single beeps occur. It is very important to wait for the double beep before withdrawing the piston each time.

10. If 'thumbs up' is displayed, the spirometer has been correctly calibrated.

11. If a 'thumbs down' sign appears on the display, then the spirometer is outside the accuracy requirements, contact Brentwood to arrange for a replacement.

12. Press the On/Off button to switch off.

5.3.4 Technical faults

Refer to table 3 if technical difficulties are experienced with the spirometer

Table 2 Troubleshooting for the spirometer

Fault	Action
Nothing is displayed when the ON button is pressed	• Replace battery • The ON button is not being held down for long enough • Display panel failure – contact Brentwood
False readings suspected	• Ensure the unit is being held correctly during the test • Re-test accuracy
Calibration values vary greatly	• Ensure the correct calibration procedure is being followed • Start calibration syringe stroke sharply

If any problems persist, contact Brentwood for advice.

5.4 Preparing the respondent

Before commencing the spirometer procedure explain the following to all eligible respondents:

- The purpose of the test and how to use the spirometer.
- To ensure an accurate reading they must 'blow' as hard as they can so long as it does not cause them any pain and/or discomfort.
- The definition of an acceptable level of lung function depends on the person's age, sex and height.
- A diagnosis of abnormality is not based on a reading from a single occasion but is rather based on several measurements and on the person's clinical history.

5.4.1 Demonstrating

For an accurate reading of lung function it is very important that you demonstrate the blowing technique to each respondent. Do this using a spare mouthpiece that is not connected to the spirometer and follow the procedure below:

1. Explain that the mouthpiece should be held in place by the lips, not the teeth and that the lips are wrapped firmly around the mouthpiece so no air can escape.

2. Demonstrate a blow, pointing out afterwards the need for full inspiration, a vigorous start to exhalation and sustained expiration. The blow should be at least 3 seconds in duration and not interrupted by coughing, laughing or leakage of air. The torso should remain in an upright position throughout the blow, not hunched over at the end.

5.5 Procedure

1. The respondent must be standing, unless chairbound, and they should loosen tight clothing to allow for a bigger inspiration. If the respondent wears dentures, it is preferable that they leave them in as they will get a tighter seal with their mouth around the mouthpiece which will result in a more accurate result.

2. Following the demonstration, hand the respondent a clean disposable mouthpiece and allow the respondent at least one practice blow using the mouthpiece alone. Correct their technique where necessary.

3. Attach the respondent's mouthpiece and turn the unit on using the 'ON/OFF' button. Check that the 'low battery' symbol is not showing.

4. Gently hand the spirometer to the respondent as sudden jerky movements can destabilise the unit. If a single beep sounds at this point, wait for the spirometer to stabilise, indicated by a further double beep, before proceeding with the test. The display should also display the 'blow' symbol.

5. Ask the respondent to take as deep a breath as possible, keeping the spirometer away from their mouth, and then to hold the mouthpiece with their lips and seal their lips around it so that air does not escape while they are blowing. Check that

the spirometer is held below the flowhead with the handle pointing downwards and the subject's hand is not obstructing the flowhead outlet.

6. Then say "now blow!" As the respondent is blowing encourage him/her by saying "keep going, keep going, keep going..." to get the maximum expiration possible. Observe the respondent closely for satisfactory technique. If the blow was technically unsatisfactory, they will need to blow again (refer to section 5.6).

7. Take the spirometer from the respondent and record the appropriate readings in CAPI by using the down arrow to scroll through the display.

8. Switch off the spirometer to reset the unit. This is very important, otherwise the subsequent readings are based on the best of a series of tests and not on individual blows.

9. Repeat steps 3-8 until you have obtained the required number of technically satisfactory blows (refer to project specific instructions). Most respondents should be able to manage what is required but there may be some that cannot. You must strike a balance between encouragement and over-insistence.

10. If the respondent wishes, record the results on their measurement record card, recording the highest obtained reading for each measure, even if they came from different blows.

5.6 Technically unsatisfactory blows

The following may result in a technically unsatisfactory blow, and if any of these occur the test should be repeated.

- Unsatisfactory start: excessive hesitation or "false start". It is probable that the spirometer will not record this blow (or give lung capacity as zero), but sometimes it will give a spurious reading.
- Laughing or coughing, especially during the first second of the blow. Some people will cough a little towards the end of expiration (particularly if this extends to 5 or 6 seconds) but this is acceptable.
- Holding the breath against a closed glottis (Valsalva manoeuvre). This results in spuriously high peak expiratory flow (see table 2).
- Leakage of air around the mouthpiece.
- Obstruction of the mouthpiece by tongue or teeth.
- Obstruction of the flowhead outlet by hands.
- If the spirometer takes more than 3 seconds to display the results after the end of the blow, it is likely that the results are spurious.

6 BLOOD PRESSURE

6.1 Introduction

Blood pressure is the exertion that the blood applies to the arterial walls as it is pumped through the circulatory system by the heart. Having a high blood pressure is an important risk factor for cardiovascular disease and stroke. The exact cause(s) of high blood pressure is not completely known however some factors known to affect blood pressure are smoking, family history, physical fitness and diet. It is important that we examine blood pressure using a standard method to see the distribution of blood pressure measurements across the population. This is vital for monitoring change over time.

6.2 Exclusion criteria

Respondents are excluded from the blood pressure measure if they are:

- Pregnant

If a pregnant woman wishes to have her blood pressure measured, you may do so, but do not record the readings in CAPI.

6.3 Equipment

You will need:

- An Omron HEM 907 blood pressure monitor
- Small adult cuff (17-22 cm)
- Standard adult cuff (22-32 cm)
- Large adult cuff (32-42 cm)
- An AC adapter

6.3.1 Using the Omron HEM 907

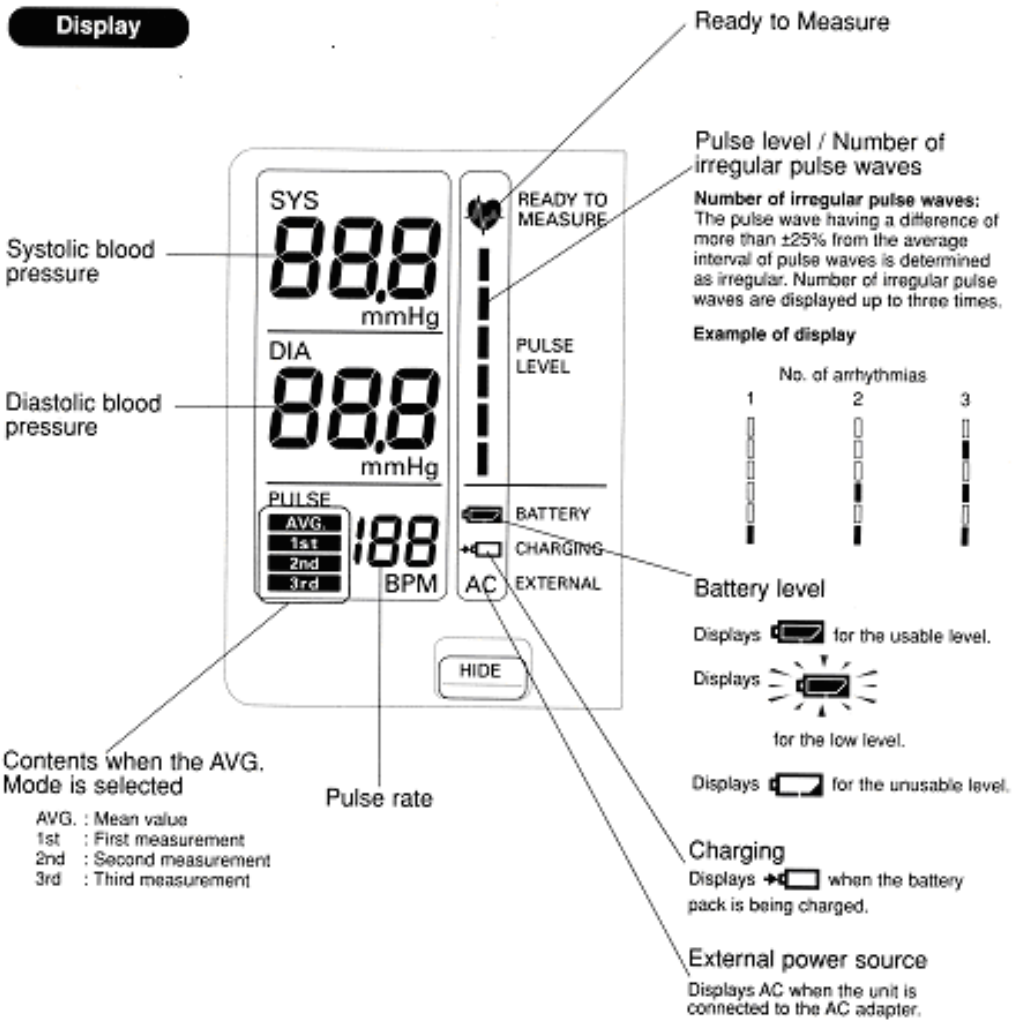


Figure 7 shows the monitor of the Omron

Figure 4 The Omron HEM 907 monitor

1. Switch the monitor on by pressing the ON/OFF button. Wait for the READY TO MEASURE symbol to light, indicating the monitor is ready to start the measurement (approximately 2 seconds).

2. Check that the MODE selector is set to AVG (average) and P-SET Volume (pressure setting) is set to auto.

3. Press the start button to begin the measurement. The cuff will start to inflate and take the first measurement. When the first measurement is complete, the LCD screen will show the systolic pressure, diastolic pressure and pulse rate. It will continue to do this at one minute intervals.

4. Press the ON/OFF button to turn it off.

5. If at any stage while you are taking the measurement you need to stop the monitor, press STOP and start the procedure again, as described in section 11.6.

6.3.2 Charging the battery

The Omron HEM 907 is equipped with a rechargeable battery, which is usable for approximately 300 measurements when fully charged.

When the battery symbol in the BATTERY display starts to flash there are 20-30 measurements left, you need to charge the battery soon. When a light battery symbol appears in the BATTERY display the battery needs to be put on charge immediately.

To recharge the battery:
Connect the monitor to the mains. A battery symbol will appear in the CHARGING display when the battery is charging. When ready to use the symbol will disappear. A dark battery symbol in the BATTERY display indicates that the battery is charged and the machine is usable. The battery can be charged in approximately 12 hours.

The Omron 907 is NOT designed to work off the mains adaptor, it should be run off the battery power pack. The mains adaptor should ONLY be used to charge the battery pack.

6.3.3 Technical faults/error readings

Refer to table 4 when error readings appear on the LCD screen.

Table 3 Troubleshooting for the Omron HEM 907

Error No.	Action
Er1, Er2	• Check that the tube connecting the cuff to the monitor is properly inserted and is not bent • Check that the cuff is properly wrapped around the arm • Repeat the measure
Er3	• Check that the tube connecting the cuff to the monitor is not bent • Repeat the measure
Er4	• Ask the respondent to sit as still as possible

	• Repeat the measure • If it persists, it may be because the respondent has very high blood pressure • Reset the P-SET Volume to 260 and repeat the measure.
Er5, Er6	• Check that the cuff is properly wrapped around the arm • Repeat the measure
Er7, Er8	• Ask the respondent to sit as still as possible • Repeat the measure • If it persists, it may be because the respondent's pulse is irregular, record that it wasn't possible and explain that this sometimes happens.
Er9	• Technical fault – Contact Brentwood and report that fault

6.4 Preparing the respondent

During the initial interview, the respondent would have been informed not to eat, smoke, drink alcohol or participate in vigorous exercise 30 minutes before the nurse visit as this can cause blood pressure to be higher than normal. Before the procedure ask to see if they have carried out any of these activities and note their response in CAPI.

Select the right arm unless this is impossible. Ask the respondent to remove outer garment (e.g. jumper, cardigan, jacket) and expose their upper right arm by rolling up their sleeve. If the sleeve constricts the arm, restricting the circulation of blood, ask the respondent if they would mind taking their arm out of the sleeve for the measurement.

6.4.1 Selecting the correct cuff

Do **not** measure the upper arm circumference to determine which cuff size to use. Instead, choose the correct cuff size based on the acceptable range which is marked on the inside of the cuff. You will note that there is some overlap between the cuffs. If the respondent falls within this overlap range then use the **standard** cuff where possible.

6.5 Procedure

1. Check that the monitor is working.

2. Use the right arm, unless this is impossible. If the left arm is used, record this in CAPI.

3. Get the respondent to sit in a comfortable chair with a suitable support so that the **right arm** is resting at a level to bring the antecubital fossa (elbow) to approximately heart level. They should be seated in a comfortable position with legs uncrossed and feet flat on the floor.

4. Wrap the correct sized cuff round the upper **right arm** and check that the index line falls within the range lines. Do not put the cuff on too tightly as bruising may occur on inflation. Ideally it should be possible to insert two fingers between the cuff and the arm.

5. Locate the brachial pulse just medial to the biceps tendon and position the arrow on the cuff over the brachial artery. The lower edge should be about 1-2 cm above the cubital fossa (elbow crease).

6. Explain to the respondent that you need them to sit quietly for five minutes and that during that time they cannot eat, drink or smoke.

7. During this 'quiet time' follow the procedure for taking ambient air temperature (section 9) and just before taking the blood pressure reading, make a note of the air temperature (this is not applicable for all surveys, refer to the project specific instructions).

8. After five minutes explain that you are starting the measurement, also explain that the cuff will inflate three times and each time they will feel some pressure on their arm. Ask them to relax, be seated in the position detailed in step 3 and not to speak until the measurement has been completed, as it may affect their reading.

9. Press start on the Omron HEM 907 to start the measurement. When the first measurement is complete it will be displayed on the LCD screen. Record this.

10. The unit will produce readings at one minute intervals thereafter, record the next two so you have three sets of readings in total. To check the readings press the 'Deflation' button. It is important that the three readings are recorded as the first reading is usually higher, and thus less accurate, than the other two readings as the respondent may be feeling nervous.

11. Press ON/OFF on the Omron to switch the unit off and remove the cuff from the respondent's arm.

12. If the respondent wishes, you should record details of their readings on the measurement record card.

6.6 Respondent feedback

When answering queries about a respondent's blood pressure it is very important to remember that it is NOT the purpose of the survey to provide respondents with medical advice, nor are you in a position to do so as you do not have the respondent's full medical history.

What you may say in each situation has been agreed with the Survey Doctor and CAPI will instruct you to read out the appropriate interpretations of the respondent's results. It is very important that the agreed script in the CAPI is read word for word and that personal interpretation is never offered.

The respondent feedback protocol should be strictly followed. It is very important that as little anxiety as possible is caused, but at the same time we have a duty to advise people to see their GP if the measurements indicate that blood pressure is raised.
As stated previously we have a duty to inform people that they need to see their GP if their blood pressure is high. It is important that the instructions below are carefully read and guidelines always followed precisely.
The computer tells you which readings your advice should be based on. This will be based on the **lowest** systolic and **lowest** diastolic reading from the last two readings (this is a change from previous practice when the highest readings were used). This will usually, but not always, be from the same reading. For example, occasionally it

may be the systolic from the second reading and the diastolic from the third reading. Furthermore if the lowest systolic reading falls in one category and the lowest diastolic reading falls in another category, the higher of the two categories will be used to trigger the advice to respondents. For example the lowest systolic reading is 138 (normal) and the lowest diastolic is 96 (mildly raised) then the advice given will be based on a mildly raised reading. If the first reading is higher than the other two it should be explained that the first reading can be high because people are nervous of having their pressure taken.

Definitions of raised blood pressure differ slightly. The Survey Doctor has recommended the blood pressure ratings given below based on the most recent guidelines from the British Hypertension Society. It is important that you adhere to these definitions, so that all respondents are treated in an identical manner. These are shown in table 5.

Table 4 Definition of blood pressure ratings

ADULTS ONLY

SURVEY DEFINITION OF BLOOD PRESSURE RATINGS

For men and women aged 16+

Rating	Systolic		Diastolic
Normal	<140	and	<90
Mildly raised	140 - 159	or	90 – 99
Raised	160 - 179	or	100 – 114
Considerably raised	180 or more	or	115 or more

Points to make to a respondent about their blood pressure (given on screen):

Normal:

'Your blood pressure is normal.'

Mildly raised:

'Your blood pressure is a bit high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are advised to visit your GP within 2 months to have a further blood pressure reading to see whether this is a one-off finding or not.'

Raised:

'Your blood pressure is a bit high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are advised to visit your GP within 2 weeks to have a further blood pressure reading to see whether this is a one-off finding or not.'

Considerably raised:

'Your blood pressure is high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are strongly advised to visit your GP within 5 days to have a further blood pressure reading to see whether this is a one-off finding or not.'

(For all of the above points, you can also advise the respondent to see their practice nurse, if this is who they would typically see in relation to their blood pressure.)

6.7 Action to be taken by the nurse after the visit

If you need to contact the Survey Doctor, unless there is a hypertensive crisis, do not do this from the respondent's home - you may cause unnecessary distress.
Table 6 summarises what action to take based on the readings you have obtained for a respondent. For this purpose you should only take into account the last two of the three readings you take, as the first reading is prone to error.

Table 5 Nurse action due to blood pressure readings

BLOOD PRESSURE	ACTION
Normal/mildly raised/raised BP Systolic less than 180 mmHg and Diastolic less than 115 mmHg	No further action necessary If you feel that the circumstances demand further action, inform the Survey Doctor who will then inform the respondent if he deems it necessary.*
Considerably raised BP Systolic at or greater than 180 mmHg or Diastolic at or greater than 115 mmHg	Contact the Survey Doctor at the earliest opportunity and he will telephone the respondent to advise them to visit their GP within 5 days to have a further blood pressure reading. .* NatCen to post to the respondent the "Letter for respondents with considerably raised BP". If the respondent has any symptoms of a hypertensive crisis** contact the survey doctor immediately or call an ambulance. The Survey Doctor must be informed as soon as possible.

* You must still contact the Survey Doctor even if respondents tell you that their GP knows about their raised BP.

** A hypertensive crisis is an extremely rare complication of high blood pressure. Its signs and symptoms include diastolic bp > 135 mmHg, headache, confusion, sleepiness, stupor, visual loss, seizures, coma, cardiac failure, oliguria, nausea & vomiting.

The Survey Doctor will look at all high or unusual readings when they reach the office. If the reading is high, then the Survey Doctor will contact the respondent directly. The Survey Doctor will also routinely check fast and slow pulse rates so no further action is necessary regarding these.

Contact details for your Survey Doctor can be find in the project instructions. The Survey Doctor is generally available from 8.00-22.00. Calls outside these hours are either unnecessary or an emergency, in which case, the survey doctor is unlikely to be in a position to do anything practical and you should be using your professional judgement whether to call an ambulance or seek other urgent advice.

7 GRIP STRENGTH

7.1 Introduction

The grip strength is a test of physical ability. It is used in a number of studies and is thus useful for drawing comparisons between countries and cultures. Hand grip strength is important as it affects every day function, such as raising the body weight and lifting heavy objects, and declines with age.

7.2 Exclusion criteria

Respondents are excluded from taking the grip strength test if:

- They have swelling or inflammation, severe pain or a recent injury to their hands
- They have had surgery on their hands in the last 6 months

If there is a problem with only one of the respondent's hands, just take measurements on the other hand.

7.3 Equipment

You will need:

- A gripometer

7.4 Preparing the respondent

Explain to the respondent the reasons why the grip strength test is required and what is involved. Explain that it is very important that they try their hardest for the most accurate reading of their grip strength. Where possible have the respondents remove any large rings.

7.4.1 Demonstrating

- The respondent is not to begin the grip strength test until it has been demonstrated.
- If after the demonstration the respondent does not understand, the test should be demonstrated again rather than relying on verbal instructions.
- The demonstration should be repeated only once.
- If the respondent still does not understand, skip the test and continue the interview.
- Do not coach the respondent

7.5 Procedure

1. Adjust the lever of the gripometer to suit the respondent's hand. To do this:

    a. Put the black bar of the gripometer on the pads at the top of their palm (see Figure 8).
    b. Check to see if it is a good fit by asking the respondent to grip the gripometer-the middle section of their fingers should be flat across the top of the metal bar (see Figure 9). If they are not you will need to adjust it.

c. To adjust it, you need to lift the metal lever on the side of the gripometer and rotate the grip until it is in a more suitable position. Repeat step b.
d. When you have a good fit, replace the lever on the side of the gripometer.

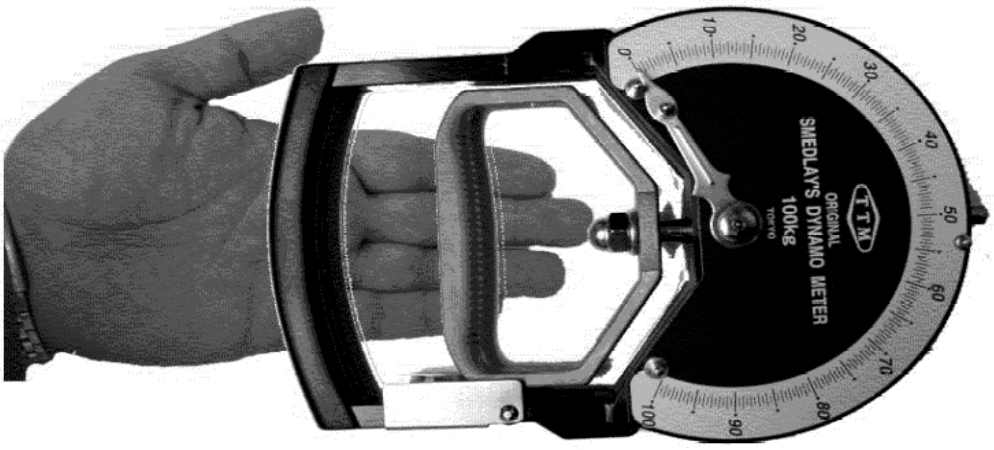


Figure 5 Aligning the gripometer with the hand

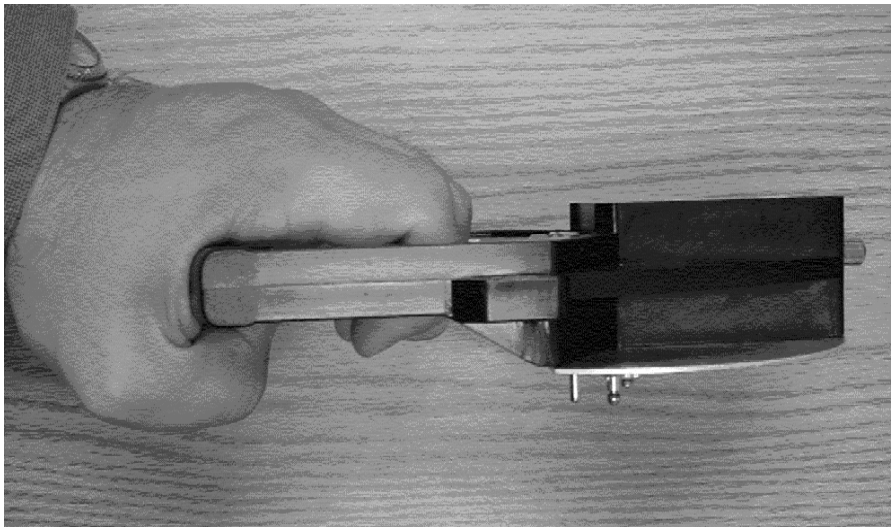


Figure 6 Gripometer lever on second phalanx in gripping action

2. If possible get the respondent to stand up with their arms by their side.

3. Hand the respondent the gripometer and allow them to have one practice with it in their dominant hand.

4. After they have had one practice, ask them to put it in their non dominant hand with their upper arm against their trunk and their forearm at a right angle to the upper arm. If the respondent is finding the gripometer too heavy to hold, they can use their other hand to support their gripometer or you can support it if appropriate.

5. Have the dial of the gripometer face outward.

6. Before commencing the measurement check to make sure that the arrow is resting at zero.

7. Ask the respondent to squeeze as hard as they can for two seconds with their non dominant hand.

8. Record the value on the scale to the nearest whole number, no decimal places. The most accurate reading is achieved if you look directly down on the scale.

9. Repeat steps 7 and 8 three times for each hand, alternating hands each time. You should have six values altogether.

10. If the respondent wishes, record the results on their measurement record card.

7.6 Additional points

- If a respondent is unable to stand to carry out the grip strength test, they can sit in a chair provided they can keep their upper arm against the trunk of their body with their forearm at right angles to their upper arm. If they are finding the gripometer too heavy to hold they can use their hand to support the gripometer.
- If a respondent is unable to complete the required number of 'squeezes' of the gripometer then record what they have been able to do and code the remaining 'squeezes' as measurement not obtained.
- If the respondent is only able to carry out the procedure using one arm, make a note of this in CAPI and continue to conduct the procedure as above using only one arm. The results for the arm that cannot be used should be coded as measurement not obtained.

8 BLOOD SAMPLING (NON FASTING)

The protocol for taking blood samples set out below is written in accordance with the Clinical Procedure Guidelines: Venepuncture. All nurses are to read this document before carrying out any venepuncture procedure.

8.1 Introduction

Blood samples are taken from respondents as they provide information on various analytes, giving a detailed description of the health of an individual. They are integral to the research NatCen undertakes as they give a comprehensive representation of the health of the population that cannot be obtained from any other source.

Table 8 shows information regarding possible analytes which may be used on *Understanding Society* and what they measure. This list is indicative of what may be measured on *Understanding Society* and is not exhaustive.

Table 6 Blood analytes

ANALYTE	WHAT IT MEASURES
Apolipoprotein E	This is involved in the transport of cholesterol and plays a protective role.
C-reactive protein	The level of C-reactive protein in the blood gives information on inflammatory activity in the body, and it is also associated with risk of heart disease.
Creatinine	Creatinine is a waste product of protein metabolism and is used in the assessment of kidney function. An abnormally high level of creatinine is found in individuals with kidney insufficiency and failure.
Fibrinogen	Fibrinogen is a major determinant of platelet aggregation and blood viscosity. It is a major independent risk factor for cardiovascular disease (CVD) and may interact with lipids to promote CVD risk.
Folic acid (folate)	Folic acid is a B vitamin. It is used in the body to make new cells and helps to prevent anaemia and birth defects of the brain and spinal cord.
Genetics	Genetic factors are associated with some common diseases such as diabetes and heart disease and relate to general biological aspects of the ageing process.
Glycated Haemoglobin	Glycated haemoglobin is a measure of the respondent's longer term glycaemic status. High levels are indicative of poor control of, or undiagnosed diabetes.
Haemoglobin, ferritin and transferrin receptors	Haemoglobin carries oxygen around the body to cells. It is too low in people with anaemia. Ferritin and transferrin receptors are indicators of iron stores: ferritin is reduced and soluble and transferrin receptor levels are increased if there is iron-deficiency, e.g. an inadequate iron supply in the diet.

Mean corpuscular (cell) volume	A measure of the average red blood cell volume. Mainly used in the classification of anaemia.
Minerals Se and Zn	Selenium (Se) is a component of some of the enzymes which protect the body against damage due to oxidation. It is also necessary for the use of iodine in thyroid hormone production and for immune system function. Zinc (Zn) is present in many enzymes and is essential for cell division and therefore growth and tissue repair. It is also necessary for normal reproductive development. Zinc is required for the functioning of the immune system and in the structure and function of the skin and thus wound healing.
Serum Albumin	Albumin is a blood plasma protein which is essential in maintaining fluid pressure in the body. It also plays a role in transporting fatty acids around the body. It is analysed in blood samples as an indicator of liver disease and kidney disorders.
Total, LDL and HDL cholesterol	Total cholesterol and LDL cholesterol increase the risk of atherosclerosis ('furring' of the arteries). Raised levels are associated with higher risks of heart attacks, while HDL cholesterol has a protective role.
Triglycerides	Together with total and HDL cholesterol, they provide a lipid (fat) profile which can give information on the risk of CVD.
Vitamin A and carotenoids	Vitamin A is essential to the normal structure and function of the skin and mucous membranes. It is also required for cell differentiation and therefore normal growth and development, and for normal vision and the immune system. Some carotenoids have provitamin A activity, thus acting as antioxidants to protect cells against oxidative damage.
Vitamin B1 (thiamin)	Vitamin B1 is required for energy production and carbohydrate metabolism. It is also involved in the normal functioning of the nervous system and the heart.
Vitamin B2 (riboflavin)	Vitamin B2 is needed for the release of energy from fats, carbohydrates and protein and the production of red blood cells. It is also needed for the normal structure and function of the mucous membranes and skin.
Vitamin B6 (pyridoxine)	Vitamin B6 is essential for the metabolism of protein. It is also involved in iron metabolism and transport.
Vitamin B12 (cyanocobalamin)	Vitamin B12 is required to make new cells as well as for normal blood formation and function. It is also needed for the normal structure and function of nerves. Dietary intake is exclusively from animal sources, e.g. eggs, milk, meat and fortified foods.
Vitamin C	Vitamin C is required for normal structure and function of skin, cartilage and bone as it is involved in the production of collagen, the protein in connective tissue. Thus it is involved in the healing process as well as the normal structure and function of blood vessels and neurological function. Vitamin C also contributes to the absorption of iron from some foods, in particular plant foods.

Vitamin D	Vitamin D is formed by the action of ultra violet light on the skin. This is the most important source as few foods contain significant amounts of vitamin D, e.g. eggs, oily fish and meat. Vitamin D undergoes changes in both the liver and the kidneys before working as a hormone in controlling the amount of calcium absorbed by the intestine. It is also essential for the absorption of phosphorous and for normal bone mineralization and structure. Vitamin D is also involved in the process of cell division in many other body tissues.
Vitamin E	Vitamin E is a group of compounds called tocopherols, of which alpha tocopherols is the most active. It acts as an antioxidant and is required to protect cells against oxidative damage by free radicals.
White blood cells	White blood cells are made by bone marrow and help the body fight infection and other diseases. There are various types of white blood cells.

The blood will **not** be tested for any viruses, such as HIV (AIDS).

8.2 Exclusion criteria

All respondents with the following exceptions are eligible to give blood:

- Pregnant women

- Respondents who are HIV positive or who have hepatitis B or C (see section 8.7.6)

- People with clotting or bleeding disorder
  By clotting or bleeding disorders we mean conditions such as haemophilia and low platelets, i.e. thrombocytopenia. There are many different types of bleeding/clotting disorders but they are all quite rare. The reason these respondents are excluded from blood sampling is that:
  a) the integrity of their veins is extremely precious
  b) we do not wish to cause prolonged blood loss

  For the purposes of blood sampling, those who have had, for example, a past history of thrombophlebitis, a deep venous thrombosis, a stroke caused by a clot, a myocardial infarction or an embolus are NOT considered to have clotting disorders.

- People who have ever had a fit
  Respondents who have ever had a fit (e.g. epileptic fit, convulsion) should not be asked to provide a blood sample. This applies even if the fit(s) occurred some years ago.

- People who are **currently** on anticoagulant drugs, e.g. Warfarin therapy
  Check if the respondent has a clotting or bleeding disorder or is on anticoagulant drugs, such as Warfarin, and record this in CAPI. These are very uncommon. If you find someone with these problems, do not attempt to take blood, even if the disorder is controlled.

Aspirin therapy is **not** a contraindication to blood sampling. If you are uncertain whether a condition constitutes a contraindication to blood sampling, the Survey Doctor will be happy to answer your queries.

- Adults who are not willing or able to give their consent in writing.

8.3 Consent

As blood sampling is an invasive procedure we need to ensure that fully informed written consent is obtained from each respondent. Information on what they are consenting to is mainly given in the Stage 2 leaflet, and the respondent confirms that they have been provided with this information on the consent form.

The leaflet also provides useful information about the risks around giving a sample and after-care. This is information that you should be giving verbally in any case, and you therefore do not need to ensure that the respondent has read this leaflet in advance as long as you make sure you have covered all the points yourself.

On **no** account should you ever take blood before you have obtained written consent to do so from the respondent.

We also require consent to store the blood.

You should seek to obtain all these consents before you take any blood.

Small quantities of blood are being stored in special freezers for further analysis in the future. Future analysis will definitely **not** involve tests for viruses (e.g. HIV (AIDS) test). Any future analysis will be unlinked which means that the researcher doing the analysis will not be able to link it back to the respondent. Respondents will therefore not receive the results of any tests done on their blood in the future.

The questions on the CAPI questionnaire will take you step by step through all the procedures for obtaining consents. Make sure you follow these carefully - recording consent codes as instructed and giving reasons for refusals, if applicable.

In summary:

- Ask the respondent if they would be willing to have a blood sample taken. Try to reassure respondents about the process, and be prepared to answer their concerns. You will need to explain the importance of written consent to the respondent
- Obtain written consents on the appropriate consent form. Remember to enter their name at the head of this form before asking the respondent to sign.
- Remember to enter your name in the qualified nurse space provided on each form.
- Check that you have circled the correct consent codes on the front of the consent booklet.

8.4 Equipment

The equipment required is listed on page 8 of the Clinical Practice Guideline for Venepuncture (CPG). Any additional equipment, specific to a project, will be listed in the project instructions.

8.5 Preparing the respondent

Protocol on preparing the respondent can be found in the CPG on page 8.

Further points to note include:

- Ask the respondent to remove any jackets, thick garments and/or roll their sleeves up.
- Instruct the respondent to remain as still as possible

8.6 Procedure

The procedure for taking the blood sample can be found in the CPG pages 9-12. This procedure is to be followed. It is to be used in conjunction with CAPI which will guide you through the blood sampling process.

Additional points to note include:

- Ametop Gel®, a local anaesthetic, may be used. There is a CPG on use of Ametop which must be followed.
- The vacutainers should be filled to capacity in turn and inverted gently on removal to ensure complete mixing of blood and preservatives (in some surveys not all tubes will need to be inverted, refer to project specific instructions).

IMPORTANT WARNING

Never re-sheath the needle after each use

Do not allow the disposal box to become overfull as this can present a potential hazard

8.7 Labelling & packaging the sample(s)

Label the tubes as you take the blood.

It cannot be stressed enough the importance of correctly labelling each tube with the correct serial number for the person from whom the blood was obtained.

Other important points

8.7.1 'Giving a blood sample' leaflet

We need to be sure that each respondent is left with information about giving a blood sample, including information about who to contact should they experience any side effects as a result of the blood sample.

To provide them with this information, leave the respondent with the leaflet 'Giving a blood sample'. The leaflet includes information on any possible side effects they may experience such as pain and bruising, and how to care for the puncture site. It is also

a useful leaflet to leave behind to reassure the friends and family of the respondent of the procedure used should they have any concerns after your visit.

There are two versions of this leaflet, depending on whether ametop gel will be offered.

8.7.2 Venupuncture check questions

Always complete the Venepuncture checklist on CAPI for every respondent from whom you attempt to take blood. This shows that you have followed the correct procedure, and noted, where applicable, any abnormalities, and the action you took. The checklist is usually towards the end of the CAPI.

Please remember to check the respondent just before you leave and note any changes in their physical appearance in CAPI.

8.7.3 Fainting respondents

If a respondent looks or feels faint during the venepuncture procedure, it should be discontinued. The respondent should be asked to lie down with feet elevated.

If they agree for the test to be continued after a suitable length of time, the procedure should be performed with the respondent lying down and the circumstances should be recorded in CAPI. It is acceptable for the respondent to discontinue the procedure but agree to give the blood sample at a later time.

Remain with the respondent until they feel able to slowly move to a sitting position and until they are happy for you to leave them. Ensure you submit a Special Report Form to the Operations Standards Co-ordinator detailing what happened and how the respondent appeared when leaving.

8.7.4 Handling & disposal of needles and other materials

Safe disposal of needles is required to control the risk of injury from the disposed sharps. Without the safe disposal of needles there is an increased risk of needle stick injuries and/or psychological trauma due to fear of potential infection.

Precautions

- Wear gloves at all times when performing the venepuncture procedure
- Do not carry sharps unnecessarily
- Handling must be kept to a minimum
- Needles must not be passed directly from hand to hand
- Needles must not be bent or broken prior to use
- Needles should not be resheathed by hand
- Never lay sharps down on beds or work surfaces, or leave lying amongst paper towels or linen
- Sharps should be disposed of at the point of use
- Never hand sharps to anyone

Disposal

Do's:

- Always wear gloves when performing venepuncture procedure
- Bins should conform to British Standard 7320
- Sharps must always be disposed of in the approved yellow ‘sharps bins‘
- Sharp bin should be available beside you before opening and using the sharp
- Ensure that the lid is secure
- Dispose of the sharp bin when the manufacturer’s marked line has been reached or when it is three quarters full
- Carry sharp containers by the handle
- Dispose of the sharp in the bin immediately after use
- Check to ensure that the bin lid is securely attached to the base and that the flap has been securely closed and sealed

Don’ts:

- Overfill sharps bins
- Fill sharps containers above the manufacturer’s marked line
- Dispose of sharps with other clinical waste
- Place used sharps containers in yellow bags for disposal
- Put your hands into sharps bins
- Never return any used sharps bins by post or courier to the Operations Department or other member of the freelance nurse or interviewer panel

Place the used needles and the vacutainer holders in the sharps box and put gloves etc in the self-seal disposal bag. The needle disposable box should be taken to your local hospital or GP practice for incineration. Telephone them beforehand, if you are not sure where to go. If you cannot find a place to dispose of the sharps bin, contact your nurse supervisor who will be able to give you information on appropriate places.

The sealed bag containing gloves etc can be disposed of with household waste as long as it does not have any items in it that are contaminated by blood.

8.7.5 Needle stick injuries

The following information is based on guidelines from the Department of Health, immediately following exposure.

First Aid

- Encourage wound to bleed.
- Do not suck.
- Wash liberally with soap and water without scrubbing, do not use antiseptics and skin washes.
- Dry and apply waterproof dressing.
- Exposed mucous membrane and conjunctivae should be irrigated copiously with water.

Following the above procedure it is recommended that the nurse attend a nearby accident and emergency department to ensure immediate current needle stick injury assessment/ treatment.

Please note that you should not take any further action in the respondent's home; any further procedures which might be necessary (such as taking a sample of the respondent's blood) would be carried out by somebody else.

Report

- Incident to be reported as soon as possible to Nurse Supervisor, who will report the incident to the Survey Doctor.
- Special Report form to be completed and sent to Operations Standards Co-ordinator at Brentwood.

As soon as the nurse supervisor hears, she will ensure that the nurse is offered appropriate advice and support.

8.7.6 Respondents who are HIV or Hepatitis B positive

If a respondent volunteers that they are HIV, Hepatitis B or Hepatitis C positive, **do not** take a blood sample. Record this as the reason in the CAPI. You should never, of course, seek this information.

9 CONTACTS

Should you have any questions regarding the protocols then please do not hesitate to contact your nurse supervisor. You can also contact the Survey Doctor, whose details can be found in the project instructions.

Should you have any questions then please contact the relevant operations team in Brentwood or the research team in London. These details are also found in the project instructions.

10 USEFUL NATCEN REFERENCE GUIDES

1. *CMS User Guide*
   For all queries on using the CAPI menu system.

2. *Working Safely*
   A guide for interviewers, nurses and researchers.

3. *Nurse Manual*
   For information on survey nursing.

4. *Venepuncture CPG*
   For guidance on venepuncture best practice.

APPENDIX A SPECIAL GROUPS

INTERVIEWING

- **Respondents with disabilities**
- **The elderly and/or vulnerable**

Mary Holmden
January 2004 (Dec06)

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1 OVERVIEW

NatCen interviewers and nurses know they can expect to meet many very different individuals when working in field. They will come from all sorts of backgrounds and live in many different types of accommodation, they will include the very elderly and the young, the healthy and the ailing. For some respondents specific procedures apply, and extra sensitivity and attention to detail will make the interview process more rewarding for them and for you.

This document concerns people with disabilities, those who are elderly or vulnerable. It is intended to:

- inform you of NatCen standard requirements and expectations when contacting/interviewing respondents in these groups
- provide you with practical guidance as to the means by which you might best enable them to participate in any study for which they have been sampled

2 PEOPLE WITH DISABILITIES

2.1 Introduction

18% of the working age population in UK – nearly 1 person in 5 - has a disability. This figure, and the figure within the general population, (estimated at 7 – 8%), is increasing. Medical and technological advances, which also encourage longevity, now help those with many kinds of disabilities to enjoy a full life and enable society to utilise their talents.

The Disability Discrimination Act defines a disabled person as one having a physical or mental impairment which: -

- is long term (12 months or more), and
- has a substantial adverse effect, and
- adversely affects his or her ability to carry out normal everyday activities

but this definition is problematic in some respects, for disability comes in many shapes and forms. Some disabilities are progressive – they may be present and meet the first two of the above criteria but not (yet) the third; other conditions may vary from day to day and or are not obvious in ordinary everyday interaction.

Disability need not advertise itself - only 5% of disabled people are wheelchair users. Disability is not necessarily sickness – the general health of many people with disabilities is as good as anyone else's.

2.2 The Role of the NatCen Interviewer and Nurse

NatCen interviewers and
Nurses, in the normal course of the assignments, meet respondents with a wide range of disabilities. If you have not previously met people with disabilities, however, you may feel discomfited, self-conscious or uncertain about the right way to act and the right things to say.

If you make assumptions or have misconceptions this is likely to be the biggest barrier to successful interviews. Disability does not necessarily mean inability, dependency or frailty.

The language of disability has changed in the past decade – it is generally recognised that terms such as 'handicapped', 'crippled' , 'mongol', 'backward' 'spastic', all at one time in common usage, are now unacceptable. What does constitute acceptable language may, however, differ depending on the individual concerned and interviewers will need to be sensitive to this. Some people with disabilities may strongly dislike terms such as 'disabled' or any similar expressions which they feel serve to identify them primarily through their disability (ie. 'an epileptic' rather than someone with a specific health condition ie. 'a person with epilepsy'). Emotive language, 'suffers from' 'afflicted with' 'stricken by' 'victim of', should also be avoided.

2.3 Some General Do's and Don'ts

- Treat respondents with respect and consideration
- Be punctual for appointments – a person who is taking medication or who needs assistance may not be as flexible as other respondents
- Watch carefully and listen attentively
- Only offer help where appropriate - and wait until it is accepted
- Look at and speak to the respondent – not to their assistant or carer if present
- Be prepared to offer to suspend the interview and return at a later date if the respondent seems to tire
- Use your usual tone of voice and your usual voice inflection
- Be aware of your own attitudes to and feelings about disability
- Use language sensitively

Project instructions usually permit assistance from carers, personal assistants or someone able to communicate in sign language. The assistance allowed may be limited.

In certain circumstances it may also be possible for assistance with an interview (eg someone able to use sign language) to be arranged via the project team.

2.4 Interviewing respondents with a disability

2.4.1 Respondents with visual impairment

About one million people in the UK are blind or partially sighted. The majority of them have some vision. They may have peripheral but no central vision; distorted or blurred vision; or tunnel vision only.

- Use normal speech – don't be embarrassed at using words like 'see' in normal conversation
- If the interview requires the use of showcards, explain what these are and offer to read them out (Don't assume this will be necessary, RNIB research shows that 60% of blind and partially sighted people are able to read clear large print)
- If you are taken to the respondent by a carer or other household member, introduce yourself clearly
- Let the respondent know if you are going to leave the room for any reason
- If you offer a handshake *say* 'shall we shake hands'
- Tell the respondent what you are doing as you set up the laptop, etc.
- If interviewing concurrently remember to say the name of the person to whom you are speaking
- Leave a leaflet and, where applicable, other project specific literature, as usual
- A guide dog is a working dog and should not be stroked or petted unless the respondent says this is acceptable

2.4.2 Respondents who are deaf or hard of hearing

There are different degrees of types of deafness and 8.7 million adults in Britain, three quarters of whom are over 60 years old, have some degree of hearing loss. Tinnitus, the sensation of ringing or buzzing in the ears in the absence of other sound, affects 17% of the population to some degree – both deaf and hearing.

Those with hearing difficulties communicate in several ways. The standard means of communication among the profoundly deaf is sign language; others may choose to lip read but this is demanding, requires intense concentration and can be very tiring.

- Establish the respondent's preferred means of communication
- When talking to a person who is hard of hearing, or has chosen to lip read, position yourself so that any light falls on your face rather than shadowing it
- Ensure you remain facing the respondent
- Make sure the respondent can see your mouth while you are talking
- Do not shout or exaggerate your speech
- Speak at slightly slower than normal speed but check regularly that you have been understood
- If assisted by an interpreter using sign language – speak to and make eye contact with the respondent, not the interpreter
- Be prepared to write things down if necessary

2.4.3 Respondents who are deaf/blind (Dual sensory impaired)

Some 23,000 people in the UK have combined sight and hearing loss. The advice above may be useful where there is some sight or hearing or, additionally, communication may be achieved using a helper familiar with the deafblind manual alphabet whereby words may be spelled out using the respondent's fingers and hands.

2.4.4 Respondents with speech difficulties

Speech difficulties may result from many different causes, such as: problems with the nervous system, multiple sclerosis, stroke, brain tumour, Parkinson's disease; or there may be some congenital cause. Medication may mean the extent of the difficulties varies at different times of the day.

- Slow or impaired speech does not mean limited intelligence or understanding
- Be patient and pay careful attention
- Allow extra time for responses to your questions
- Do not interrupt or attempt to finish sentences
- Do not pretend to understand if you do not; politely ask the respondent to repeat what they have said

2.4.5 Respondents with cerebral palsy, physical or mobility difficulties

Cerebral palsy is a physical impairment that affects control of movement. The severity of this disability ranges from the barely noticeable to the extremely severe where the person concerned may not be able to feed themselves or sit up unsupported.

- It is not necessarily the case that because a respondent has difficulty controlling facial expression, gestures or movement, their mental abilities are impaired
- Do allow those with mobility difficulties extra time to reach the door and to make themselves comfortable for the interview
- Be patient with slowness during the interview and don't try to rush away once the interview is completed
- Do be prepared to offer a break, or to suspend the interview and return if the respondent is in discomfort from spending too long in a sitting position

2.4.6 Where a wheelchair is used or walking aids are used

Wheelchairs are mobility aids that enable people to get around - people *use* wheelchairs and are not 'confined' or 'bound' to them.

- A wheelchair is 'personal space' – do not touch or move it without permission
- Try to place yourself at the same level when talking to the respondent for any length of time
- Only move or tidy sticks, crutches or walking aids if asked to do so

2.4.7 Respondents with facial disfigurement

Disfigurement may be the result of an accident or illness, or have been present since birth.

- If you are shocked by someone's appearance, try not to show it
- Make eye contact, but do not stare, and listen carefully just as you would with any other respondent
- Never ask "what happened to you?"

2.4.8 Respondents with learning disabilities

Learning disabilities are sometimes known as learning difficulties, intellectual disabilities or developmental disabilities. They are usually present from birth or early childhood but may result from injury or be apparent in the early states of dementia.

People with severe learning disabilities (approx 300,000 people in UK) need constant support and help in their everyday lives and may not be able to participate in an interview. Of the 0.5 - 1.75 million people in UK who have some milder form of learning disability (or difficulty) most will be able to be interviewed, depending on the length and subject matter of the survey.

- Be careful not to make assumptions about the respondent's level of understanding
- Ask, where possible, for any distractions – television, music, etc. to be switched off or removed
- Be patient and be prepared to repeat questions, several times if necessary.

2.4.9 Respondents with mental health disabilities

Mental health disabilities, such as depression or schizophrenia, may be relatively short term or may impact on the individual concerned throughout their life. These disabilities may not be immediately apparent or an individual may be confused, inconsistent or behave inappropriately. Medication timing can also affect consistency of behaviour. The amount of negative press coverage on mental health issues and/or the emotional distress and confusion sometimes felt and evidenced by those with mental health problems may make you feel discomforted.

- Be patient and calm. Give the respondent time to formulate their answers
- Be sensitive and non-judgemental
- Where contact is made through a carer or assistant they may have useful advice to offer about the best time to call
- If you are uncomfortable or uneasy with a respondent's behaviour during an interview or call, do not persist; make an excuse and leave
- If you are uncomfortable or uneasy about the need to make contact with a respondent who is known to have severe mental health difficulties first seek advice from your area manager

2.5 If you are concerned

PLEASE SEEK ADVICE and where appropriate submit an incident form…….

- If you are assigned an interview with a respondent with a specific disability which you find problematic in any way, if you feel they or you need assistance in order to participate in/conduct the interview

- Should anything occur when you make contact with or are conducting an interview with a person with a disability which gives you cause for concern, or causes them distress.

3 PEOPLE WHO ARE ELDERLY OR VULNERABLE

3.1 Introduction

Within the UK the percentage of the population aged 65 plus has trebled in the last century, reaching over 10.7 million people in 2000. 18% of the population is now over pensionable age, with 12.5% of our freelance interviewer panel being over 65.

It is difficult to generalise about the 'problems' of interviewing elderly respondents. Numerous people well into their 90s have participated in and enjoyed interviews on many different projects while others, who may be as young as 60, cite age-related difficulties as reasons for refusal. Their own awareness of factors such as interview length, complexity and subject matter may make an interviewer reluctant to attempt to persuade a hesitant older respondent to take part and well-meaning interventions by neighbours and family members can create additional hurdles for the interviewer to overcome.

3.2 Approach and pre interview

Most of the problems associated with interviewing the elderly are readily overcome with a little extra effort and understanding. Bear in mind that

- Suspicion, concern and fear of strangers are not uncommon among the elderly – particularly those who live alone

If respondents are concerned about letting a stranger into their home, and possibly refuse to open the door, you are more likely to gain their confidence if you:

- Make it clear that you are happy to return
- Ask if the respondent would like you to come back when a family member or neighbour will be present
- Leave additional literature with your name and interviewer number clearly written on it
- Let the respondent know that the office will always be happy to answer questions and to confirm identity

Note: while police awareness of your presence in the area may be mentioned, police approval of the study or any requirement to participate should never be stated or implied.

The ingrained politeness and respect for 'officialdom' of some older members of society, or perhaps simple loneliness, may lead them to invite you in when they are not wholly comfortable with the thought – or are unclear about the reason for your presence. This can lead to problems later, for example, when other members of their family are told of the interview by a concerned, confused or upset elderly respondent unable to properly explain why it was carried out or how they came to be involved.

However welcoming and apparently willing the elderly respondent may appear you should always:

- Take extra care to identify yourself properly
- Explain the reason for visiting clearly and be confident that this explanation has been understood
- Ensure that the respondent is aware that you are very happy to return if it is not convenient
- Suggest they telephone the office to check identification if they still seem unsure
- Give a proper assessment of how long the interview will take and what it will entail
- Ensure that appropriate leaflets or survey literature are left with a clearly written note of your name and number

3.3 Those who are unwell, frail or tired

Ill health /tiredness/limited concentration may all be factors that affect the success of an interview with an older respondent. The great majority of elderly people are not ill but energy levels do decline with age, as may the ability to concentrate.

- If a respondent says that they are too unwell to participate or to continue you must always respect this
- Where an interview is cut short for this reason, offer to call in a neighbour or warden for assistance
- If the respondent loses consciousness, appears in severe pain or becomes incoherent, an ambulance should be called even if they are unwilling that this is done
- If the respondent refuses help and you are particularly concerned you should, if you feel it appropriate, mention these concerns to a warden or close neighbour.

If you do seek help be careful to respect respondent confidentiality and do not discuss the subject matter of the interview or any details of their conversation with you.

If you terminate an interview for reasons of ill health, or if you refer concerns to a neighbour or warden, please submit an incident form giving full details of the problem and what action you took.

- Problems with tiredness and concentration may be more apparent on long interviews; where questions are complex; or when interviews are conducted later in the day
- If a respondent doesn't go out to work or is housebound it does not mean they are freely available
- Respondents with degenerative conditions or those on medication may have particularly good and bad times of the day – many elderly people have higher energy levels in the morning.
- If a respondent tires during an interview, ask if they would like a break. Give an honest estimate of how much longer the interview will take and, if necessary, offer to return at another time to complete the interview.

3.4 Family, neighbours and carers

Family members or neighbours may attempt to intervene to prevent the interview taking place because *they* feel the respondent is not capable of participation, or is too unwell to participate. They may also want to confirm your identity or request detailed information about the project.

- Such intervention is usually well intentioned. The family and neighbours are better placed to have real awareness of the respondent's condition than you are
- Where possible, without antagonising the 'gatekeeper', try to speak in person to the named or selected respondent whose feelings about their capabilities may differ from those of their relative
- It is reasonable that those who care for the elderly should ask for confirmation of your identity and reason for calling; you should not go into detail about the subject matter of the survey, however, since this is confidential to the person selected to take part

3.5 During the interview

- Be prepared to spend time answering any questions and giving any reassurances that are required
- Ensure the respondent is physically comfortable and that they have the right spectacles to hand for any show cards, reading or self completions that may be required
- Ask permission first, if the laptop needs to be plugged into a mains socket rather than used on battery and if necessary reassure that electricity use is minimal (concerned respondents could be offered 10p)
- Take extra care to ensure that the lead does not constitute a trip hazard and, if the respondent gets up during the interview, remind them where the lead is sited
- Be patient and be prepared to repeat questions, sometimes more than once
- Remember that some questions which are readily answered by younger respondents may be seen as intrusive or too personal
- After the interview, allow a little time for any doubts or concerns they may not have liked to mention earlier to be raised.
- **ALWAYS** leave a thank you leaflet and stress that if they have any later concerns or worries about the interview the office will be happy to talk about these.

4 INFORMED CONSENT

Respondents with learning or mental health related disabilities, or those who are frail and elderly, may not always be capable of giving the informed consent to interview that we are legally and ethically obliged to obtain.

If you have any doubts or concerns about this, either in general terms or in relation to a particular respondent, **please seek advice from the Project Controller before proceeding to interview.**

4.1 Collection of accurate data

If during the course of an interview it becomes apparent that a respondent is not able to answer questions reasonably or accurately, you should terminate the interview as soon as possible. Please complete an incident report in such cases and send this to Mary Holmden, Operations Standards Co-ordinator at NatCen, Brentwood.

If you have concerns about the reliability and usefulness of the answers given, but you did manage to complete the interview, please note the difficulties fully and ensure the project team is made aware of your concerns.