THE ALSPAC STUDY

Focus on Mothers 1

Prepared by:

The ALSPAC Study Team

Documentation giving frequencies, background and instructions for use.

Version 3a: January 2019

Contents

1. Introduction

1.1 Background

The main purpose of this study is to determine what factors are related to body size, bone density, arterial wall thickness (an indicator of atherosclerosis), blood pressure, glucose, insulin and abnormal blood lipids in women, before age-related changes occur and prior to large numbers having to take medications that would affect these factors. The “Focus on Mothers” 1 clinic is the first in a series of four funded clinics.

The study was funded by British Heart Foundation (SP/07/008/24066) with Professor Debbie Lawlor as the Principal Investigator.

The first “Focus on Mothers” hands-on data collection started in December 2008. The visit lasted two to two and a half hours. All visits were completed by July 2011.

1.2 Sample & response rates

There are a total of 14,785 records on the built file with 4,832 women having attended the FOM1 clinic, however there are a total of 4,981 attended cases on the release file (see section 1.7 for an important note on this). This number is made up of the 14,541 mothers in the core ALSPAC sample (regardless of whether or not they were invited to FOM1), plus 244 eligible mothers not in the core sample to whom invites were sent out. Invitations to FOM1 were sent out to a total of 11,264 (77.5%) study mothers (43% response): All women who were still alive and had not actively withdrawn from the study with known contact details. This response rate was lower than that obtained for the last young person’s clinic (TF4). This can be explained by the fact that a flag exists in the ALSPAC administrative database for young people who have the option to state ‘no to clinics’ (but continue to complete questionnaires for example). As this was the first clinic run just for mothers no such flag existed for them. For further information on the ALSPAC sample, please see the cohort profile paper (Fraser et al, 2012).

Note that there is one mother who attended the clinic that had either triplets or quadruplets enrolled in ALSPAC. For reasons of confidentiality, the data for this mother is not available. The administrative variables fm1a001 and fm1a005 remain unchanged, but all other variables have been set to missing values of ‘-11’ or ‘-111’ (as appropriate).

A small number of attendees were invited back for a second visit in order to check reliability. To be eligible for a return visit the participant had to live locally, went through their first visit in a standard order and was willing to return. The data collected during the second visit is *not* held on the built file.

1.3 Data Collection

Data was entered directly into a computerised system at the time of collection. This system had a number of quality control checks built in (e.g. asking for clarification if attempts were made to enter a value that was outside of common ranges for women of this age) in order to minimise data entry errors. On the rare occasion that the computerised system failed, paper data were collected on paper and later entered into the computer system.

FOM1 Outreach was a community engagement programme within the wider FOM1 study. It was designed to engage eligible cohort members who may not have otherwise participated. It involved a shorter version of the clinic and was held in alternative locations such as local shopping centres or at the participant's home if this was requested. The community outreach clinics were run on the basis of drop-ins rather than appointments, with participants attending in response to mail shots, advertisements or word of mouth. Home visits were by appointment. Despite differences in organisation and location, all protocols from the main clinic were maintained. For outreach visits, data were directly entered onto the same data collection system as for the main clinic but using laptops. Women were also given the option to attend the main ALSPAC clinic at a later date after the initial outreach visit to complete a DXA scan which was not possible at outreach. An indicator variable (fm1a015) is available to identify the exact method of data collection should researchers wish to take this into account in any way.

Informed consent for each procedure was obtained for all participants at the beginning of the clinic session (appendix 4.1). Mothers were free to not participate in any sessions they did not want to and could retroactively withdraw consent after the session if they wished.

1.4 Format of the clinic

Trained field workers conducted all assessments at the clinic. On the whole one field worker looked after each participant, meaning that the same individual greeted the woman, explained the assessments, obtained informed consent and then conducted each of the assessments. The field worker moved around the different rooms of the clinic (eg. DXA scan room, carotid artery scan room) with the participant.

The table below summarises the procedures that were conducted on each woman at the clinic:

Session (Procedures)	**Estimated completion time**	**Order**
Reception (welcome, registration, completion of meal voucher)	10 minutes	First for all women
Consent & fasting blood sample	20 minutes	Second for all women
Food (breakfast/lunch in café)	20 minutes	Third for all women
Vascular (carotid intima-media thickness, ultrasound scans, BP)	25 minutes	Order varied
Anthropometrics & DXA scan	20 minutes	Order varied

1.5 Data file structure

The data file is presented as overall administrative variables appearing first, followed by the data from each of the individual sessions. For each session, administrative variables appear first, followed by the actual data collected arranged in the order it was collected. As noted some sessions could not be completed when the assessment took place outside the main clinic site and these are summarised below.

Variables are given the prefix fm1xx and a 3-digit number, where xx denotes the session from which the data were collected (e.g. variables from the measures session are fm1ms100, fm1ms101, etc). Variables with the prefix fm1a and a number (e.g. fm1a011) are administrative variables. Repeat measures in subsequent mother clinics (funding currently exists to repeat assessments in a subgroup, called FOM2, FOM3 and FOM4) will take exactly the same variable naming format (only the '1' in fm1 will change to '2', '3' or '4' depending on the clinic).

Measures repeated from other FoM clinics take exactly the same variable naming format (although note some measures may differ between clinics). See appendix 4.2 for a summary of the similarities and differences in data collection between the different FoM clinics.

1.6 Format of this documentation

Summaries of the protocols for data collection are provided. The bulk of this documentation consists of the frequency tables of the variables collected. All frequencies are presented. Where any post-data collection editing has occurred a description has been added before the relevant frequency tables. The algorithms used to create derived variables are also included where appropriate.

1.7 Important Note for all data users

Please be aware that some women <u>may</u> appear in the release file more than once. This is due to the way in which women were originally enrolled into the study and were assigned IDs. ALSPAC started by enrolling pregnant women and the main study ID is a pregnancy based ID. Therefore if a women enrolled with two different pregnancies (both having an expected delivery date within the recruitment period (April 1991-December 1992)), she will have two separate IDs to uniquely identify these women and their pregnancies. An indicator variable has been included in the file, called *mult_mum* to identify these women. If you are carrying out mother based research that does not require you to consider repeat pregnancies for which we have data then please select mult_mum = 2 to remove the duplicate entries. This will keep one pregnancy and drop the other. If you are matching the data included in this file to child based data or have been provided with a dataset that includes the children of the ALSPAC pregnancies, as well as the mother-based data, you need not do anything as each pregnancy (and hence each child from a separate pregnancy) has a unique identifier and a mother's data has been included/repeated here for each of her pregnancies where appropriate. Each of the frequencies below therefore contains duplicate data due to these multiple pregnancies.

mult_mum_fm1 Entry is a duplicate - Remove if only looking at Mothers: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	149	1.0	3.0	3.0
	2 No	4831	32.7	97.0	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

1.8 Built file version history

Built file version 1 – released October 2013

Built file version 2a – released February 2018

Details of additions/corrections from previous release file:

- Additional multiple pregnancies missed during the creation of built version 1 have been added.
- Original DXA variables have been removed and replaced by re-processed DXA data. Note that the previous data was not incorrect, but the re-processed data contains additional variables not previously included and makes the variables comparable between this and all other FoM clinics.
- New derived variables to identify length of time between last meal and bloods sample, and if this was longer than 8 hours (the proposed minimum fasting time prior to bloods sample).
- The full sample of core ALSPAC mothers have been included (in addition to those who attended).
- Updated some outliers missed in previous built file: fm1ms101 (sitting height), fm1ms103 (leg length).

Built file version 3a – released January 2019

Details of additions/corrections from previous release file:

- Several variables relating to whether certain medications were being taken have been derived from the medications text data. These include:
    - Blood pressure medication (fm1sa200)
    - Statins (fm1sa201)
    - Vitamin D supplements (with or without calcium: fm1sa202)
    - Calcium (without Vitamin D: fm1sa203)
    - Calcium or Vitamin D supplements (fm1sa204)
    - Bisphosphonate (fm1sa205)
    - Hormone replacement therapy (HRT) tablet and/or patch (fm1sa206)
    - Oral steroids (fm1sa207)
    - Tamoxifen (fm1sa208)
    - Aromatase inhibitor (fm1sa209)
    - Diabetes medication (fm1sa210)
- During this process, it was also noticed that a handful of Mothers were incorrectly categorised as either taking or not taking any medication (variable fm1sa007). This variable has therefore been updated.

2. The data and observations

2.1 Administrative variables

fm1a001 Attended FOM1 clinic: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4981	33.7	33.7	33.7
	2 No	9804	66.3	66.3	100.0
	Total	14785	100.0	100.0	

fm1a005 In core ALSPAC sample: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	14541	98.3	98.3	98.3
	2 No	244	1.7	1.7	100.0
	Total	14785	100.0	100.0	

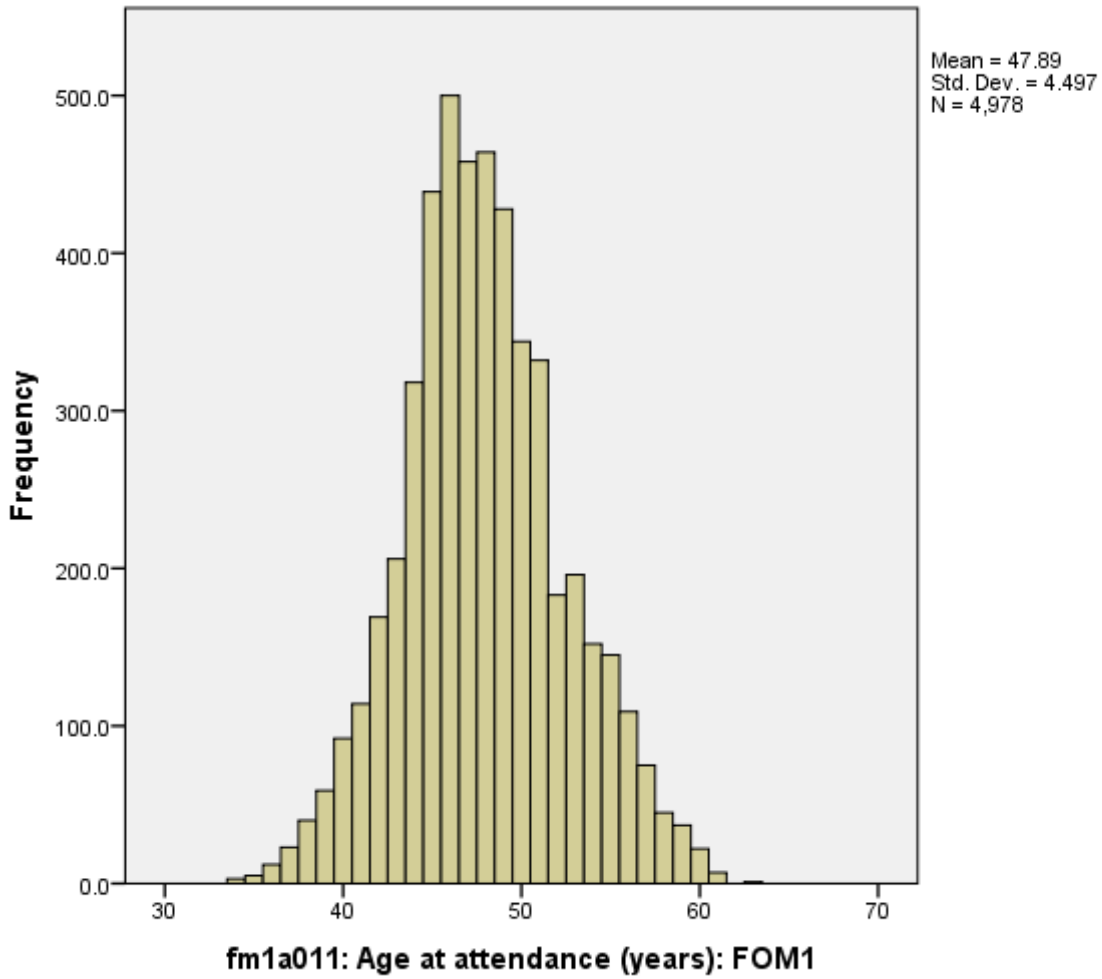
fm1a010a Month of attendance: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	314	2.1	6.3	6.3
	2	425	2.9	8.5	14.8
	3	491	3.3	9.9	24.7
	4	472	3.2	9.5	34.2
	5	440	3.0	8.8	43.0
	6	499	3.4	10.0	53.0
	7	444	3.0	8.9	61.9
	8	458	3.1	9.2	71.1
	9	441	3.0	8.9	80.0
	10	407	2.8	8.2	88.2
	11	340	2.3	6.8	95.0
	12	249	1.7	5.0	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1a010b Year of attendance: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2008	52	.4	1.0	1.0
	2009	2573	17.4	51.7	52.7
	2010	2077	14.0	41.7	94.4
	2011	278	1.9	5.6	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

Age at attendance (in years) was reported directly by the mother.



fm1a015 DV: Source of data collection: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Main clinic	4663	31.5	93.6	93.6
	2 Outreach	317	2.1	6.4	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

2.2 Samples session

2.2.1 Blood sample

Written and verbal consent was required prior to taking blood. A number of consents were obtained as indicated below. Note that for cell lines and DNA, consent was only requested from women who had not previously given consent (hence the large amount of missing data). Data collection documents are displayed in appendix 4.3.

The women were asked to complete a medications sheet that was sent to her with her appointment confirmation letter (see appendix 4.4). This text data is available to researchers (although additional costs may be involved: please refer to the ALSPAC access policy for further details). A summary variable for *any* medication use is available as fm1sa007).

All women were asked to fast overnight (if booked in for to a morning appointment) or for at least 8 hours prior to their visit. The protocols followed by the fieldworkers for collecting blood are available on request.

All blood assay results will be available in the mother's sample release file as data becomes available.

fm1sa001 Blood sample fieldworker: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1033	7.0	21.1	21.1
	2	147	1.0	3.0	24.1
	3	2	.0	.0	24.2
	4	19	.1	.4	24.6
	5	554	3.7	11.3	35.9
	6	28	.2	.6	36.5
	7	825	5.6	16.9	53.3
	8	261	1.8	5.3	58.7
	9	738	5.0	15.1	73.8
	10	883	6.0	18.1	91.8
	11	400	2.7	8.2	100.0
	Total	4890	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	90	.6		
	Total	9895	66.9		
Total		14785	100.0		

fm1sa002 Blood sample room: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3717	25.1	76.0	76.0
	2	1176	8.0	24.0	100.0
	Total	4893	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	87	.6		
	Total	9892	66.9		
Total		14785	100.0		

fm1sa005 Taking any form of anti-coagulant: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	15	.1	.3	.3
	2 No	4953	33.5	99.7	100.0
	Total	4968	33.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	12	.1		
	Total	9817	66.4		
Total		14785	100.0		

fm1sa006 Any clotting/bleeding or are anaemic: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	43	.3	.9	.9
	2 No	4910	33.2	99.1	100.0
	Total	4953	33.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	27	.2		
	Total	9832	66.5		
Total		14785	100.0		

fm1sa007 Taking any Medication: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	2668	18.0	53.7	53.7
	2 No	2297	15.5	46.3	100.0
	Total	4965	33.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	15	.1		
	Total	9820	66.4		
Total		14785	100.0		

fm1sa010 Consent to bloods: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4827	32.6	98.3	98.3
	2 No	83	.6	1.7	100.0
	Total	4910	33.2	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	70	.5		
	Total	9875	66.8		
Total		14785	100.0		

fm1sa011 Consent to cell-line and DNA: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1280	8.7	93.8	93.8
	2 No	85	.6	6.2	100.0
	Total	1365	9.2	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	3615	24.5		
	Total	13420	90.8		
Total		14785	100.0		

fm1sa012 Consent to DNA only: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	128	.9	72.3	72.3
	2 No	49	.3	27.7	100.0
	Total	177	1.2	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	4803	32.5		
	Total	14608	98.8		
Total		14785	100.0		

fm1sa013 Consent to Haemoglobin test: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4673	31.6	98.4	98.4
	2 No	77	.5	1.6	100.0
	Total	4750	32.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	230	1.6		
	Total	10035	67.9		
Total		14785	100.0		

fm1sa014 Consent to be informed if Haemoglobin low: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4742	32.1	99.7	99.7
	2 No	12	.1	.3	100.0
	Total	4754	32.2	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	226	1.5		
	Total	10031	67.8		
Total		14785	100.0		

fm1sa015 Consent to glucose test: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4748	32.1	98.4	98.4
	2 No	78	.5	1.6	100.0
	Total	4826	32.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	154	1.0		
	Total	9959	67.4		
Total		14785	100.0		

fm1sa016 Consent to be informed if glucose high: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4738	32.0	99.7	99.7
	2 No	14	.1	.3	100.0
	Total	4752	32.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	228	1.5		
	Total	10033	67.9		
Total		14785	100.0		

fm1sa017 Consent to have lipids test: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4749	32.1	98.4	98.4
	2 No	77	.5	1.6	100.0
	Total	4826	32.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	154	1.0		
	Total	9959	67.4		
Total		14785	100.0		

fm1sa018 Consent to be informed if lipids out of range: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4741	32.1	99.7	99.7
	2 No	12	.1	.3	100.0
	Total	4753	32.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	227	1.5		
	Total	10032	67.9		
Total		14785	100.0		

fm1sa019 Consent to have blood sample stored: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4797	32.4	98.5	98.5
	2 No	75	.5	1.5	100.0
	Total	4872	33.0	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	108	.7		
	Total	9913	67.0		
Total		14785	100.0		

fm1sa050a Time last eaten (hour): FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	116	.8	2.5	2.5
	1	22	.1	.5	2.9
	2	4	.0	.1	3.0
	3	5	.0	.1	3.1
	4	15	.1	.3	3.5
	5	139	.9	3.0	6.4
	6	264	1.8	5.6	12.0
	7	184	1.2	3.9	16.0
	8	128	.9	2.7	18.7
	9	87	.6	1.9	20.5
	10	75	.5	1.6	22.1
	11	75	.5	1.6	23.7
	12	59	.4	1.3	25.0
	13	58	.4	1.2	26.2
	14	32	.2	.7	26.9
	15	11	.1	.2	27.1
	16	12	.1	.3	27.4
	17	32	.2	.7	28.1
	18	141	1.0	3.0	31.1
	19	306	2.1	6.5	37.6
	20	587	4.0	12.5	50.1
	21	846	5.7	18.0	68.1
	22	959	6.5	20.4	88.5
	23	538	3.6	11.5	100.0
	Total	4695	31.8	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	285	1.9		
	Total	10090	68.2		
Total		14785	100.0		

fm1sa050b Time last eaten (minutes): FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2832	19.2	60.3	60.3
	1	3	.0	.1	60.4
	2	1	.0	.0	60.4
	3	2	.0	.0	60.4
	5	9	.1	.2	60.6
	7	1	.0	.0	60.7
	8	1	.0	.0	60.7
	10	28	.2	.6	61.3
	11	1	.0	.0	61.3
	15	138	.9	2.9	64.2
	20	19	.1	.4	64.6
	22	1	.0	.0	64.7
	25	2	.0	.0	64.7
	30	1319	8.9	28.1	92.8
	34	1	.0	.0	92.8
	35	3	.0	.1	92.9
	39	1	.0	.0	92.9
	40	14	.1	.3	93.2
	45	220	1.5	4.7	97.9
	50	52	.4	1.1	99.0
	54	1	.0	.0	99.0
	55	31	.2	.7	99.7
	59	15	.1	.3	100.0
	Total	4695	31.8	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	285	1.9		
	Total	10090	68.2		
Total		14785	100.0		

fm1sa055 CPDA sample taken: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1237	8.4	93.3	93.3
	2 No	89	.6	6.7	100.0
	Total	1326	9.0	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	3654	24.7		
	Total	13459	91.0		
Total		14785	100.0		

fm1sa056 Fluoride sample taken: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4557	30.8	94.7	94.7
	2 No	253	1.7	5.3	100.0
	Total	4810	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	170	1.1		
	Total	9975	67.5		
Total		14785	100.0		

fm1sa057 Heparin sample taken: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4608	31.2	95.5	95.5
	2 No	217	1.5	4.5	100.0
	Total	4825	32.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	155	1.0		
	Total	9960	67.4		
Total		14785	100.0		

fm1sa058 EDTA sample taken: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4618	31.2	95.7	95.7
	2 No	207	1.4	4.3	100.0
	Total	4825	32.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	155	1.0		
	Total	9960	67.4		
Total		14785	100.0		

fm1sa060a Time sample put on ice (hour): FOM1

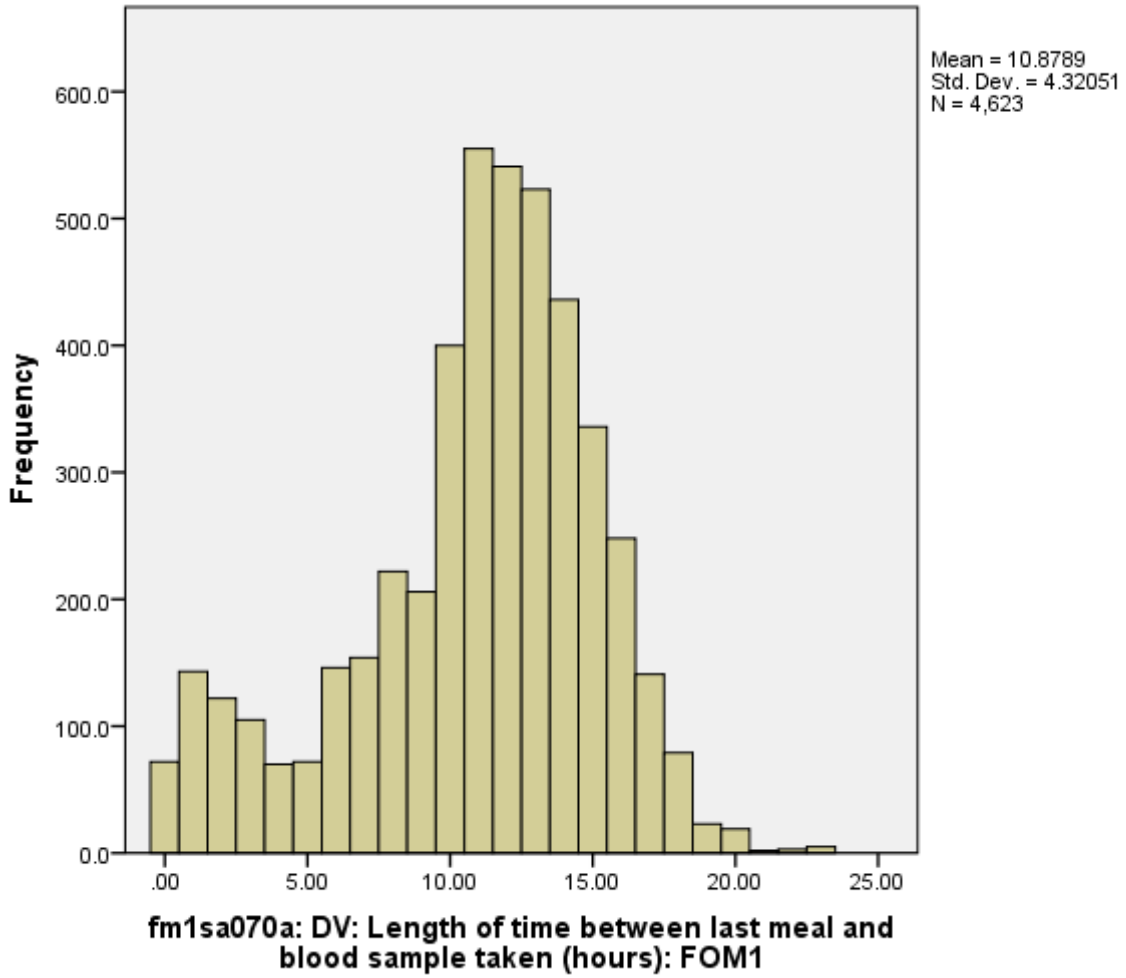
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	10	.1	.2	.2
	7	6	.0	.1	.3
	8	909	6.1	19.6	19.9
	9	769	5.2	16.6	36.5
	10	539	3.6	11.6	48.1
	11	674	4.6	14.5	62.6
	12	404	2.7	8.7	71.3
	13	572	3.9	12.3	83.6
	14	546	3.7	11.8	95.4
	15	147	1.0	3.2	98.5
	16	29	.2	.6	99.2
	17	24	.2	.5	99.7
	18	13	.1	.3	100.0
	19	1	.0	.0	100.0
	20	1	.0	.0	100.0
	Total	4644	31.4	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	336	2.3		
	Total	10141	68.6		
Total		14785	100.0		

fm1sa060b Time sample put on ice (minutes): FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	190	1.3	4.1	4.1
	1	48	.3	1.0	5.1
	2	52	.4	1.1	6.2
	3	80	.5	1.7	8.0
	4	53	.4	1.1	9.1
	5	139	.9	3.0	12.1
	6	53	.4	1.1	13.2
	7	67	.5	1.4	14.7
	8	70	.5	1.5	16.2
	9	53	.4	1.1	17.3
	10	191	1.3	4.1	21.4
	11	44	.3	.9	22.4
	12	69	.5	1.5	23.9
	13	61	.4	1.3	25.2
	14	68	.5	1.5	26.7
	15	206	1.4	4.4	31.1
	16	55	.4	1.2	32.3
	17	65	.4	1.4	33.7
	18	55	.4	1.2	34.9
	19	44	.3	.9	35.8
	20	182	1.2	3.9	39.7
	21	43	.3	.9	40.7
	22	71	.5	1.5	42.2
	23	48	.3	1.0	43.2
	24	52	.4	1.1	44.3
	25	160	1.1	3.4	47.8
	26	61	.4	1.3	49.1
	27	81	.5	1.7	50.8

	28	55	.4	1.2	52.0
	29	46	.3	1.0	53.0
	30	172	1.2	3.7	56.7
	31	52	.4	1.1	57.8
	32	54	.4	1.2	59.0
	33	66	.4	1.4	60.4
	34	52	.4	1.1	61.5
	35	151	1.0	3.3	64.8
	36	45	.3	1.0	65.8
	37	76	.5	1.6	67.4
	38	52	.4	1.1	68.5
	39	40	.3	.9	69.4
	40	151	1.0	3.3	72.6
	41	44	.3	.9	73.6
	42	50	.3	1.1	74.7
	43	56	.4	1.2	75.9
	44	44	.3	.9	76.8
	45	181	1.2	3.9	80.7
	46	47	.3	1.0	81.7
	47	61	.4	1.3	83.0
	48	42	.3	.9	83.9
	49	40	.3	.9	84.8
	50	165	1.1	3.6	88.4
	51	39	.3	.8	89.2
	52	62	.4	1.3	90.5
	53	42	.3	.9	91.4
	54	46	.3	1.0	92.4
	55	144	1.0	3.1	95.5
	56	52	.4	1.1	96.6
	57	61	.4	1.3	98.0
	58	60	.4	1.3	99.2
	59	35	.2	.8	100.0
	Total	4644	31.4	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	336	2.3		
	Total	10141	68.6		
Total		14785	100.0		

The time that the Mother last ate is recorded in fm1sa050a (hour) and fm1sa050b (minutes) and the time that the samples were put on ice is recorded in fm1sa060a (hour) and fm1sa060b (minutes). These were used to create three new derived variables; the first two detail the length of time between last meal and bloods sample in hours (fm1sa070a) and minutes (fm1sa070b), while the other is a binary variable stating whether the length of time was over eight hours or not (fm1sa071).



fm1sa070b DV: Length of time between last meal and blood sample taken (minutes): FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	161	1.1	3.5	3.5
	1	53	.4	1.1	4.6
	2	43	.3	.9	5.6
	3	63	.4	1.4	6.9
	4	63	.4	1.4	8.3
	5	137	.9	3.0	11.2
	6	60	.4	1.3	12.5
	7	67	.5	1.4	14.0
	8	59	.4	1.3	15.3
	9	48	.3	1.0	16.3
	10	183	1.2	4.0	20.3
	11	52	.4	1.1	21.4
	12	63	.4	1.4	22.8

	13	64	.4	1.4	24.1
	14	61	.4	1.3	25.5
	15	222	1.5	4.8	30.3
	16	52	.4	1.1	31.4
	17	61	.4	1.3	32.7
	18	56	.4	1.2	33.9
	19	38	.3	.8	34.7
	20	190	1.3	4.1	38.8
	21	45	.3	1.0	39.8
	22	75	.5	1.6	41.4
	23	45	.3	1.0	42.4
	24	53	.4	1.1	43.6
	25	161	1.1	3.5	47.0
	26	56	.4	1.2	48.3
	27	67	.5	1.4	49.7
	28	63	.4	1.4	51.1
	29	44	.3	1.0	52.0
	30	188	1.3	4.1	56.1
	31	43	.3	.9	57.0
	32	63	.4	1.4	58.4
	33	76	.5	1.6	60.0
	34	48	.3	1.0	61.1
	35	154	1.0	3.3	64.4
	36	51	.3	1.1	65.5
	37	67	.5	1.4	66.9
	38	60	.4	1.3	68.2
	39	35	.2	.8	69.0
	40	150	1.0	3.2	72.2
	41	40	.3	.9	73.1
	42	70	.5	1.5	74.6
	43	53	.4	1.1	75.8
	44	50	.3	1.1	76.9
	45	164	1.1	3.5	80.4
	46	50	.3	1.1	81.5
	47	69	.5	1.5	83.0
	48	44	.3	1.0	83.9
	49	37	.3	.8	84.7
	50	156	1.1	3.4	88.1
	51	39	.3	.8	88.9
	52	59	.4	1.3	90.2
	53	51	.3	1.1	91.3
	54	57	.4	1.2	92.6
	55	145	1.0	3.1	95.7
	56	45	.3	1.0	96.7
	57	63	.4	1.4	98.0
	58	52	.4	1.1	99.2
	59	39	.3	.8	100.0
	Total	4623	31.3	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	357	2.4		
	Total	10162	68.7		
Total		14785	100.0		

fm1sa071 DV: Blood sample taken less than eight hours after last meal: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	884	6.0	19.1	19.1
	2 No	3739	25.3	80.9	100.0
	Total	4623	31.3	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	357	2.4		
	Total	10162	68.7		
Total		14785	100.0		

Derived text medications data

The following variables detail whether the Mother was taken either certain medications (e.g., statins or tamoxifen), or medication for certain conditions (e.g., blood pressure or diabetes). These variables were derived from the text medications data.

Blood pressure medication (fm1sa200) was derived using the following protocol:

- Searching for medications (including misspellings) listed on the British National Formulary (BNF) website (https://www.bnf.org/) for the treatment of high blood pressure or hypertension being taken by the Mother.
- Searching for 'blood pressure' or 'hypertension' as a reason for the Mother taking a medication.
- Checking each case where drug and reason did not match up (e.g., taking a drug listed by the BNF as for blood pressure, yet not giving BP/hypertension as a reason for taking this medication; or taking a drug for BP/hypertension, yet the drug was not listed on the BNF website as treating BP/hypertension).
- Creating a final variable of individuals who were taking blood pressure medication because of high blood pressure/hypertension.

fm1sa200 DV: Taking any blood pressure medication: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4499	30.4	94.3	94.3
	1 Yes	273	1.8	5.7	100.0
	Total	4772	32.3	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	208	1.4		
	Total	10013	67.7		
Total		14785	100.0		

Statin use (fm1sa201) was derived using the following protocol:

- Searching for statin medications (including misspellings) listed on the British National Formulary (BNF) website (https://www.bnf.org/) and whether the Mother was taking any of these.

fm1sa201 DV: Taking any statins: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4723	31.9	98.1	98.1
	1 Yes	90	.6	1.9	100.0
	Total	4813	32.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	167	1.1		
	Total	9972	67.4		
Total		14785	100.0		

Use of Vitamin D supplements (with or without calcium: fm1sa202), Calcium (without Vitamin D: fm1sa203), Calcium or Vitamin D supplements (fm1sa204), Bisphosphonate (fm1sa205), Hormone replacement therapy (HRT) tablet and/or patch (fm1sa206), Oral steroids (fm1sa207), Tamoxifen (fm1sa208) and Aromatase inhibitor (fm1sa209) were derived using the following protocol:

- Searching for whether the Mother was taking any of these medications/supplements (including misspellings).

fm1sa202 DV: Taking any Vitamin D supplements (with or without calcium): FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4700	31.8	97.7	97.7
	1 Yes	112	.8	2.3	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

fm1sa203 DV: Taking any calcium (without Vitamin D) supplements: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4777	32.3	99.3	99.3
	1 Yes	35	.2	.7	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

fm1sa204 DV: Taking any calcium or Vitamin D supplements: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4668	31.6	97.0	97.0
	1 Yes	144	1.0	3.0	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

fm1sa205 DV: Taking any bisphosphonate: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4790	32.4	99.5	99.5
	1 Yes	22	.1	.5	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

fm1sa206 DV: Taking any Hormone Replacement Therapy (HRT) tablet and/or patch: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4598	31.1	95.6	95.6
	1 Yes	214	1.4	4.4	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

fm1sa207 DV: Taking any oral steroids: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4796	32.4	99.7	99.7
	1 Yes	16	.1	.3	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

fm1sa208 DV: Taking any tamoxifen: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4790	32.4	99.5	99.5
	1 Yes	22	.1	.5	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

fm1sa209 DV: Taking any aromatase inhibitor: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4796	32.4	99.7	99.7
	1 Yes	16	.1	.3	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

Diabetes medication (fm1sa210) was derived using the following protocol:

- Searching for medications (including misspellings) listed on the British National Formulary (BNF) website (https://www.bnf.org/) for the treatment of diabetes being taken by the Mother.
- Searching for 'diabetes' (or related terms, including misspellings) as a reason for the Mother taking a medication.
- Checking each case where drug and reason did not match up (e.g., taking a drug listed by the BNF as for diabetes, yet not giving diabetes as a reason for taking this medication; or taking a drug for diabetes, yet the drug was not listed on the BNF website as treating diabetes).
- Creating a final variable of individuals who were taking diabetes medication because of diabetes.

fm1sa210 DV: Currently taking diabetes medication: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	4742	32.1	98.5	98.5
	1 Yes	70	.5	1.5	100.0
	Total	4812	32.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	168	1.1		
	Total	9973	67.5		
Total		14785	100.0		

2.2.2 Hormone use, menstruation and mammograms

Data was collected on the women's use of oral contraceptive, contraceptive injection, and HRT. The fieldworker asked the women directly and entered the responses into the computer. In addition, the women were asked whether they had had a period in the last 12 months. If no, they were asked to give a reason why they had stopped and to give the date of their last period.

fm1ob100 Currently taking oral contraceptives: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	336	2.3	6.8	6.8
	2 No	4632	31.3	93.2	100.0
	Total	4968	33.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	12	.1		
	Total	9817	66.4		
Total		14785	100.0		

fm1ob101 Currently using contraceptive injection: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	42	.3	.8	.8
	2 No	4926	33.3	99.2	100.0
	Total	4968	33.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	12	.1		
	Total	9817	66.4		
Total		14785	100.0		

fm1ob110 Currently taking hormone replacement therapy: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	218	1.5	4.4	4.4
	2 No	4750	32.1	95.6	100.0
	Total	4968	33.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	12	.1		
	Total	9817	66.4		
Total		14785	100.0		

fm1ob120 Had a period/menstrual bleeding in the previous 12 months: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	3437	23.2	69.2	69.2
	2 No	1527	10.3	30.8	100.0
	Total	4964	33.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	16	.1		
	Total	9821	66.4		
Total		14785	100.0		

fm1ob121 Reason why periods stopped: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Hysterectomy	333	2.3	21.6	21.6
	2 Ablation/resection	23	.2	1.5	23.1
	4 Chemotherapy or radiation therapy	39	.3	2.5	25.6
	6 Menopause	751	5.1	48.7	74.3
	7 Contraceptive: Coil	253	1.7	16.4	90.7
	8 Contraceptive: Injection	62	.4	4.0	94.7
	9 Contraceptive: Implant	5	.0	.3	95.0
	10 Contraceptive: Pill	59	.4	3.8	98.8
	11 Contraceptive: Other	6	.0	.4	99.2
	12 Other medical reason	12	.1	.8	100.0
	Total	1543	10.4	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-2 Had recent periods	3437	23.2		
	Total	13242	89.6		
Total		14785	100.0		

fm1ob123 Day of last period: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	181	1.2	6.5	6.5
	2	102	.7	3.7	10.2
	3	97	.7	3.5	13.7
	4	110	.7	4.0	17.6
	5	87	.6	3.1	20.7
	6	76	.5	2.7	23.5
	7	88	.6	3.2	26.6
	8	89	.6	3.2	29.8
	9	66	.4	2.4	32.2
	10	123	.8	4.4	36.6
	11	63	.4	2.3	38.9
	12	89	.6	3.2	42.1
	13	78	.5	2.8	44.9
	14	86	.6	3.1	48.0
	15	104	.7	3.7	51.7
	16	90	.6	3.2	55.0
	17	89	.6	3.2	58.2
	18	88	.6	3.2	61.3
	19	96	.6	3.5	64.8
	20	122	.8	4.4	69.2
	21	72	.5	2.6	71.7
	22	96	.6	3.5	75.2
	23	86	.6	3.1	78.3
	24	86	.6	3.1	81.4
	25	83	.6	3.0	84.4
	26	93	.6	3.3	87.7
	27	84	.6	3.0	90.7
	28	68	.5	2.4	93.2
	29	69	.5	2.5	95.7
	30	80	.5	2.9	98.5
	31	41	.3	1.5	100.0
	Total	2782	18.8	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	2198	14.9		
	Total	12003	81.2		
Total		14785	100.0		

fm1ob124 Month of last period: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	219	1.5	7.9	7.9
	2	265	1.8	9.5	17.4
	3	256	1.7	9.2	26.6
	4	258	1.7	9.3	35.9
	5	259	1.8	9.3	45.2
	6	260	1.8	9.3	54.5
	7	233	1.6	8.4	62.9
	8	248	1.7	8.9	71.8
	9	247	1.7	8.9	80.7
	10	244	1.7	8.8	89.5
	11	159	1.1	5.7	95.2
	12	134	.9	4.8	100.0
	Total	2782	18.8	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	2198	14.9		
	Total	12003	81.2		
Total		14785	100.0		

fm1ob125 Year of last period: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1990	2	.0	.0	.0
	1991	4	.0	.1	.1
	1992	18	.1	.4	.6
	1993	13	.1	.3	.9
	1994	20	.1	.5	1.3
	1995	31	.2	.7	2.0
	1996	33	.2	.8	2.8
	1997	21	.1	.5	3.3
	1998	40	.3	.9	4.2
	1999	44	.3	1.0	5.3
	2000	76	.5	1.8	7.0
	2001	62	.4	1.4	8.5
	2002	81	.5	1.9	10.3
	2003	105	.7	2.4	12.8
	2004	129	.9	3.0	15.8
	2005	145	1.0	3.4	19.1
	2006	158	1.1	3.7	22.8
	2007	240	1.6	5.6	28.4
	2008	272	1.8	6.3	34.7
	2009	1592	10.8	37.0	71.7
	2010	1103	7.5	25.6	97.3
	2011	115	.8	2.7	100.0
	Total	4304	29.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	676	4.6		
	Total	10481	70.9		
Total		14785	100.0		

fm1ob126 Period/menstrual bleeding in last 3 months: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	3121	21.1	91.0	91.0
	2 No	309	2.1	9.0	100.0
	Total	3430	23.2	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-2 Not had recent periods	1527	10.3		
	-1 Missing	23	.2		
	Total	11355	76.8		
Total		14785	100.0		

fm1ob130 Periods are regular: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes, every 28-30 days	1781	12.0	51.9	51.9
	2 Yes, < every 28 days	335	2.3	9.8	61.7
	3 Yes, every 30 days	109	.7	3.2	64.9
	4 No	1205	8.2	35.1	100.0
	Total	3430	23.2	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-2 Not had recent periods	1527	10.3		
	-1 Missing	23	.2		
	Total	11355	76.8		
Total		14785	100.0		

fm1ma100 Woman is over 48: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	2440	16.5	49.0	49.0
	2 No	2540	17.2	51.0	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1ma101 Had a mammogram: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1292	8.7	25.9	25.9
	2 No	3688	24.9	74.1	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1ma102 Year of first mammogram: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1984	1	.0	.1	.1
	1985	1	.0	.1	.2
	1986	1	.0	.1	.2
	1988	1	.0	.1	.3
	1989	1	.0	.1	.4
	1990	4	.0	.3	.7
	1992	1	.0	.1	.8
	1993	6	.0	.5	1.3
	1994	3	.0	.2	1.5
	1995	6	.0	.5	2.0
	1996	7	.0	.5	2.5
	1997	6	.0	.5	3.0
	1998	12	.1	.9	3.9
	1999	21	.1	1.6	5.6
	2000	31	.2	2.4	8.0
	2001	28	.2	2.2	10.2
	2002	44	.3	3.4	13.6
	2003	71	.5	5.6	19.2
	2004	96	.6	7.5	26.7
	2005	110	.7	8.6	35.3
	2006	153	1.0	12.0	47.2
	2007	171	1.2	13.4	60.6
	2008	259	1.8	20.3	80.8
	2009	199	1.3	15.6	96.4
	2010	39	.3	3.0	99.5
	2011	7	.0	.5	100.0
	Total	1279	8.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-2 Not had a mammogram	3688	24.9		
	-1 Missing	13	.1		
	Total	13506	91.3		
Total		14785	100.0		

fm1ma103 Invite for a mammogram: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	39	.3	2.8	2.8
	2 No	1373	9.3	97.2	100.0
	Total	1412	9.6	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	3568	24.1		
	Total	13373	90.4		
Total		14785	100.0		

fm1ma104 Woman gave permission to access mammogram: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1287	8.7	99.6	99.6
	2 No	5	.0	.4	100.0
	Total	1292	8.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-2 Not had a mammogram	3688	24.9		
	Total	13493	91.3		
Total		14785	100.0		

2.3 Anthropometry session

Height (seated and standing), weight and circumferences (waist, hip and arm) were all conducted in the same room as blood pressure measurements. The order of measurements was generally height (standing and seated), weight, waist circumference, hip circumference and arm circumference. Data collection documents are displayed in appendix 4.3.

fm1ms001 Anthropometry fieldworker: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1177	8.0	24.1	24.1
	2	199	1.3	4.1	28.1
	3	10	.1	.2	28.3
	4	26	.2	.5	28.9
	5	503	3.4	10.3	39.2
	6	23	.2	.5	39.6
	7	862	5.8	17.6	57.2
	8	278	1.9	5.7	62.9
	9	718	4.9	14.7	77.6
	10	769	5.2	15.7	93.3
	11	326	2.2	6.7	100.0
	Total	4891	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	89	.6		
	Total	9894	66.9		
Total		14785	100.0		

fm1ms002 Anthropometry room: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4891	33.1	100.0	100.0
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	89	.6		
	Total	9894	66.9		
Total		14785	100.0		

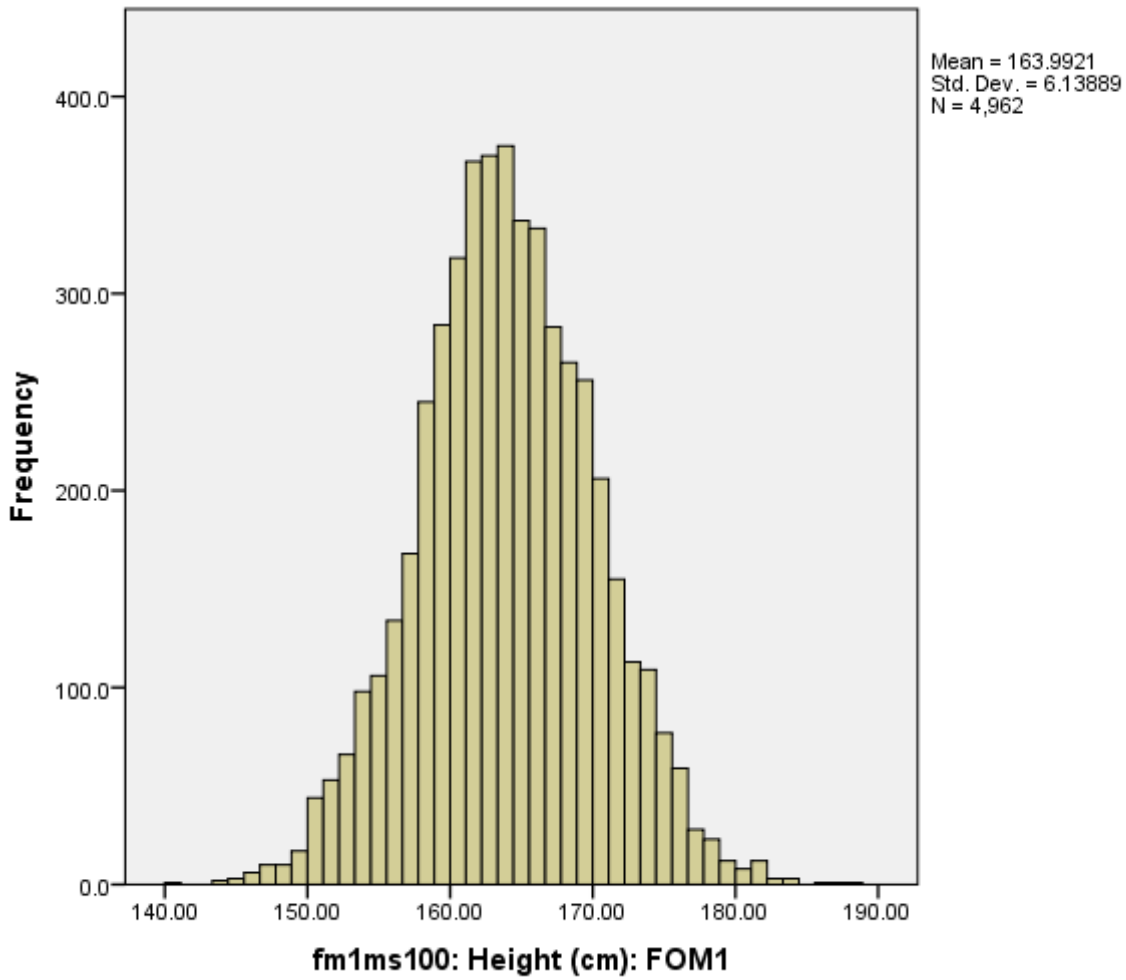
Women were asked whether they had a pacemaker (fm1ms105). Those who did could not use the TANITA scales and were instead weighed using standard bathroom scales.

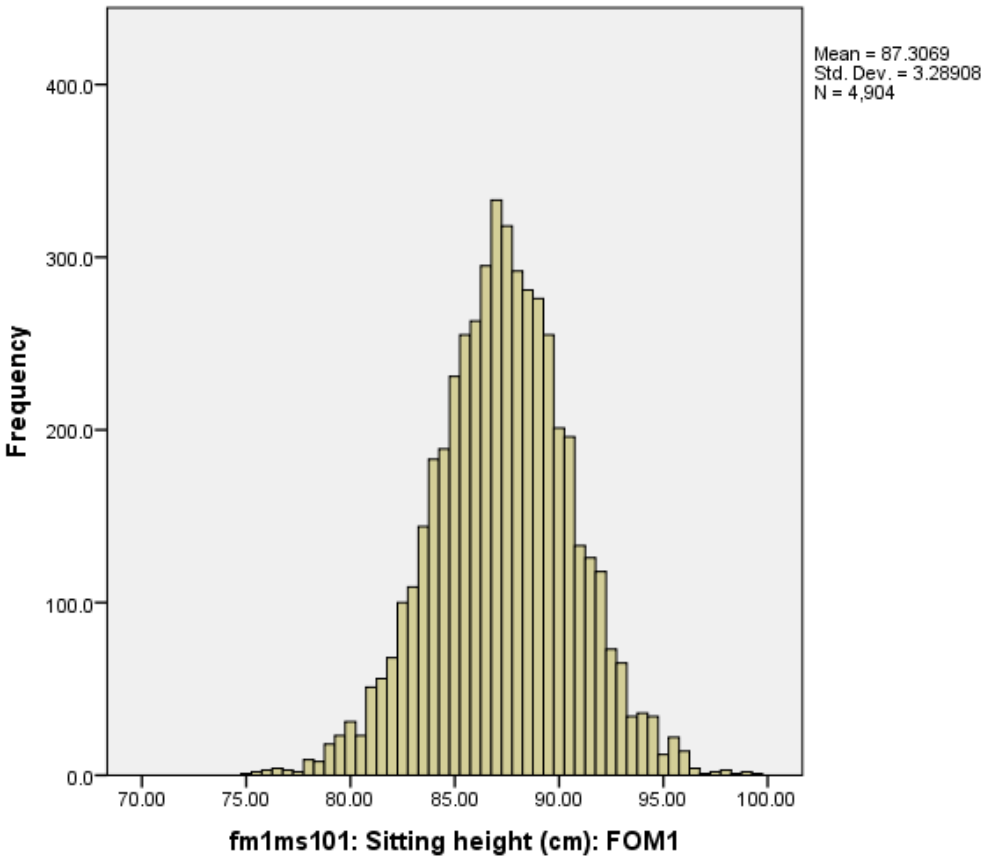
fm1ms105 Pacemaker fitted: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	3	.0	.1	.1
	2 No	4878	33.0	99.9	100.0
	Total	4881	33.0	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	99	.7		
	Total	9904	67.0		
Total		14785	100.0		

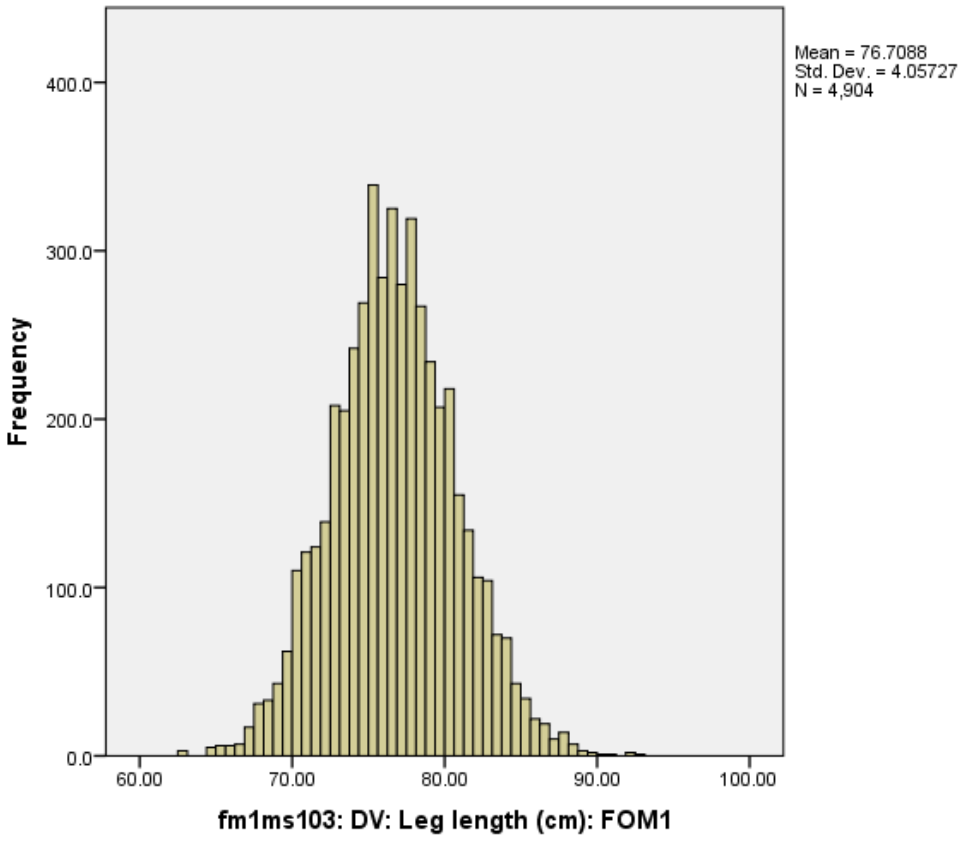
2.3.1 Anthropometrics

Standing and sitting height was measured using a Harpenden stadiometer and recorded to the nearest 1mm.

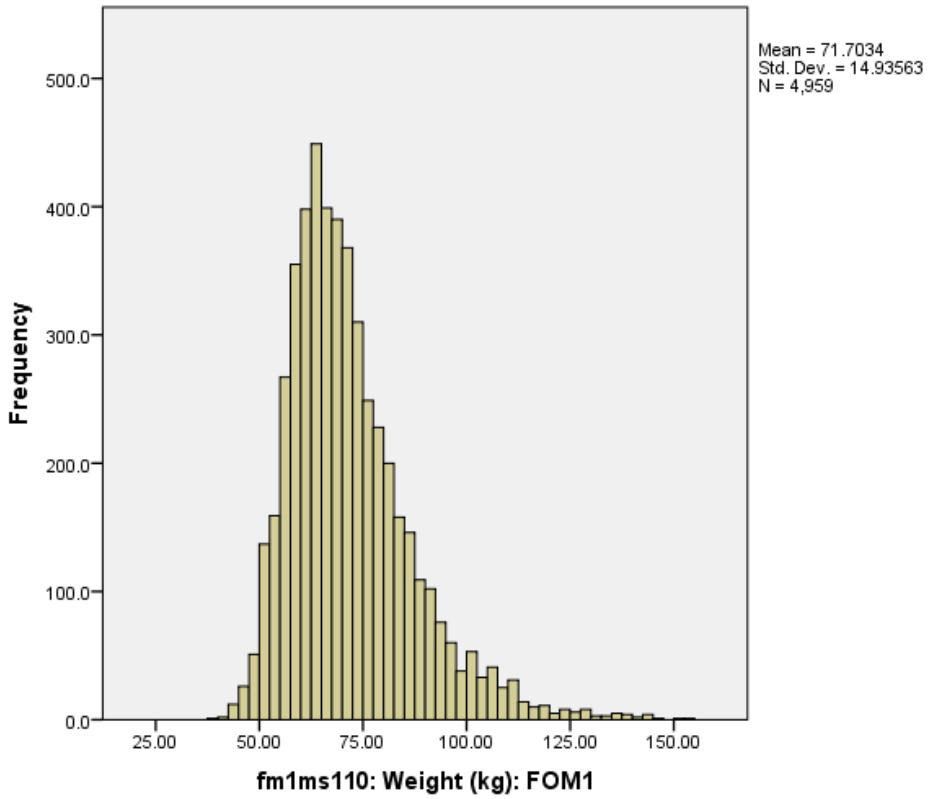




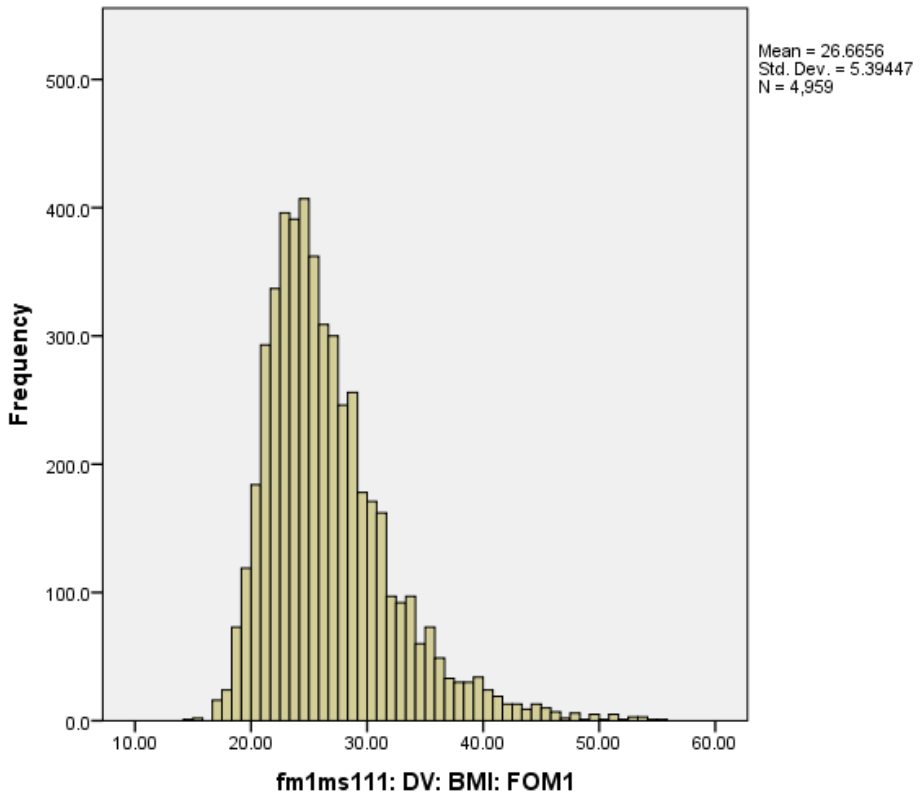
Derived variable (fm1ms103): Leg length calculated as the difference between standing height and sitting height (fm1ms100 – fm1ms101).



Weight was measured to the nearest 0.1 kg.

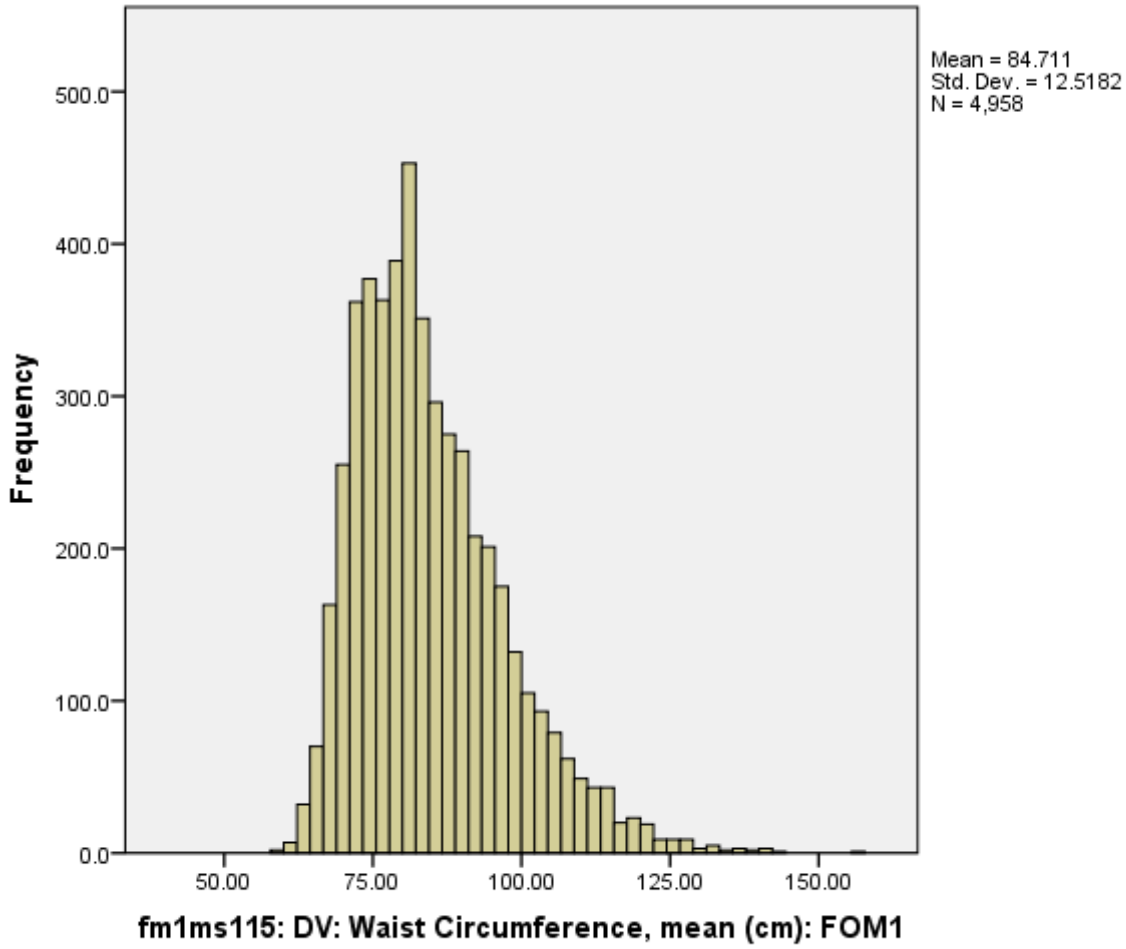


Derived variable: BMI calculated as [weight (kg)] / [height (m) 2] (fm1ms110 / ((fm1ms100/100) * (fm1ms100/100)).



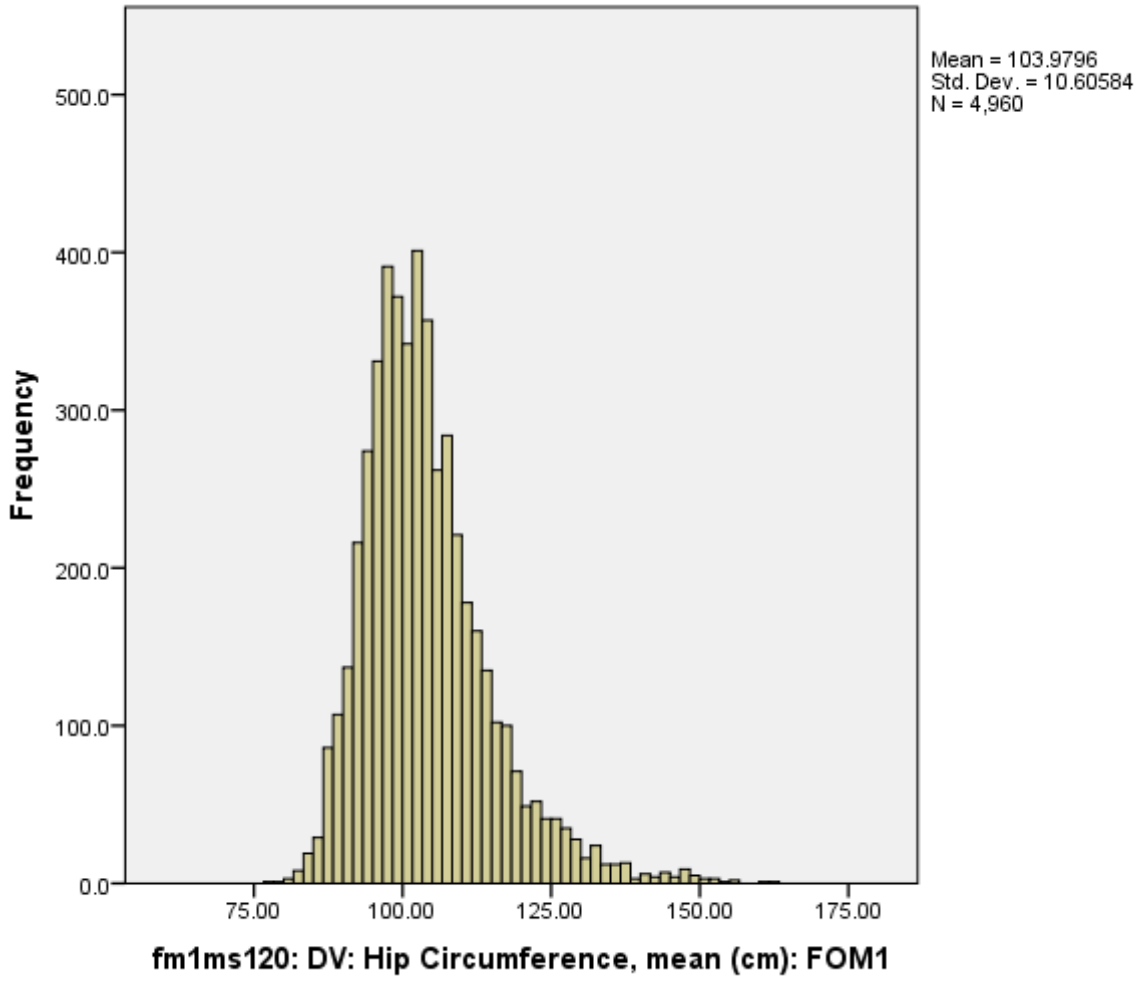
Waist circumference was measured using the Seca 200 body tension tape. It was measured twice and recorded to the nearest 1mm. The two measures for waist circumference are variables fm1ms115a and fm1ms115b.

Derived variable (fm1ms115): mean of these two measures: (fm1ms115a + fm1ms115b)/2. [If only one measure was taken, that one was used].

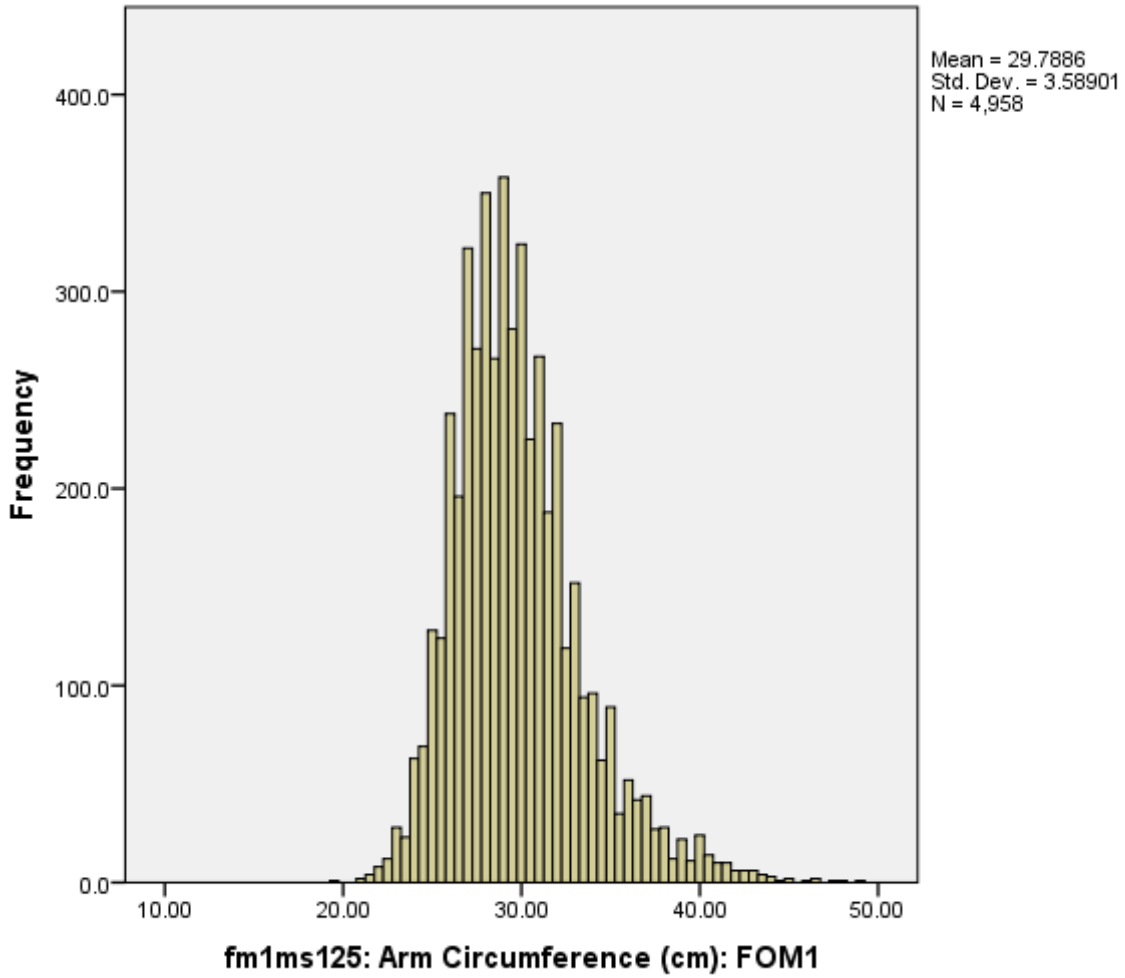


Hip circumference was measured using the Seca 200 body tension tape. It was measured twice and recorded to the nearest 1mm. The two measures for waist circumference are variables fm1ms120a and fm1ms120b.

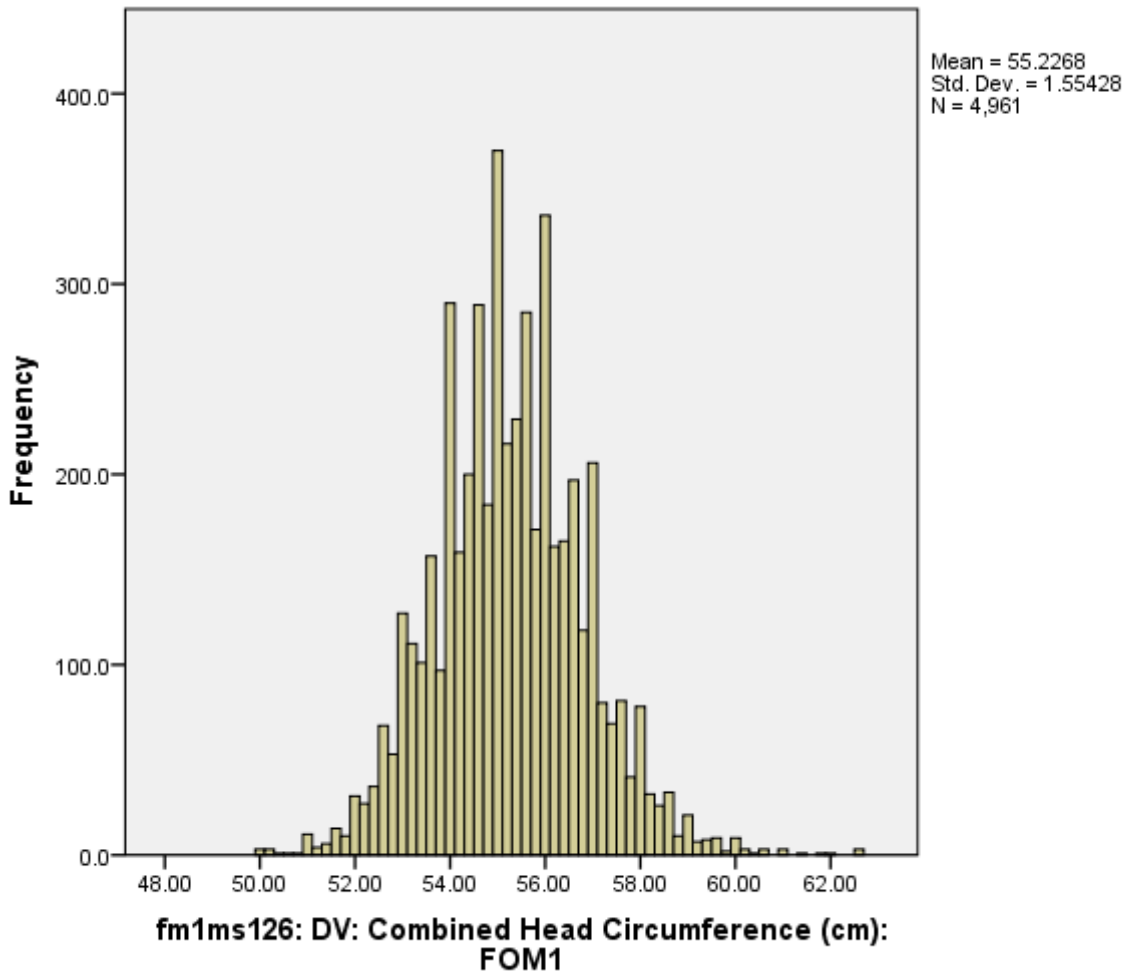
Derived variable (fm1ms120): mean of these two measures: (fm1ms120a + fm1ms120b)/2. [If only one measure was taken, that one was used].



Arm circumference was measured using the Seca 200 body tension tape. It was measured once and recorded to the nearest 1mm.



Head circumference was initially measured using the Seca 200 body tension tape (fm1ms126a), but during October 2009 a Harlow healthcare “Lasso” head circumference tape was used instead (fm1ms126b). Head circumference was measured once and recorded to the nearest 1mm. A derived ‘combined head circumference’ variable was then constructed to include all head circumferences in the same variable (fm1ms126).



2.3.2 DXA

Fat mass, muscle mass and bone density were assessed using Dual Emission X-ray Absorptiometry (DXA: Lunar Prodigy). Two scans were performed using a Lunar prodigy narrow fan beam densitometer: a full-body scan and another focusing just on one hip. Before the woman was scanned she was asked if she could be pregnant. If she was, then the scan was not performed. Note that variables with the code 'dx' (e.g., fm1dx020) relate to the full body DXA scan, while variables with the code 'hdx' (e.g., fm1hdx061) relate to the DXA scan focusing specifically on participants' hips.

Please also note the following regarding the cleaning of the DXA data. The raw scans were not routinely checked for artefacts, alignment issues or other errors. To assess the integrity of the DXA data, each variable in the export of the raw data was checked for outliers which fell outside the main distribution (identified using histograms). Additionally, for full body DXA scans the 'expected weight' (based on DXA values) was compared against the mother's weight from the anthropometry session; any cases where the DXA weight was two kilograms or more lighter than the anthropometric weight were also noted (as this may reflect a substantial proportion of the body being outside the DXA scanner area). All of these cases were noted and the raw DXA scans checked for artefacts, alignment issues or other anomalies. If found, a short description of the problem was noted. This was conducted separately for the full body and the hip scans.

Where any anomalies on the scan were noted, these were categorised and derived variables created to describe the issue (e.g., arm(s) outside of scan area; alignment issues; white masses on chest (breast implant(s)); miscellaneous; etc.). A derived variable highlighting cases where *any* issues were identified was also created. For the for full body DXA scan, these are variables fm1dx990 to fm1dx995; while for the hip DXA scan these are variables fm1hdx990 to fm1hdx994.

Note also that for cases with an 'issues' flag, this may not apply to the whole scan, but only for specific measures. For instance, someone with their arms outside the scan area will obviously have erroneous arm values, but all other variables are likely to be sensible. Similarly, for the hip scan, an individual who has geometry issues may be fine for all other hip variables.

On a related topic, hip geometry values (CSMI, CSA, etc.) are likely to carry greater error than other DXA variables, given their high dependency on accurate detection of anatomical landmarks. Any corrected results obtained in the future, following manual inspection of scans, will be added to the release file.

It is also important to note that during this process not all DXA scans were checked, so other, potentially more subtle, issues may have been overlooked. For instance, scans with only minor alignment issues, or with arms only marginally outside of the

scan area, are unlikely to have been picked up. ALSPAC are hoping to make the raw DXA scans available for researchers at a later date, so that researchers can explore the raw scans themselves (although additional costs may be involved: please refer to the ALSPAC access policy for further details).

As a consequence of these limitations, we advise researchers to explore the DXA data carefully and use their expertise when deciding which data to use.

fm1dx001 Consent given for DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4837	32.7	97.1	97.1
	2 No	143	1.0	2.9	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx002 Consent given to be informed if low BMD on DXA: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4670	31.6	93.8	93.8
	2 No	310	2.1	6.2	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx010 DXA scan done: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4800	32.5	96.4	96.4
	2 No	180	1.2	3.6	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx015 DXA - possibly pregnant: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	9	.1	.2	.2
	2 No	4945	33.4	99.8	100.0
	Total	4954	33.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	26	.2		
	Total	9831	66.5		
Total		14785	100.0		

The following variables are based upon the full-body DXA scan (fm1dx020 to fm1dx501).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
fm1dx020 Total Fat Mass (g): FOM1	4670	2487.17	77740.16	27179.2123	10899.99606
fm1dx021 Total Lean Mass (g): FOM1	4670	27330.53	71460.37	41274.7744	5165.32144
fm1dx030 Total BMD (g\cmˆ2): FOM1	4670	.93	1.55	1.2214	.08544
fm1dx031 Total BMC (g): FOM1	4670	1475.57	4134.21	2678.6905	407.32688
fm1dx035 Total Area (cmˆ2): FOM1	4670	1549.11	3267.43	2185.8328	234.24711
fm1dx036 Total Bone Mass (g): FOM1	4670	1475.57	4134.21	2678.6905	407.32688
fm1dx050 Head BMD (g\cmˆ2): FOM1	4670	1.41	3.77	2.4299	.29168
fm1dx051 Head BMC (g): FOM1	4670	169.61	819.06	513.7948	73.24247
fm1dx052 Head Area (cmˆ2): FOM1	4670	53.68	277.12	211.2616	13.44634
fm1dx101 Arm Left Bone Mass (g): FOM1	4670	30.02	790.83	161.8663	33.55566
fm1dx102 Arm Left Fat Mass (g): FOM1	4670	76.30	23203.83	1360.3666	1136.31235
fm1dx103 Arm Left Lean Mass (g) : FOM1	4670	563.40	20798.48	2258.6031	810.65142
fm1dx104 Arm Right Bone Mass (g): FOM1	4670	20.63	618.10	159.0584	27.05103
fm1dx105 Arm Right Fat Mass (g): FOM1	4670	82.75	22431.84	1229.4965	714.13569
fm1dx106 Arm Right Lean Mass (g) : FOM1	4670	216.16	22936.21	2090.8641	510.67493
fm1dx107 Arms Bone Mass (g): FOM1	4670	64.11	908.71	320.9247	52.65136
fm1dx108 Arms Fat Mass (g): FOM1	4670	159.05	31303.24	2589.8631	1602.72507
fm1dx109 Arms Lean Mass (g) : FOM1	4670	1107.53	32055.59	4349.4672	1071.52317
fm1dx110 Leg Left Bone Mass (g): FOM1	4670	143.69	927.38	483.7093	78.40787
fm1dx111 Leg Left Fat Mass (g): FOM1	4670	594.70	15372.41	4856.7079	1809.61288
fm1dx112 Leg Left Lean Mass (g): FOM1	4670	3027.26	13096.87	6599.8755	934.85809
fm1dx113 Leg Right Bone Mass (g): FOM1	4670	169.79	824.80	487.3117	77.42003
fm1dx114 Leg Right Fat Mass (g): FOM1	4670	615.59	15384.73	4809.7508	1803.63326
fm1dx115 Leg Right Lean Mass (g): FOM1	4670	2666.57	12123.16	6530.7786	924.14173
fm1dx116 Legs Bone Mass (g): FOM1	4670	466.38	1752.18	971.0209	154.35503
fm1dx117 Legs Fat Mass (g): FOM1	4670	1210.29	30632.43	9666.4586	3599.89125
fm1dx118 Legs Lean Mass (g): FOM1	4670	7177.48	24034.71	13130.6541	1832.48636
fm1dx119 Trunk Left Bone Mass (g): FOM1	4670	152.12	965.29	444.3325	104.94111
fm1dx120 Trunk Left Fat Mass (g): FOM1	4670	447.76	24252.20	7183.1928	3304.81587
fm1dx121 Trunk Left Lean Mass (g): FOM1	4670	3462.56	22992.36	10540.4136	1586.75692
fm1dx122 Trunk Right Bone Mass (g): FOM1	4670	173.25	861.71	428.6176	101.28689
fm1dx123 Trunk Right Fat Mass (g): FOM1	4670	405.94	22505.99	6967.1295	3244.39701
fm1dx124 Trunk Right Lean Mass (g): FOM1	4670	5124.39	22949.72	10197.3434	1557.31455
fm1dx125 Trunk Bone Mass (g): FOM1	4670	352.62	1728.23	872.9501	203.82815
fm1dx126 Trunk Fat Mass (g): FOM1	4670	853.69	45615.57	14150.3223	6508.42165
fm1dx127 Trunk Lean Mass (g): FOM1	4670	13676.53	45753.31	20737.7570	3044.94045
fm1dx128 Total Left Bone Mass (g): FOM1	4670	663.43	2434.34	1336.0225	211.01908
fm1dx129 Total Left Fat Mass (g) : FOM1	4670	1254.90	48335.89	13770.0819	5581.52066
fm1dx130 Total Left Lean Mass (g): FOM1	4670	13790.54	42710.78	20862.1260	2690.26367
fm1dx131 Total Right Bone Mass (g): FOM1	4670	628.95	2128.22	1342.6679	210.23236
fm1dx132 Total Right Fat Mass (g): FOM1	4670	1232.28	46409.05	13409.1304	5368.12208
fm1dx133 Total Right Lean Mass (g): FOM1	4670	13401.18	41499.80	20412.6484	2581.78920
fm1dx137 Android Bone Mass (g): FOM1	4670	26.95	152.27	58.3348	13.35433
fm1dx138 Android Fat Mass (g): FOM1	4670	105.90	8099.70	2408.1282	1215.27963

fm1dx139 Android Lean Mass (g): FOM1	4670	1879.91	6931.94	3036.2374	490.30228
fm1dx140 Gynoid Bone Mass (g): FOM1	4670	108.91	514.83	270.8117	52.47430
fm1dx141 Gynoid Fat Mass (g): FOM1	4670	853.46	13896.87	5237.5597	1716.56193
fm1dx142 Gynoid Lean Mass (g): FOM1	4670	3416.41	10117.35	6005.5772	795.26820
fm1dx204 Arms BMD (g\cmˆ2): FOM1	4670	.70	1.34	1.0222	.08534
fm1dx205 Arms BMC (g): FOM1	4670	64.11	908.71	320.9247	52.65136
fm1dx206 Arms Area (cmˆ2): FOM1	4670	69.28	756.41	313.4849	39.83743
fm1dx207 Legs BMD (g\cmˆ2): FOM1	4670	.96	1.66	1.2782	.09865
fm1dx208 Legs BMC (g): FOM1	4670	466.38	1752.18	971.0209	154.35503
fm1dx209 Legs Area (cmˆ2): FOM1	4670	400.11	1235.10	757.5732	89.31374
fm1dx210 Trunk BMD (g\cmˆ2): FOM1	4670	.69	1.37	.9581	.08774
fm1dx211 Trunk BMC (g): FOM1	4670	352.62	1728.23	872.9501	203.82815
fm1dx212 Trunk Area (cmˆ2): FOM1	4670	335.42	1579.14	903.5131	152.04428
fm1dx213 Ribs BMD (g\cmˆ2): FOM1	4670	.51	1.31	.6820	.07523
fm1dx214 Ribs BMC (g): FOM1	4670	67.25	672.28	251.1155	79.16050
fm1dx215 Ribs Area (cmˆ2): FOM1	4670	75.99	740.69	363.5080	86.63402
fm1dx216 Pelvis BMD (g\cmˆ2): FOM1	4670	.73	1.69	1.1780	.11314
fm1dx217 Pelvis BMC (g): FOM1	4670	111.66	717.63	349.9950	82.77858
fm1dx218 Pelvis Area (cmˆ2): FOM1	4670	116.41	568.43	294.7789	51.69851
fm1dx219 Spine BMD (g\cmˆ2): FOM1	4670	.70	1.64	1.1015	.13146
fm1dx220 Spine BMC (g): FOM1	4670	66.80	776.25	271.8396	56.49709
fm1dx221 Spine Area (cmˆ2): FOM1	4670	89.88	615.41	245.2262	31.61633
fm1dx251 Arm Left BMD (g\cmˆ2): FOM1	4670	.68	1.39	1.0110	.08733
fm1dx252 Arm Left BMC (g): FOM1	4670	30.02	790.83	161.8663	33.55566
fm1dx253 Arm Left Area (cmˆ2): FOM1	4670	29.34	624.78	159.7739	26.04169
fm1dx254 Arm Right BMD (g\cmˆ2): FOM1	4670	.51	1.37	1.0336	.08959
fm1dx255 Arm Right BMC (g): FOM1	4670	20.63	618.10	159.0584	27.05103
fm1dx256 Arm Right Area (cmˆ2): FOM1	4670	29.34	527.61	153.7110	21.05855
fm1dx257 Leg Left BMD (g\cmˆ2): FOM1	4670	.94	1.69	1.2753	.10123
fm1dx258 Leg Left BMC (g): FOM1	4670	143.69	927.38	483.7093	78.40787
fm1dx259 Leg Left Area (cmˆ2): FOM1	4670	111.35	609.91	378.2335	45.53079
fm1dx260 Leg Right BMD (g\cmˆ2): FOM1	4670	.95	1.65	1.2813	.09900
fm1dx261 Leg Right BMC (g): FOM1	4670	169.79	824.80	487.3117	77.42003
fm1dx262 Leg Right Area (cmˆ2): FOM1	4670	137.45	625.19	379.3398	45.18668
fm1dx263 Trunk Left BMD (g\cmˆ2): FOM1	4670	.70	1.45	.9655	.09159
fm1dx264 Trunk Left BMC (g): FOM1	4670	152.12	965.29	444.3325	104.94111
fm1dx265 Trunk Left Area (cmˆ2): FOM1	4670	135.29	833.29	456.4744	78.07266
fm1dx266 Trunk Right BMD (g\cmˆ2): FOM1	4670	.68	1.36	.9508	.08722
fm1dx267 Trunk Right BMC (g): FOM1	4670	173.25	861.71	428.6176	101.28689
fm1dx268 Trunk Right Area (cmˆ2): FOM1	4670	200.13	778.24	447.0387	76.94675
fm1dx269 Total Left BMD (g\cmˆ2): FOM1	4670	.91	1.54	1.2151	.08855
fm1dx270 Total Left BMC (g): FOM1	4670	663.43	2434.34	1336.0225	211.01908
fm1dx271 Total Left Area (cmˆ2): FOM1	4670	542.39	1659.15	1095.4514	120.80462
fm1dx272 Total Right BMD (g\cmˆ2): FOM1	4670	.95	1.57	1.2270	.08733
fm1dx273 Total Right BMC (g): FOM1	4670	628.95	2128.22	1342.6679	210.23236
fm1dx274 Total Right Area (cmˆ2): FOM1	4670	503.69	1608.28	1090.3815	121.13965
fm1dx300 Arms Tissue Mass (g): FOM1	4670	1585.49	63358.83	6939.3302	2527.90568
fm1dx301 Arm Right Tissue Mass (g): FOM1	4670	556.23	45368.05	3320.3606	1141.92118
fm1dx302 Arm Left Tissue Mass (g): FOM1	4670	817.56	44002.31	3618.9697	1889.78037
fm1dx303 Legs Tissue Mass (g): FOM1	4670	11472.05	53412.59	22797.1127	4566.79998
fm1dx304 Leg Right Tissue Mass (g): FOM1	4670	5564.27	27507.90	11340.5293	2302.66974
fm1dx305 Leg Left Tissue Mass (g): FOM1	4670	5691.32	26807.80	11456.5833	2305.24023
fm1dx306 Trunk Tissue Mass (g): FOM1	4670	18794.03	91021.80	34888.0793	8540.04348
fm1dx307 Trunk Right Tissue Mass (g): FOM1	4670	8940.09	45266.94	17164.4729	4314.23496
fm1dx308 Trunk Left Tissue Mass (g): FOM1	4670	6722.71	45754.86	17723.6064	4356.00472
fm1dx309 Android Tissue Mass (g): FOM1	4670	2358.11	13654.49	5444.3657	1568.67193
fm1dx310 Gynoid Tissue Mass (g): FOM1	4670	5604.14	24014.22	11243.1369	2204.81152
fm1dx311 Total Tissue Mass (g): FOM1	4670	39251.05	145970.10	68453.9867	14104.00279
fm1dx312 Total Right Tissue Mass (g): FOM1	4670	18899.22	87908.85	33821.7788	6978.19681
fm1dx313 Total Left Tissue Mass (g): FOM1	4670	19741.26	91046.66	34632.2079	7272.61203
fm1dx320 Arms Fat Free Mass (g): FOM1	4670	1270.48	32766.82	4670.3918	1103.39953
fm1dx321 Arm Right Fat Free Mass (g): FOM1	4670	241.38	23500.11	2249.9225	528.49480
fm1dx322 Arm Left Fat Free Mass (g): FOM1	4670	609.26	21519.69	2420.4693	832.76752
fm1dx323 Legs Fat Free Mass (g): FOM1	4670	7643.86	25536.94	14101.6750	1941.14296
fm1dx324 Leg Right Fat Free Mass (g): FOM1	4670	2955.64	12857.54	7018.0902	978.75523
fm1dx325 Leg Left Fat Free Mass (g): FOM1	4670	3379.18	14024.25	7083.5847	989.26409
fm1dx326 Trunk Fat Free Mass (g): FOM1	4670	14492.13	46587.22	21610.7071	3104.49036

fm1dx327 Trunk Right Fat Free Mass (g): FOM1	4670	5453.58	23490.59	10625.9610	1587.67907
fm1dx328 Trunk Left Fat Free Mass (g): FOM1	4670	3614.68	23420.69	10984.7461	1618.34726
fm1dx329 Android Fat Free Mass (g): FOM1	4670	1917.86	6998.86	3094.5722	493.66903
fm1dx330 Gynoid Fat Free Mass (g): FOM1	4670	3566.37	10445.53	6276.3889	828.65863
fm1dx331 Total Fat Free Mass (g): FOM1	4670	29144.35	74628.81	43953.4649	5374.99373
fm1dx332 Total Right Fat Free Mass (g): FOM1	4670	14426.40	43379.81	21755.3163	2696.09332
fm1dx333 Total Left Fat Free Mass (g): FOM1	4670	14717.95	44740.25	22198.1486	2799.04448
fm1dx340 Arms Total Mass (g): FOM1	4670	1748.44	64070.06	7260.2549	2552.55994
fm1dx341 Arm Right Total Mass (g): FOM1	4670	581.45	45931.94	3479.4190	1156.33066
fm1dx342 Arm Left Total Mass (g): FOM1	4670	899.96	44723.52	3780.8359	1909.48755
fm1dx343 Legs Total Mass (g): FOM1	4670	12158.87	54565.71	23768.1336	4682.29920
fm1dx344 Leg Right Total Mass (g): FOM1	4670	5906.27	28242.27	11827.8410	2360.48309
fm1dx345 Leg Left Total Mass (g): FOM1	4670	6027.48	27375.15	11940.2926	2363.38191
fm1dx346 Trunk Total Mass (g): FOM1	4670	19304.12	91855.71	35761.0294	8648.53756
fm1dx347 Trunk Right Total Mass (g): FOM1	4670	9175.30	45672.51	17593.0905	4368.57878
fm1dx348 Trunk Left Total Mass (g): FOM1	4670	6874.82	46183.19	18167.9389	4411.37397
fm1dx349 Android Total Mass (g): FOM1	4670	2394.93	13699.75	5502.7004	1572.59478
fm1dx350 Gynoid Total Mass (g): FOM1	4670	5803.71	24299.06	11513.9486	2241.47254
fm1dx351 Total Total Mass (g): FOM1	4670	41064.87	148739.40	71132.6772	14346.19503
fm1dx352 Total Right Total Mass (g): FOM1	4670	19888.36	89788.86	35164.4467	7107.64926
fm1dx353 Total Left Total Mass (g): FOM1	4670	20668.67	93076.14	35968.2305	7394.00293
fm1dx360 Arms Region Fat (g): FOM1	4670	.04	.64	.3413	.08162
fm1dx361 Arm Right Region Fat (g): FOM1	4670	.04	.64	.3408	.08127
fm1dx362 Arm Left Region Fat (g): FOM1	4670	.04	.64	.3417	.08179
fm1dx363 Legs Region Fat (g): FOM1	4670	.08	.64	.3961	.07939
fm1dx364 Leg Right Region Fat (g): FOM1	4670	.08	.64	.3960	.07939
fm1dx365 Leg Left Region Fat (g): FOM1	4670	.08	.64	.3962	.07939
fm1dx366 Trunk Region Fat (g): FOM1	4670	.04	.60	.3782	.09558
fm1dx367 Trunk Right Region Fat (g): FOM1	4670	.04	.60	.3783	.09555
fm1dx368 Trunk Left Region Fat (g): FOM1	4670	.04	.60	.3782	.09559
fm1dx369 Android Region Fat (g): FOM1	4670	.04	.64	.4140	.10769
fm1dx370 Gynoid Region Fat (g): FOM1	4670	.14	.64	.4455	.06905
fm1dx371 Total Region Fat (g): FOM1	4670	.06	.59	.3696	.08213
fm1dx372 Total Right Region Fat (g): FOM1	4670	.06	.59	.3689	.08186
fm1dx373 Total Left Region Fat (g): FOM1	4670	.06	.59	.3703	.08243
fm1dx380 Arms Tissue Fat (g): FOM1	4670	.04	.65	.3572	.08294
fm1dx381 Arm Right Tissue Fat (g): FOM1	4670	.04	.65	.3572	.08288
fm1dx382 Arm Left Tissue Fat (g): FOM1	4670	.04	.65	.3572	.08297
fm1dx383 Legs Tissue Fat (g): FOM1	4670	.09	.66	.4130	.08148
fm1dx384 Leg Right Tissue Fat (g): FOM1	4670	.09	.66	.4130	.08149
fm1dx385 Leg Left Tissue Fat (g): FOM1	4670	.09	.66	.4129	.08148
fm1dx386 Trunk Tissue Fat (g) : FOM1	4670	.05	.61	.3878	.09762
fm1dx387 Trunk Right Tissue Fat (g) : FOM1	4670	.05	.61	.3878	.09761
fm1dx388 Trunk Left Tissue Fat (g) : FOM1	4670	.05	.61	.3878	.09762
fm1dx389 Android Tissue Fat (g) : FOM1	4670	.04	.65	.4185	.10827
fm1dx390 Gynoid Tissue Fat (g): FOM1	4670	.15	.66	.4562	.07010
fm1dx391 Total Tissue Fat (g): FOM1	4670	.06	.61	.3841	.08420
fm1dx392 Total Right Tissue Fat (g): FOM1	4670	.06	.61	.3836	.08397
fm1dx393 Total Left Tissue Fat (g): FOM1	4670	.06	.61	.3846	.08444
fm1dx500 Total T score: FOM1	4669	-2.39	5.34	1.2044	1.06804
fm1dx501 Total Z score: FOM1	4666	-2.24	5.30	1.1609	.94612

fm1dx990 DV: Arm(s) out of full body DXA scan area: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	125	.8	2.5	2.5
	2 No	4855	32.8	97.5	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx991 DV: Alignment issues in the full body DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	102	.7	2.0	2.0
	2 No	4878	33.0	98.0	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx992 DV: Full body DXA image is grainy: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	63	.4	1.3	1.3
	2 No	4917	33.3	98.7	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx993 DV: White masses on chest (breast implant(s)): FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	13	.1	.3	.3
	2 No	4967	33.6	99.7	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx994 DV: Miscellaneous error/artefact in full body DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	9	.1	.2	.2
	2 No	4971	33.6	99.8	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1dx995 DV: Any error/artefact noted in full body DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	157	1.1	3.2	3.2
	2 No	4823	32.6	96.8	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

The following variables are based upon the hip DXA scan (fm1hdx060 to fm1hdx205).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
fm1hdx060 Hip Total BMD (g\cmˆ2): FOM1	4645	.60	2.04	1.0290	.13863
fm1hdx061 Hip Total BMC (g): FOM1	4645	1.55	60.87	32.1307	5.17194
fm1hdx062 Hip Total area (cmˆ2): FOM1	4645	2.53	47.84	31.1962	2.39166
fm1hdx065 Hip Total T Score: FOM1	4641	-3.36	8.66	.2326	1.14943
fm1hdx066 Hip Total Z Score: FOM1	4638	-2.93	8.29	.3897	1.03145
fm1hdx070 Hip Troch BMD (g\cmˆ2): FOM1	4660	.00	1.36	.8211	.12827
fm1hdx071 Hip Troch BMC (g): FOM1	4660	.00	60.36	10.2989	2.54629
fm1hdx072 Hip Troch area (cmˆ2): FOM1	4660	.00	46.17	12.4587	1.88241
fm1hdx075 Hip Troch T Score: FOM1	4653	-3.83	5.18	.2227	1.15698
fm1hdx076 Hip Troch Z Score: FOM1	4650	-3.46	5.61	.2245	1.03536
fm1hdx080 Hip Wards BMD (g\cmˆ2): FOM1	4660	.00	1.68	.8288	.15038
fm1hdx081 Hip Wards BMC (g): FOM1	4660	.00	7.38	2.1291	.51989
fm1hdx082 Hip Wards area (cmˆ2): FOM1	4660	.00	6.42	2.5639	.39144
fm1hdx085 Hip Wards T Score: FOM1	4652	-3.95	5.90	-.6194	1.14240
fm1hdx086 Hip Wards Z Score: FOM1	4649	-3.24	6.68	-.0459	1.07045
fm1hdx090 Hip Shaft BMD (g\cmˆ2): FOM1	4645	.00	2.14	1.2259	.17250
fm1hdx091 Hip Shaft BMC (g) : FOM1	4645	.00	33.31	17.0660	2.44305
fm1hdx092 Hip Shaft area (cmˆ2): FOM1	4645	.26	18.38	13.9385	.86817
fm1hdx100 Cross-sectional moment of inertia (CSMI) (mm4): FOM1	4141	-59148355 92873.80	40882.85	-234026978 6.6552	10569734641 9.79530
fm1hdx101 Bone cross-sectional area (CSA) (mm2): FOM1	4141	-4.07	274.57	149.0140	23.36597
fm1hdx102 Hip axis length (mm): FOM1	4121	.00	126.12	104.8013	6.93563
fm1hdx103 Strength Index: FOM1	4141	-.01	4.58	1.5365	.39433
fm1hdx108 Alpha (deg: Neck angle): FOM1	4141	-20.15	63.40	-1.7455	3.51012
fm1hdx109 Theta (deg: Neck angle): FOM1	4141	.00	146.99	125.7993	4.70607
fm1hdx130 Hip Neck BMD (g\cmˆ2): FOM1	4660	.00	1.95	.9929	.13639
fm1hdx131 Hip Neck BMC (g\cmˆ2): FOM1	4660	.00	9.53	4.7592	.74418
fm1hdx132 Hip Neck Area (g\cmˆ2): FOM1	4660	.06	7.60	4.7906	.37593
fm1hdx135 Hip Neck T Score: FOM1	4653	-3.04	8.09	.0620	1.11131
fm1hdx136 Hip Neck Z Score: FOM1	4650	-2.68	7.83	.3875	1.01186
fm1hdx140 Hip Upper Neck BMD (g\cmˆ2): FOM1	4659	.00	2.00	.8349	.14333
fm1hdx141 Hip Upper Neck BMC (g): FOM1	4659	.00	4.27	1.9637	.35823
fm1hdx142 Hip Upper Neck area (cmˆ2): FOM1	4659	.00	3.82	2.3549	.18787
fm1hdx145 Hip Upper Neck T Score: FOM1	4654	-4.38	9.85	.1130	1.19047
fm1hdx146 Hip Upper Neck Z Score: FOM1	4651	-3.78	9.80	.4062	1.11351
fm1hdx150 Hip Lower Neck BMD (g\cmˆ2): FOM1	4659	.00	1.90	1.1462	.14154
fm1hdx151 Hip Lower Neck BMC (g): FOM1	4659	.00	7.30	2.7967	.42131
fm1hdx152 Hip Lower Neck area (cmˆ2): FOM1	4659	.04	4.57	2.4367	.18900
fm1hdx200 Hip cortical width neck: FOM1	4141	.00	13.68	5.8172	2.04637
fm1hdx201 Hip cortical ratio neck: FOM1	4141	.00	46.00	19.5858	6.78219
fm1hdx202 Hip cortical width calcar: FOM1	4141	-2.82	13.90	3.9517	1.12496
fm1hdx203 Hip cortical ratio calcar: FOM1	4141	-5.01	26.31	7.7103	2.14712
fm1hdx204 Hip cortical width shaft: FOM1	4141	-4.78	15.33	5.1647	1.43942
fm1hdx205 Hip cortical ratio shaft: FOM1	4141	-13.06	38.06	17.7947	4.48133

fm1hdx299 Side of hip DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Left	4649	31.4	99.7	99.7
	2 Right	12	.1	.3	100.0
	Total	4661	31.5	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	319	2.2		
	Total	10124	68.5		
Total		14785	100.0		

fm1hdx990 DV: Alignment issues in the hip DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	59	.4	1.2	1.2
	2 No	4921	33.3	98.8	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1hdx991 DV: Edge of hip missing from hip DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	16	.1	.3	.3
	2 No	4964	33.6	99.7	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1hdx992 DV: All/some hip geometry measures coded as '0' for hip DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	113	.8	2.3	2.3
	2 No	4867	32.9	97.7	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1hdx993 DV: Miscellaneous error/artefact in hip DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	28	.2	.6	.6
	2 No	4952	33.5	99.4	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

fm1hdx994 DV: Any error/artefact noted in hip DXA scan: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	127	.9	2.6	2.6
	2 No	4853	32.8	97.4	100.0
	Total	4980	33.7	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	Total	9805	66.3		
Total		14785	100.0		

2.4 Arteries session

2.4.1 Carotid Intima-Media Thickness (cIMT)

Both the left and right common carotid artery scans were obtained via high-resolution B ultrasound and imaged longitudinally 1 cm proximal to the carotid bifurcation following a standardized protocol using a ZONARE z.one Ultra convertible ultrasound system with L10-5 linear transducer. Images were focused on the posterior (far) wall of the artery and the zoom function was used to magnify the area. Ten-second cine loops were recorded in DICOM format and analyzed offline using Carotid Analyzer for Research (Vascular Research Tools 5, Medical Imaging Applications, LLC 2008). Three consecutive cardiac cycles were identified and three measures of cIMT were taken from end-diastolic frames and averaged. This was done for both right and left carotid arteries. Arterial distensibility was calculated as the difference between systolic and diastolic arterial diameter. The mean of the left- and right-sided readings was used in analyses. The images were analyzed by a single trained reader. Data collection documents are displayed in appendix 4.3.

fm1cv001 Cardiovascular measures fieldworker: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1307	8.8	26.8	26.8
	4	3	.0	.1	26.9
	5	662	4.5	13.6	40.4
	7	943	6.4	19.3	59.8
	8	320	2.2	6.6	66.3
	9	732	5.0	15.0	81.3
	10	910	6.2	18.7	100.0
	Total	4877	33.0	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	103	.7		
	Total	9908	67.0		
Total		14785	100.0		

fm1cv002 Cardiovascular measures room: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1616	10.9	33.1	33.1
	2	3262	22.1	66.9	100.0
	Total	4878	33.0	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	102	.7		
	Total	9907	67.0		
Total		14785	100.0		

fm1cv100 Consent for CIMT ultrasound: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4891	33.1	100.0	100.0
	2 No	2	.0	.0	100.0
	Total	4893	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	87	.6		
	Total	9892	66.9		
Total		14785	100.0		

fm1cv105 CIMT ultrasound machine used: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Scanner 1	1588	10.7	32.5	32.5
	2 Scanner 2	3303	22.3	67.5	100.0
	Total	4891	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	89	.6		
	Total	9894	66.9		
Total		14785	100.0		

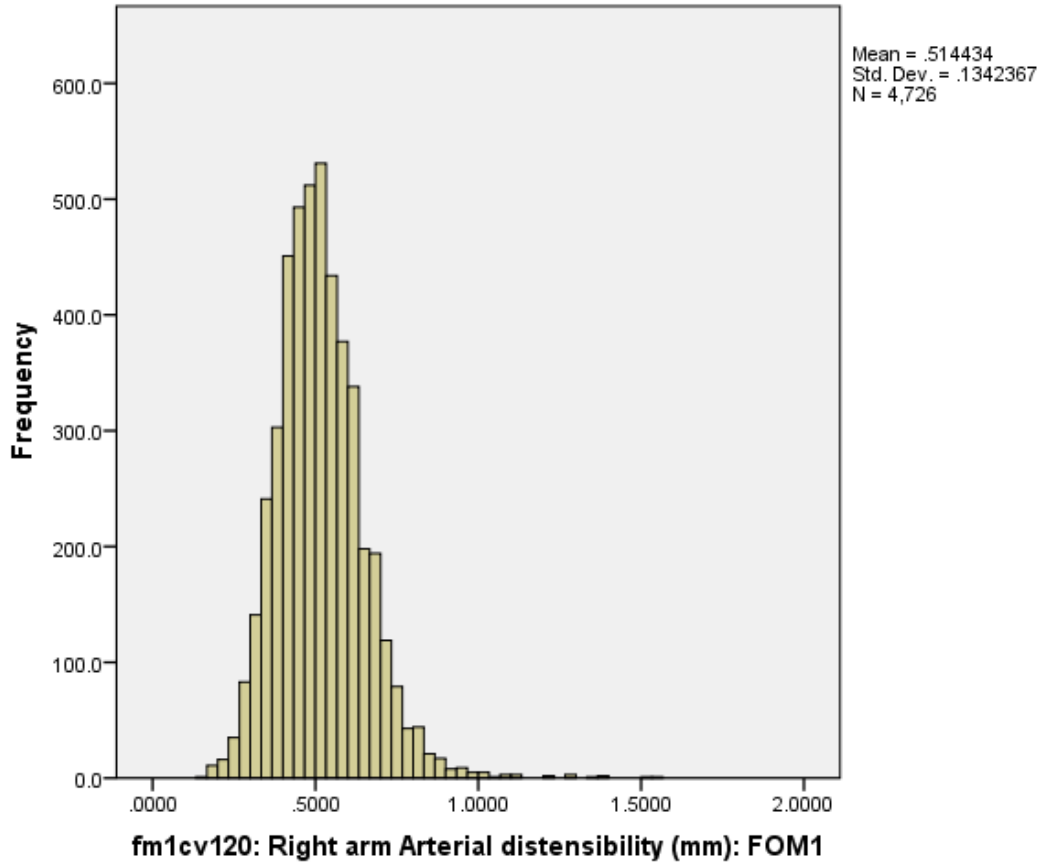
fm1cv110a CIMT time measures taken (hours): FOM1

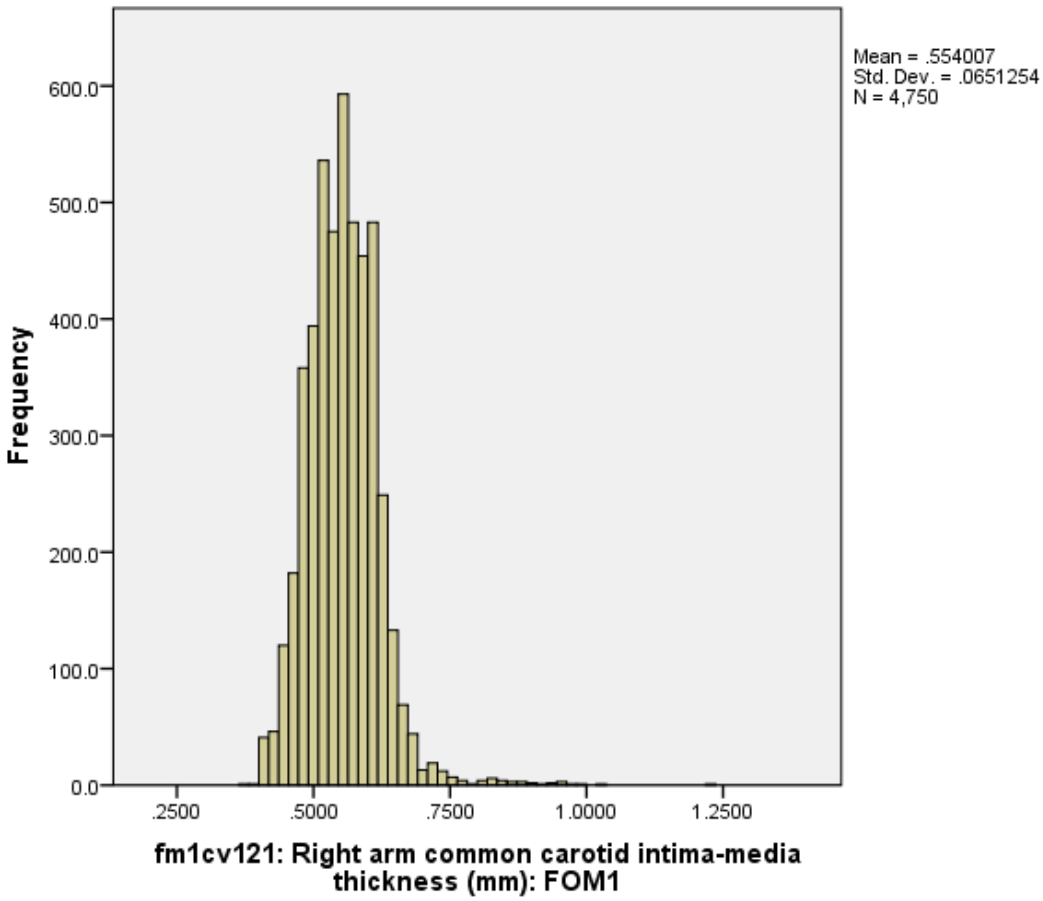
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7	210	1.4	4.4	4.4
	8	592	4.0	12.4	16.7
	9	801	5.4	16.7	33.5
	10	717	4.8	15.0	48.4
	11	520	3.5	10.9	59.3
	12	565	3.8	11.8	71.1
	13	573	3.9	12.0	83.0
	14	499	3.4	10.4	93.5
	15	227	1.5	4.7	98.2
	16	48	.3	1.0	99.2
	17	26	.2	.5	99.7
	18	8	.1	.2	99.9
	19	4	.0	.1	100.0
	Total	4790	32.4	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	190	1.3		
	Total	9995	67.6		
Total		14785	100.0		

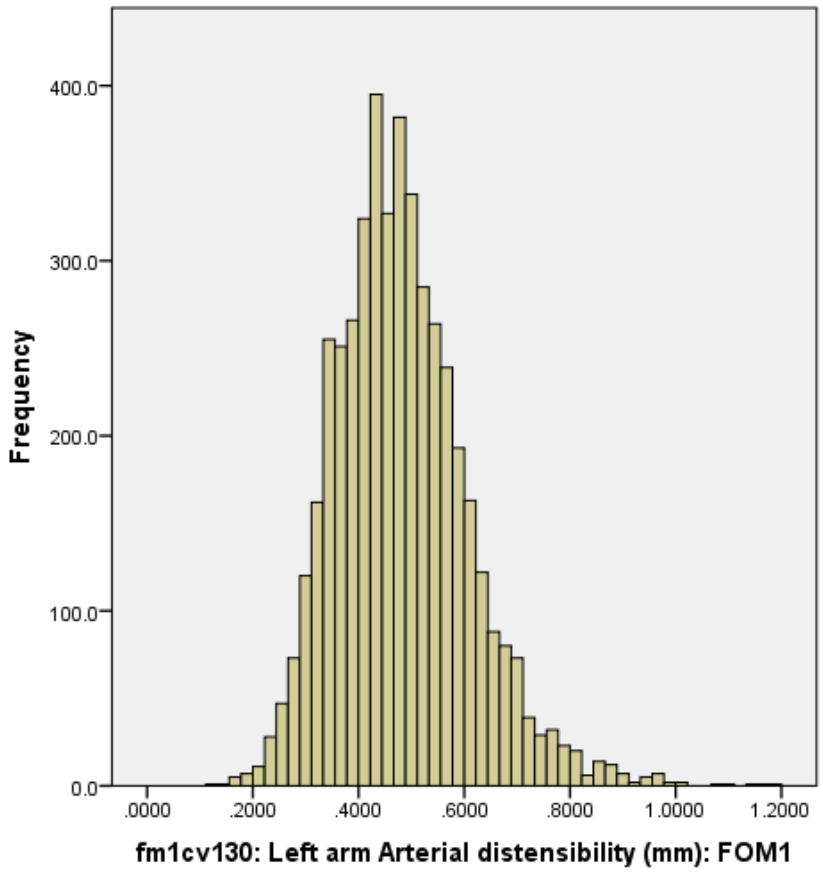
fm1cv110b CIMT time measures taken (minutes): FOM1

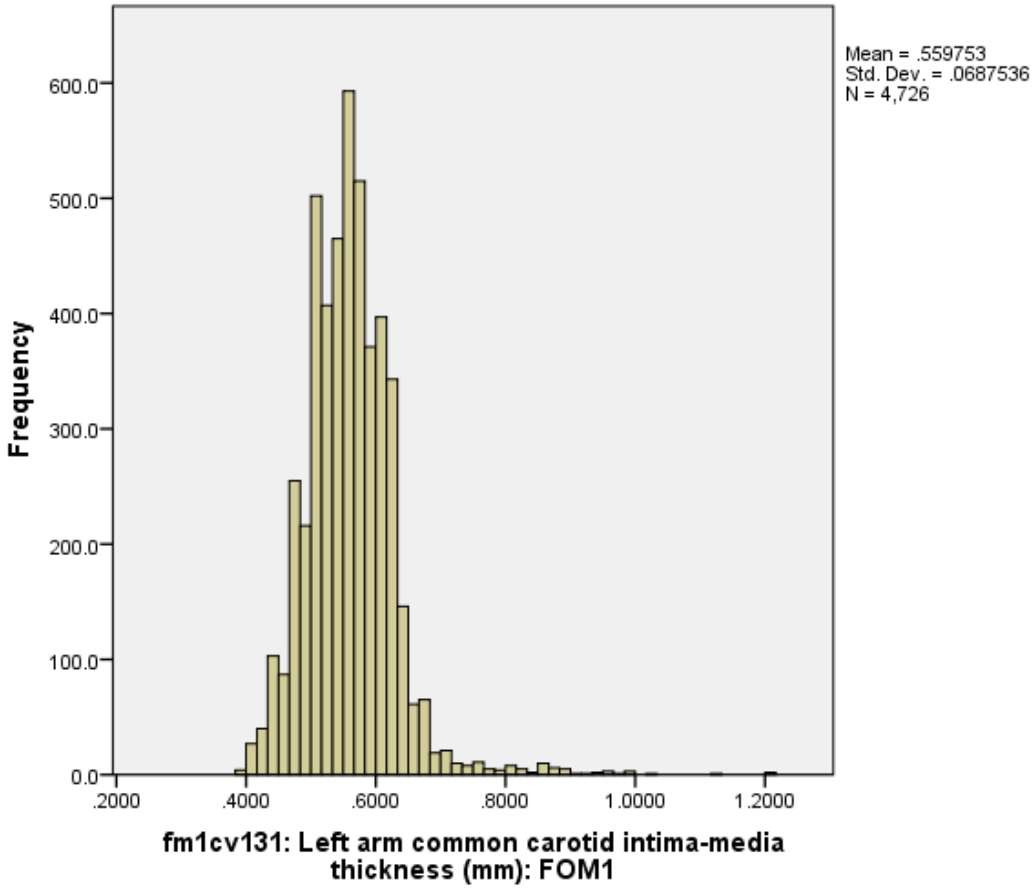
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	78	.5	1.6	1.6
	1	81	.5	1.7	3.3
	2	84	.6	1.8	5.1
	3	75	.5	1.6	6.6
	4	75	.5	1.6	8.2
	5	72	.5	1.5	9.7
	6	83	.6	1.7	11.4
	7	94	.6	2.0	13.4
	8	66	.4	1.4	14.8
	9	97	.7	2.0	16.8
	10	93	.6	1.9	18.7
	11	80	.5	1.7	20.4
	12	65	.4	1.4	21.8
	13	87	.6	1.8	23.6
	14	68	.5	1.4	25.0
	15	82	.6	1.7	26.7
	16	76	.5	1.6	28.3
	17	83	.6	1.7	30.0
	18	81	.5	1.7	31.7
	19	72	.5	1.5	33.2
	20	80	.5	1.7	34.9
	21	79	.5	1.6	36.6
	22	89	.6	1.9	38.4
	23	70	.5	1.5	39.9
	24	88	.6	1.8	41.7
	25	77	.5	1.6	43.3
	26	86	.6	1.8	45.1
	27	67	.5	1.4	46.5
	28	74	.5	1.5	48.1
	29	68	.5	1.4	49.5
	30	82	.6	1.7	51.2
	31	60	.4	1.3	52.4
	32	62	.4	1.3	53.7
	33	80	.5	1.7	55.4
	34	75	.5	1.6	57.0
	35	75	.5	1.6	58.5
	36	89	.6	1.9	60.4
	37	84	.6	1.8	62.2
	38	78	.5	1.6	63.8
	39	74	.5	1.5	65.3
	40	70	.5	1.5	66.8
	41	95	.6	2.0	68.8
	42	85	.6	1.8	70.5
	43	82	.6	1.7	72.3
	44	95	.6	2.0	74.2
	45	87	.6	1.8	76.1
	46	90	.6	1.9	77.9
	47	82	.6	1.7	79.6
	48	87	.6	1.8	81.5
	49	66	.4	1.4	82.8
	50	86	.6	1.8	84.6
	51	81	.5	1.7	86.3
	52	92	.6	1.9	88.2

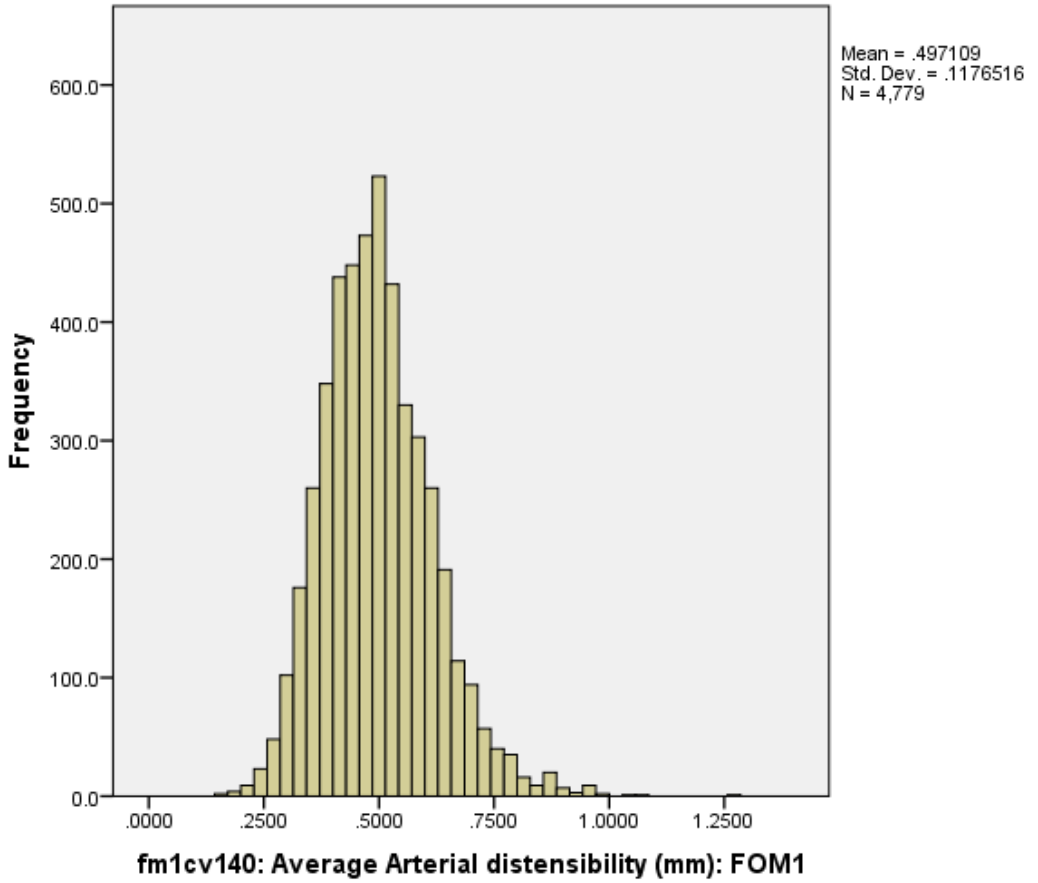
	53	82	.6	1.7	90.0
	54	54	.4	1.1	91.1
	55	92	.6	1.9	93.0
	56	76	.5	1.6	94.6
	57	67	.5	1.4	96.0
	58	103	.7	2.2	98.1
	59	89	.6	1.9	100.0
	Total	4790	32.4	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	190	1.3		
	Total	9995	67.6		
Total		14785	100.0		

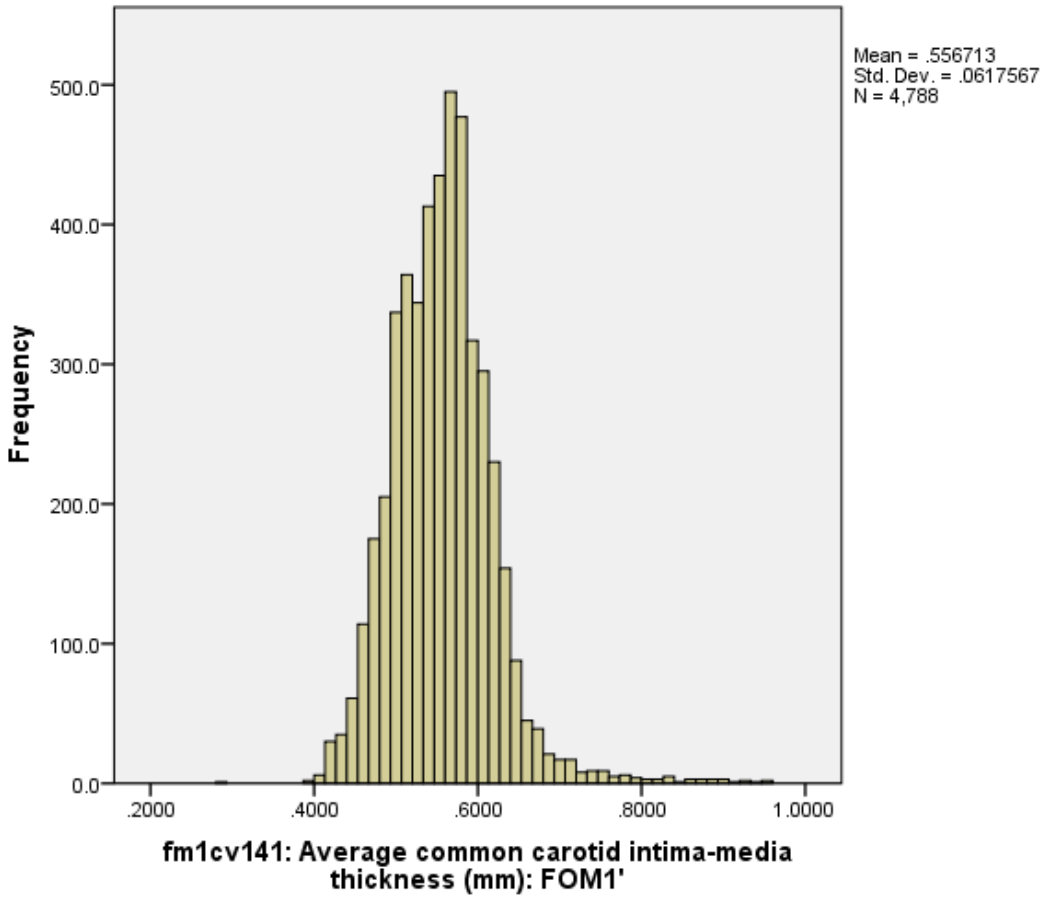

Mean = .514434
Std. Dev. = .1342367
N = 4,726
Frequency
600.0
500.0
400.0
300.0
200.0
100.0
0.0
.0000
.5000
1.0000
1.5000
2.0000
fm1cv120: Right arm Arterial distensibility (mm): FOM1


Mean = .554007
Std. Dev. = .0651254
N = 4,750
Frequency
600.0
500.0
400.0
300.0
200.0
100.0
0.0
.2500
.5000
.7500
1.0000
1.2500
fm1cv121: Right arm common carotid intima-media thickness (mm): FOM1


Mean = .481316
Std. Dev. = .1256313
N = 4,705
Frequency
400.0
300.0
200.0
100.0
0.0
.0000
.2000
.4000
.6000
.8000
1.0000
1.2000
fm1cv130: Left arm Arterial distensibility (mm): FOM1


Mean = .559753
Std. Dev. = .0687536
N = 4,726
Frequency
600.0
500.0
400.0
300.0
200.0
100.0
0.0
.2000
.4000
.6000
.8000
1.0000
1.2000
fm1cv131: Left arm common carotid intima-media thickness (mm): FOM1


Mean = .497109
Std. Dev. = .1176516
N = 4,779
Frequency
600.0
500.0
400.0
300.0
200.0
100.0
0.0
.0000
.2500
.5000
.7500
1.0000
1.2500
fm1cv140: Average Arterial distensibility (mm): FOM1


Mean = .556713
Std. Dev. = .0617567
N = 4,788
Frequency
500.0
400.0
300.0
200.0
100.0
0.0
.2000
.4000
.6000
.8000
1.0000
fm1cv141: Average common carotid intima-media thickness (mm): FOM1'

2.4.2 Blood pressure and pulse rate

Blood pressure and pulse readings were taken straight after cIMT and were measured using an Omron M6 upper arm BP/Pulse monitor.

fm1bp100 Consent for blood pressure: FOM1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4890	33.1	99.9	99.9
	2 No	3	.0	.1	100.0
	Total	4893	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	87	.6		
	Total	9892	66.9		
Total		14785	100.0		

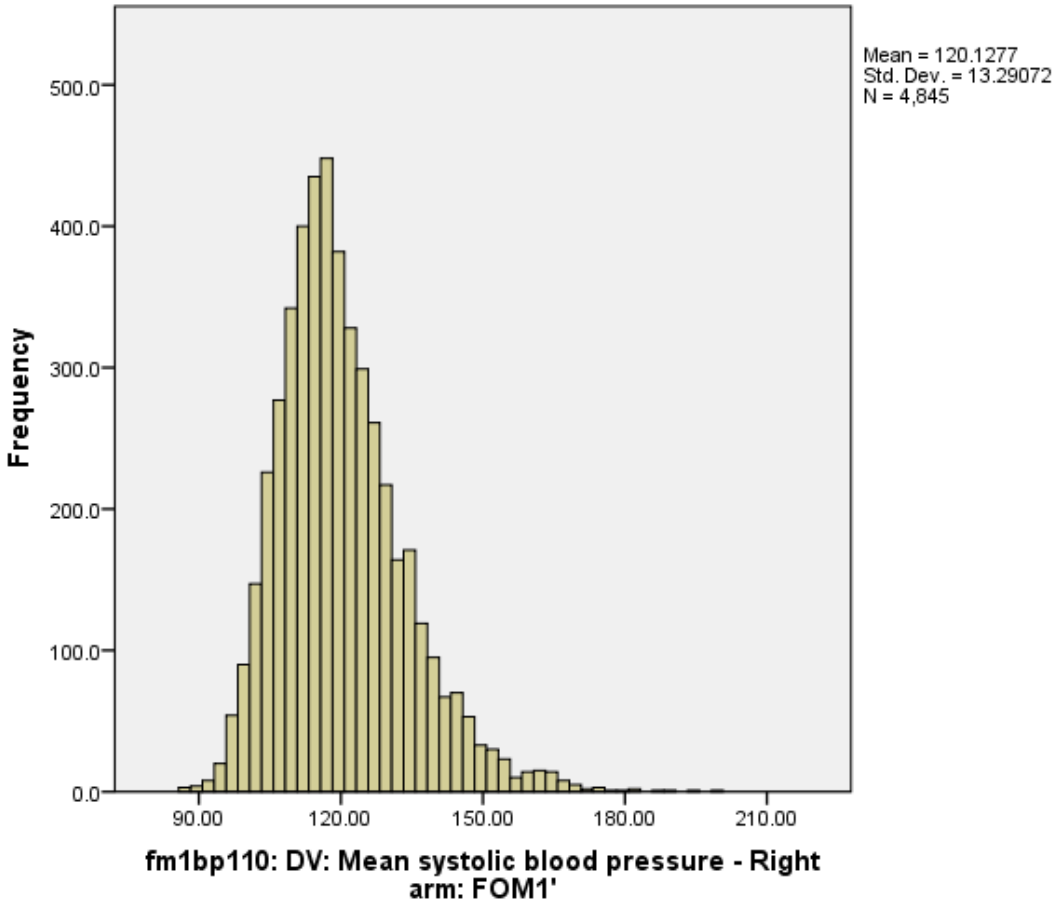
fm1bp101 Consent to be informed if BP high: FOM1

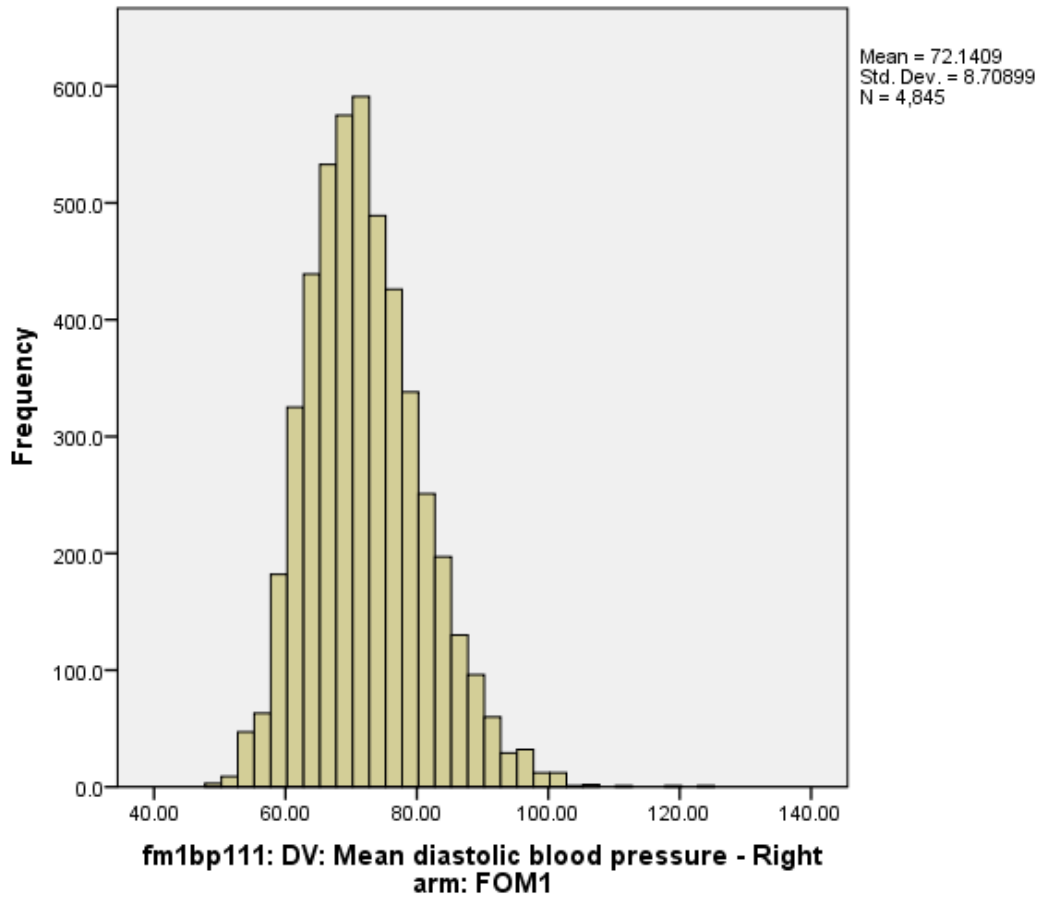
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4887	33.1	99.9	99.9
	2 No	7	.0	.1	100.0
	Total	4894	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	86	.6		
	Total	9891	66.9		
Total		14785	100.0		

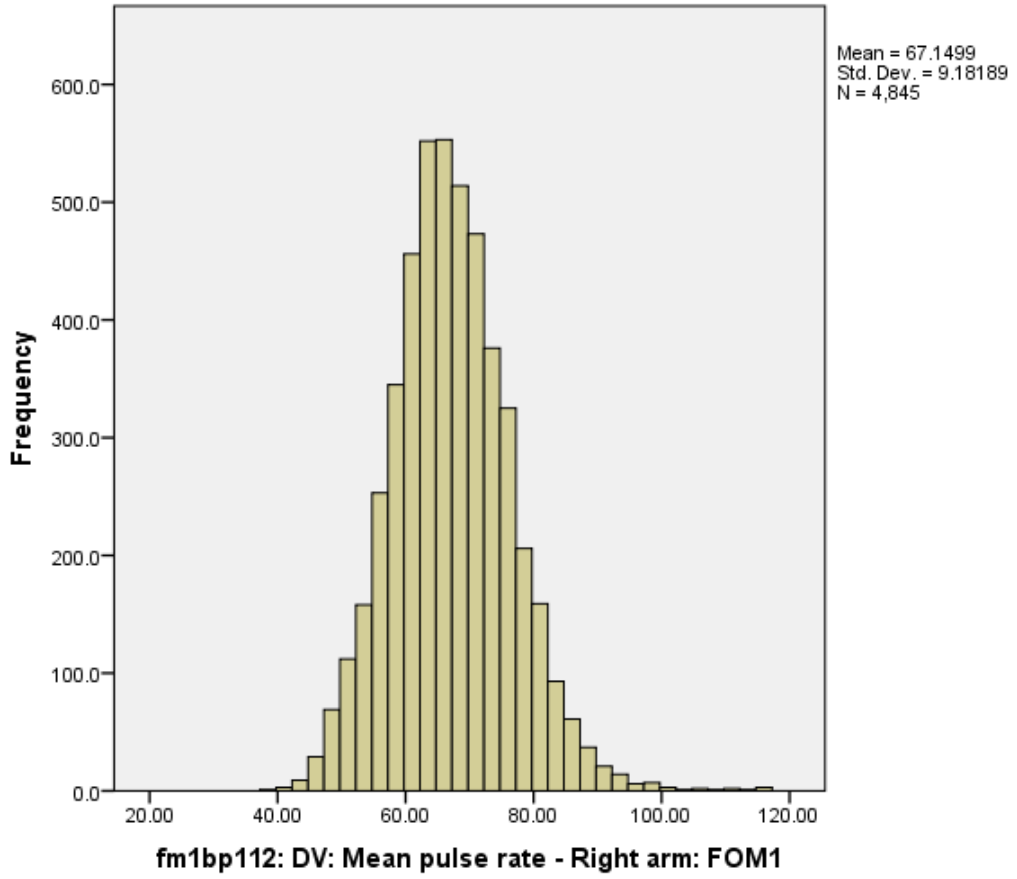
fm1bp105 Cuff size used for BP measure: FOM1

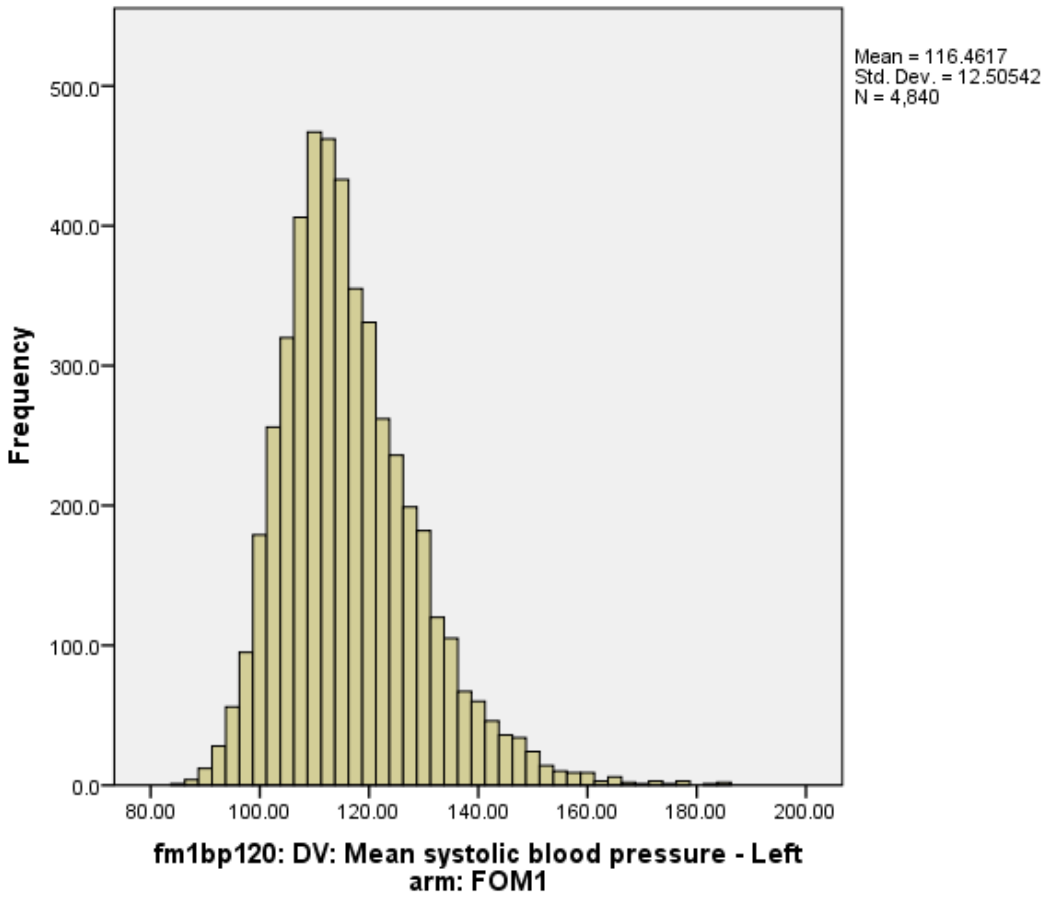
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Small -arm circ <22cm	21	.1	.4	.4
	2 Medium - arm circ 22-32cm	3985	27.0	81.4	81.9
	3 Large - arm circ >32cm	887	6.0	18.1	100.0
	Total	4893	33.1	100.0	
Missing	-11 Mother of trip/quad	1	.0		
	-10 Did not attend clinic	9804	66.3		
	-1 Missing	87	.6		
	Total	9892	66.9		
Total		14785	100.0		

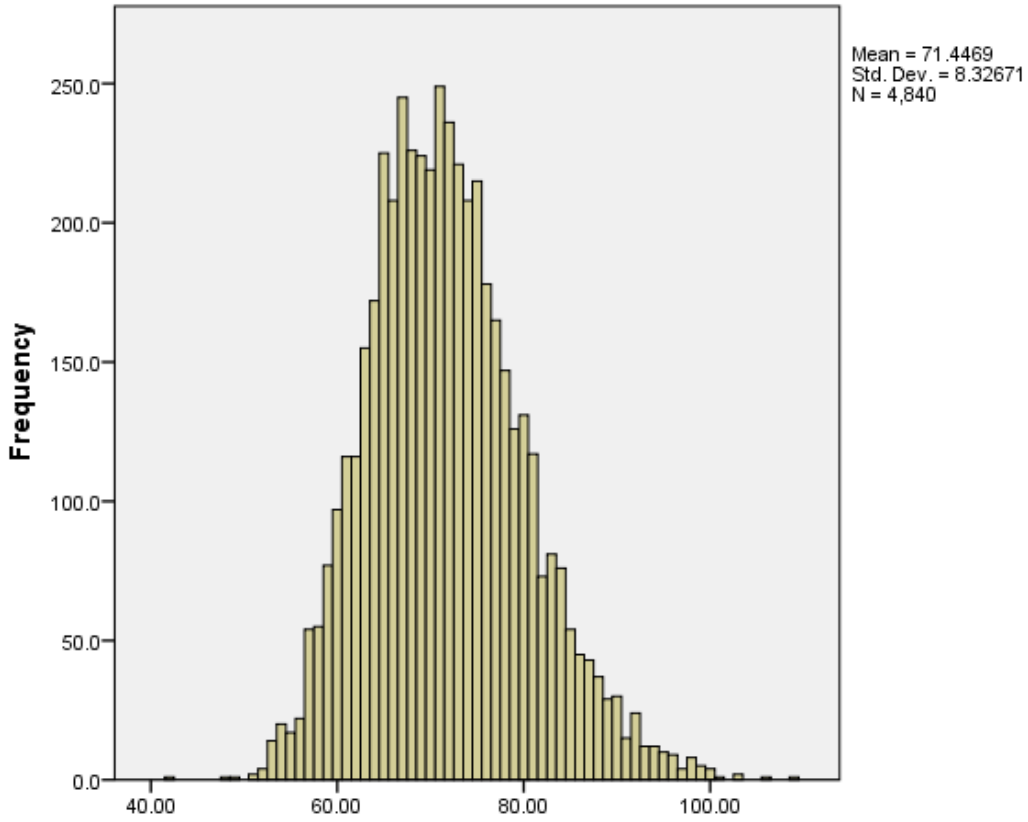
Two measures of blood pressure are available for each arm. We provide here the means of each of those [note the individual variables for the separate measure take the same variable name but have suffix –a or –b]


Mean = 120.1277
Std. Dev. = 13.29072
N = 4,845
Frequency
500.0
400.0
300.0
200.0
100.0
0.0
90.00
120.00
150.00
180.00
210.00
fm1bp110: DV: Mean systolic blood pressure - Right arm: FOM1'

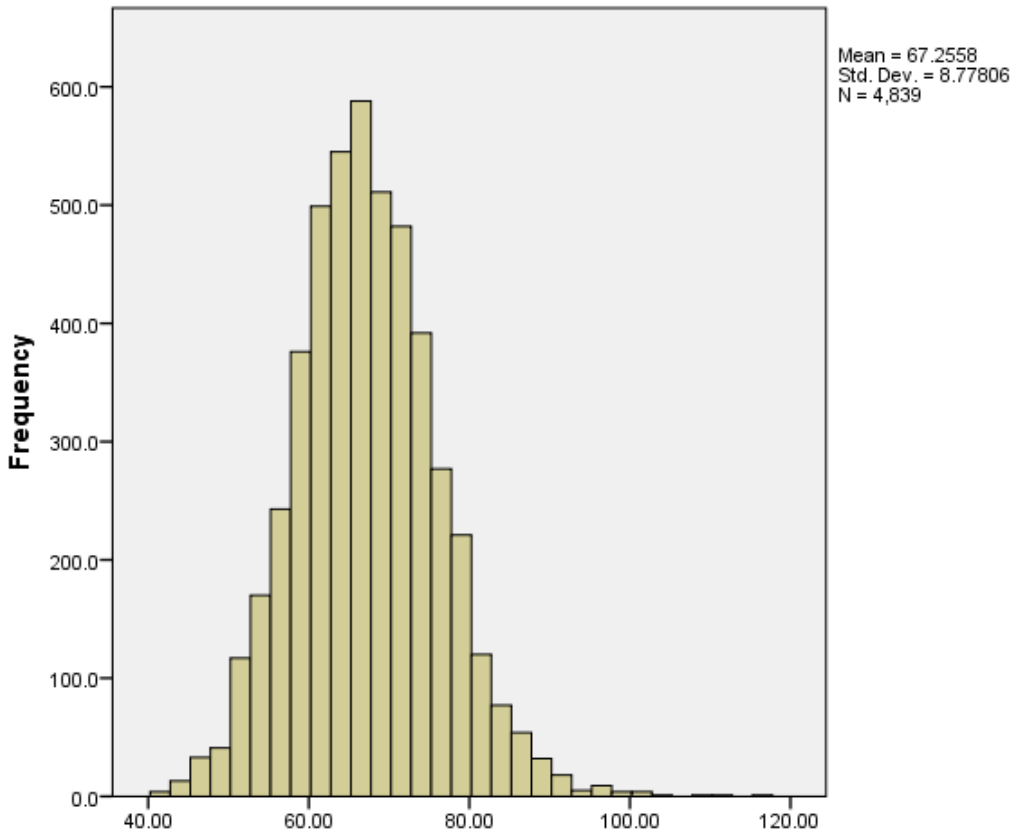

Mean = 72.1409
Std. Dev. = 8.70899
N = 4,845
Frequency
600.0
500.0
400.0
300.0
200.0
100.0
0.0
40.00
60.00
80.00
100.00
120.00
140.00
fm1bp111: DV: Mean diastolic blood pressure - Right arm: FOM1


Mean = 67.1499
Std. Dev. = 9.18189
N = 4,845
Frequency
600.0
500.0
400.0
300.0
200.0
100.0
0.0
20.00
40.00
60.00
80.00
100.00
120.00
fm1bp112: DV: Mean pulse rate - Right arm: FOM1


Mean = 116.4617
Std. Dev. = 12.50542
N = 4,840
Frequency
500.0
400.0
300.0
200.0
100.0
0.0
80.00
100.00
120.00
140.00
160.00
180.00
200.00
fm1bp120: DV: Mean systolic blood pressure - Left arm: FOM1

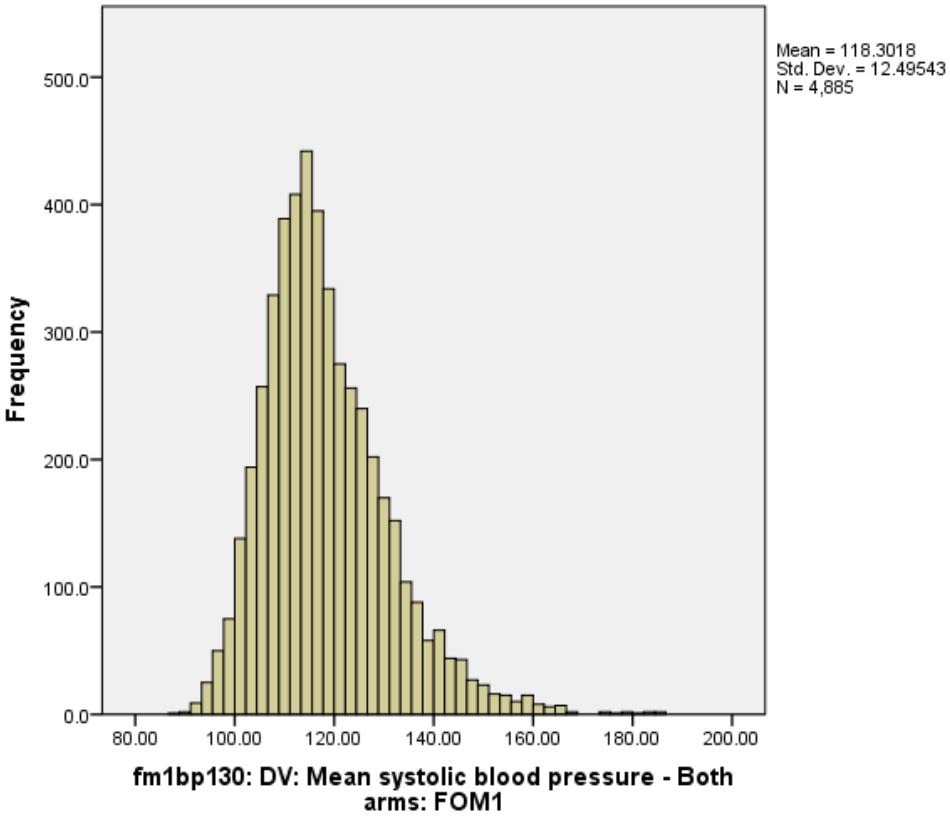


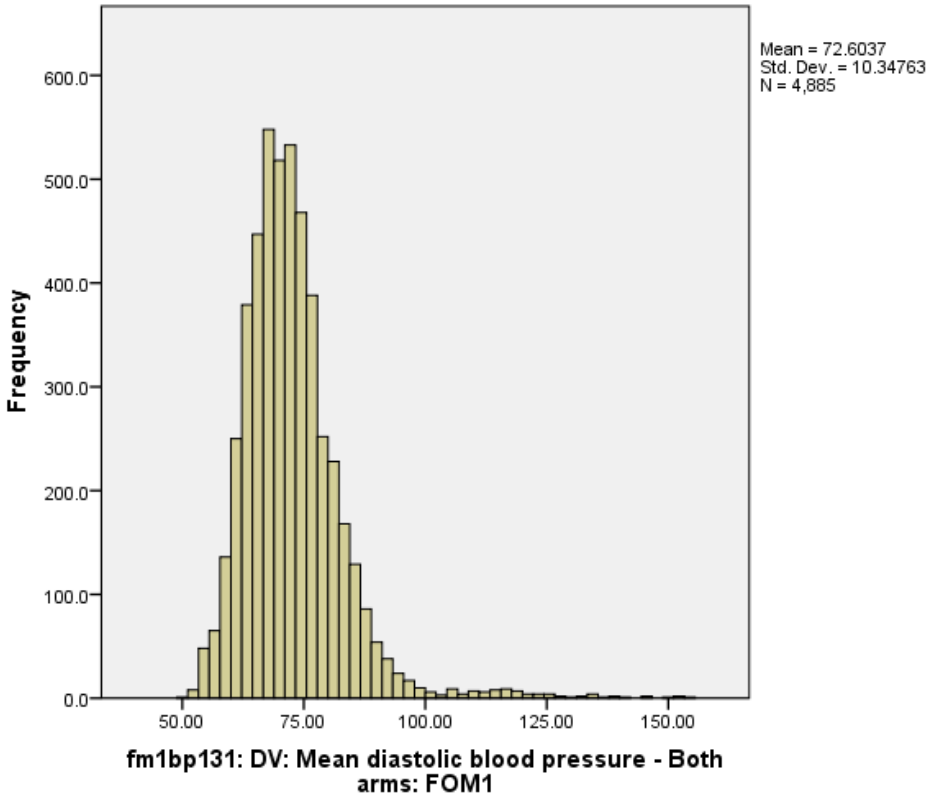
fm1bp121: DV: Mean diastolic blood pressure - Left arm: FOM1

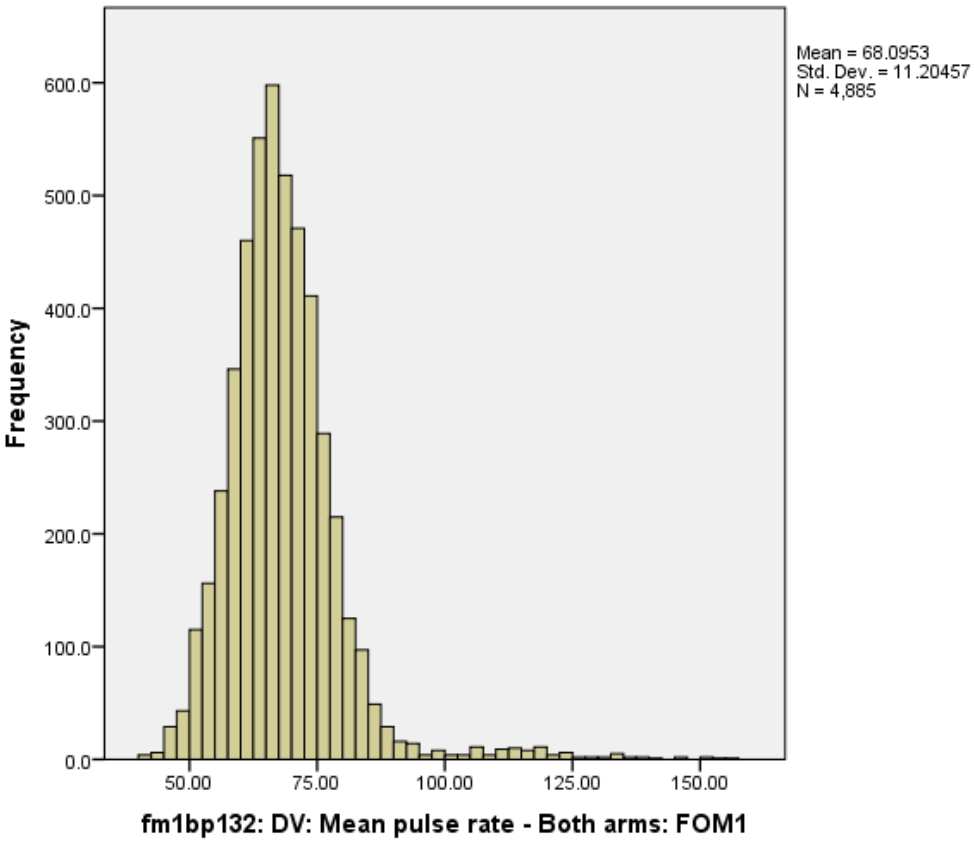


fm1bp122: DV: Mean pulse rate - Left arm: FOM1

Derived variables have been calculated taking the mean of the left and right arms for each BP measure and pulse rate [If only one measure was taken, that one was used].





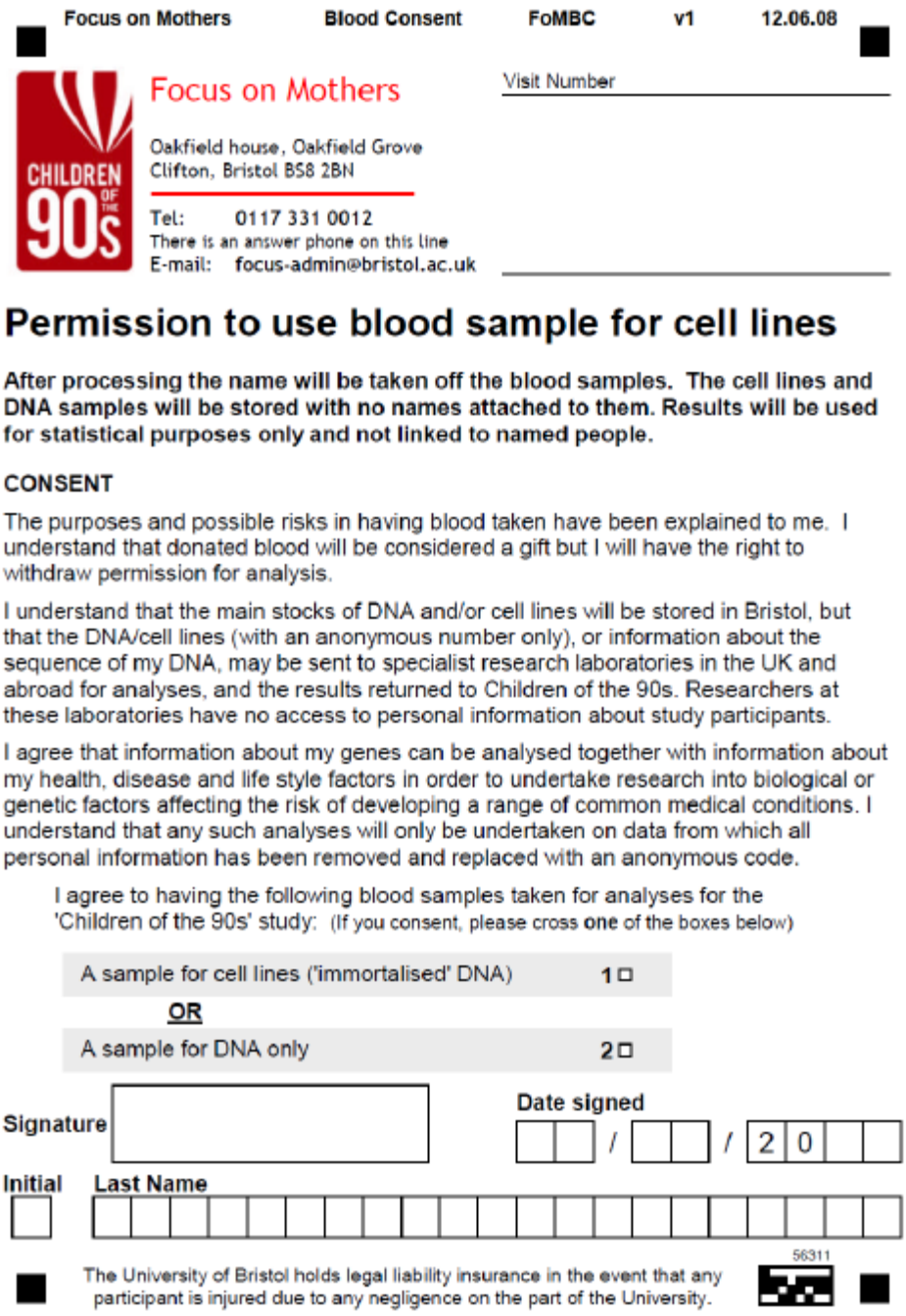

Mean = 68.0953
Std. Dev. = 11.20457
N = 4,885
Frequency
600.0
500.0
400.0
300.0
200.0
100.0
0.0
50.00
75.00
100.00
125.00
150.00
fm1bp132: DV: Mean pulse rate - Both arms: FOM1

3. References

Fraser A, Macdonald-Wallis C, Tilling K, Boyd A, Golding J, Davey Smith G, Henderson J, Macleod J, Molloy L, Ness A, Ring S, Nelson SM, Lawlor DA. Cohort profile: the Avon Longitudinal Study of parents and Children: ALSPAC mothers cohort. Int J Epidemiol. 2013; 42: 97-110.

4. Appendices

4.1 Consent forms



Focus on Mothers | Blood Consent | FoMBC | v1 | 12.06.08

Focus on Mothers

Visit Number

Oakfield house, Oakfield Grove
Clifton, Bristol BS8 2BN

Tel: 0117 331 0012
There is an answer phone on this line
E-mail: focus-admin@bristol.ac.uk

Permission to use blood sample for cell lines

After processing the name will be taken off the blood samples. The cell lines and DNA samples will be stored with no names attached to them. Results will be used for statistical purposes only and not linked to named people.

CONSENT

The purposes and possible risks in having blood taken have been explained to me. I understand that donated blood will be considered a gift but I will have the right to withdraw permission for analysis.

I understand that the main stocks of DNA and/or cell lines will be stored in Bristol, but that the DNA/cell lines (with an anonymous number only), or information about the sequence of my DNA, may be sent to specialist research laboratories in the UK and abroad for analyses, and the results returned to Children of the 90s. Researchers at these laboratories have no access to personal information about study participants.

I agree that information about my genes can be analysed together with information about my health, disease and life style factors in order to undertake research into biological or genetic factors affecting the risk of developing a range of common medical conditions. I understand that any such analyses will only be undertaken on data from which all personal information has been removed and replaced with an anonymous code.

I agree to having the following blood samples taken for analyses for the 'Children of the 90s' study: (If you consent, please cross **one** of the boxes below)

A sample for cell lines ('immortalised' DNA)	1 ☐
OR	
A sample for DNA only	2 ☐

Signature

Date signed / / 20

Initial Last Name

The University of Bristol holds legal liability insurance in the event that any participant is injured due to any negligence on the part of the University.

56311

Focus on Mothers

Oakfield house, Oakfield Grove
Clifton, Bristol BS8 2BN

Tel: 0117 331 0012
There is an answer phone on this line
E-mail: focus-admin@bristol.ac.uk

Visit Number

Permission to complete and use clinic data

We would like to ask you to undertake all of the following measurements/procedures:

Please cross the boxes and initial to indicate that you consent, or leave blank if you do not consent. Also cross and initial to indicate whether you would like us to inform you, and give you a letter to give to your GP, if the results of tests marked * give cause for concern.

		1. Consent to test		2. Consent to inform	
		Cross box	Initial	Cross box	Initial
(a)	DXA scan of bone density*, fat and muscle mass	☐		☐	
(b)	Weight, height, waist, hip and arm circumference	☐			
(c)	Blood pressure* and pulse pressure	☐		☐	
(d)	Ultrasound scan of arteries in your neck (Carotid artery intima media thickness)	☐			

I understand that donated blood will be considered a gift but I will have the right to withdraw permission for analysis.

Fasting blood sample for:

(e)	Haemoglobin (test for anaemia)*	☐		☐	
(f)	Glucose (sugar)*	☐		☐	
(g)	Lipids (forms of cholesterol)*	☐		☐	
(h)	Storage for future research	☐			

Signature

Date signed ☐☐ / ☐☐ / 20☐☐

Initial ☐ Last Name

PLEASE TURN OVER

37386

The University of Bristol holds legal liability insurance in the event that any participant is injured due to any negligence on the part of the University.

Focus on Mothers

Oakfield house, Oakfield Grove
Clifton, Bristol BS8 2BN

Tel: 0117 331 0012
There is an answer phone on this line
E-mail: focus-admin@bristol.ac.uk

Permission to obtain a copy of your first mammogram (breast scan)

If you are aged 48 years or older, we would like permission to take a copy of your first mammogram taken as part of the NHS breast screening programme. If you are older than 50 you may already have had a screening mammogram and we would use this permission to obtain a copy of your first mammogram now. If you are younger than 50 you will be invited for a mammogram in the future and we would like to obtain permission to obtain a copy of your first mammogram in the future.

We consider that this consent form will be valid for 2-3 years only (the invitation for your first mammogram will be sent within 12 months of your 50th birthday). Therefore if you are under 48 years of age we will not ask you to sign this consent form now, but may contact you some time in the future for this permission.

(i) Have you already had at least one mammogram? Yes ☐ No ☐

(j) If yes, what year was your first mammogram completed? ☐☐☐☐

(k) If no, have you received an invitation for your screening mammogram? Yes ☐ No ☐

(l) If you have received an invitation, could you tell us approximately when your appointment is? ☐☐ / ☐☐ / ☐☐☐☐

Please cross the box and initial to indicate that you consent, or leave blank if you do not consent.

		Consent to test	
		Cross box	Initial
(m)	**I give permission for ALSPAC researchers to obtain a copy of my first mammogram**	☐	☐

Signature ☐

Date signed ☐☐ / ☐☐ / 20☐☐

Initial ☐ **Last Name** ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

37386

The University of Bristol holds legal liability insurance in the event that any participant is injured due to any negligence on the part of the University.

4.2 Comparison of data collected over the four FoM clinics. Note that even though the same type of data may have been collected (e.g., anthropometry or hormone use), some methods of data collection differed between the clinics so occasional variables may not be consistent across the FoM clinics.

Data	FoM1	FoM2	FoM3	FoM4
Anthropometry	Yes	Yes	Yes	Yes
DXA scans (full-body and hip)	Yes	Yes	Yes	Yes
Blood samples [a]	Yes	Yes	Yes	Yes
Hormone use and menstruation	Yes	Yes	Yes	Yes
Blood pressure	Yes	Yes	Yes	Yes
pQCT scan [b]	No	Yes	Yes	Yes
Physical tests	No	Yes	Yes	Yes
Cognitive tests	No	Yes	Yes	Yes
Carotid intima-media thickness (cIMT) scan	Yes	No	No	Yes
Mammogram use	Yes	No	No	No
Assessment of physical activity (accelerometer)	No	No	Yes [c]	No
3D body scan	No	No	Yes [d]	No
BCG scar size	No	No	No	Yes

[a] Note that blood samples do not appear in this 'clinic' release file, but rather are in the 'sample' release file. All blood assay results will be available in the mother's sample release file as data becomes available.

[b] Note that pQCT data are currently not available for any of the FoM clinics (other than preliminary pQCT data in FoM2). Once they have been processed they will be made available for release.

[c] Note that the physical activity data for FoM3 has not been processed yet. Once this has been processed the data will be made available for release.

[d] Note that the 3D body scan data for FoM3 has not been processed yet. Once this has been processed the data will be made available for release.

4.3 Data Collection Forms

Station Variables

Clinic ID:

Date: ____/____/200__
Start Time: ___:___

Blood Sample Station

Are you taking any form of anti-coagulant?
(a couple of examples…)

1 - Yes
2 - No

Do you have any clotting/bleeding disorder or are anaemic?

1 - Yes
2 - No

Are you currently taking any medication?

1 - Yes
2 - No

Medication History Report
(please complete additional sheet)

-

Do you consent/able for bloods to be taken?

1 - Yes
2 - No

Do you consent to the creation of a cell-line for permanent storage of your DNA?

1 - Yes
2 - No

Do you consent to this blood being used for DNA only?

1 - Yes
2 - No

Consent for Haemoglobin given?
(test for anaemia)

1 - Yes
2 - No

Consent to inform for Haemoglobin given?

1 - Yes
2 - No

Consent for Glucose given?
(sugar)

1 - Yes
2 - No

Consent to inform for Glucose given?

1 - Yes
2 - No

Consent for Lipids given?
(forms of cholesterol)

1 - Yes
2 - No

Consent to inform for Lipids given?

1 - Yes
2 - No

Consent to store other tests relevant to health given?

1 - Yes
2 - No

Have you already had at least one mammogram?

1 - Yes
2 - No

What year was your FIRST mammogram completed?

-

Have you received an invitation for your screening mammogram?

1 - Yes
2 - No

If you have received an invitation, could you tell us approximately when your appointment is?

-

I give permission for ALSPAC researchers to obtain a copy of my first mammogram

1 - Yes
2 - No

Are you currently taking the oral contraceptive pill?

1 - Yes
2 - No

Are you currently using a contraceptive injection?
(such as Depo-Provera)

1 - Yes
2 - No

Are you currently taking hormone replacement therapy tablets?
(not patches or creams)

1 - Yes
2 - No

In the last 12 months have you had a period or menstrual bleeding?

1 - Yes
2 - No

Were your periods stopped by: -

1 - Hysterectomy
2 - Chemotherapy or radiation therapy
3 - Pregnancy or breastfeeding
4 - Menopause
5 - Other reason (please specify)

Please specify other reason

-

In what year was your last period?

-

In the last 3 months have you had a period or menstrual bleeding?

1 - Yes
2 - No

When was the first day of your last period?
(include current period if bleeding now)

-

Are your periods regular?

1 - Yes, occur every 28-30 days
2 - Yes, occur less than every 28 days
3 - Yes, occur more than every 30 days
4 - No

Time last ate/drank anything other than water

___:___

Was CPDA taken?
(cell-lines)

1 - Yes
2 - No

Any comments regarding CPDA:

-

Was Fluoride taken?
(glucose)

1 - Yes
2 - No

Any comments regarding Fluoride:

-

Was Heparin taken?

1 - Yes
2 - No

Any comments regarding Heparin:

-

Was EDTA taken?

1 - Yes
2 - No

Any comments regarding EDTA:

-

Time bloods were placed in ice

___:___

Were there any problems or difficulties?

1 - Yes
2 - No

Identify nature of problems/difficulties

1 - Faint
2 - Looks like will be marked bruising
3 - Took more than 2 attempts to obtain sample (please specify)
4 - Other (please specify)

Number of attempts

-

Specify other problem/difficulty

-

Would you like to add any comments?
(Fieldworker)

-

End Time: ___:___

Clinic ID:

Date: ____/____/200__
Start Time: ___:___

Measurement Station

DXA Consent Given

1 - Yes
2 - No

DXA Consent to Inform

1 - Yes
2 - No

Anthropometry Consent

1 - Yes
2 - No

Are you fitted with a Pacemaker (or similar device)?

1 - Yes
2 - No

Standing Height
mm
-

Seated Height
mm
-

Weight
Kg
-

Waist - first measurement
mm
-

Waist - second measurement
mm
-

Hip - first measurement
mm
-

Hip - second measurement
mm
-

Arm circumference
mm
-

Head circumference
mm
-

Are you or do you think you might be pregnant?

1 - Yes
2 - No

DXA Measurement taken

1 - Yes
2 - No

Would you like to add any comments?
(fieldworker)

End Time: ___:___

Clinic ID:

Date: ____/____/200__
Start Time: ___:___

Vascular Station

Consent to take Blood Pressure and Pulse Rate Measures?

1 - Yes
2 - No

Consent to inform regarding Blood Pressure?

1 - Yes
2 - No

Consent to take ultrasound scan of arteries in your neck

1 - Yes
2 - No

Cuff size

1 - Arm circum < 22 cm - small
2 - Arm circum 22 - 32 cm - medium
3 - Arm circum > 32 - large

Scanner used

1 - Scanner 1
2 - Scanner 2

Right side common carotid film successfully saved?

1 - Yes
2 - No

Comments for Right Side Common Carotid film

-

Okay to do Right BP1 measure?

1 - Yes
2 - No

Right Arm BP 1

_____/_____

Okay to do Right BP2 measure?

1 - Yes
2 - No

Right Arm BP 2

_____/_____

Left side common carotid film successfully saved?

1 - Yes
2 - No

Comments for Left Side Common Carotid film

-

Okay to do Left BP1 measure?

1 - Yes
2 - No

Left Arm BP 1

____/____

Okay to do Left BP2 measure?

1 - Yes
2 - No

Left Arm BP 2

____/____

Would you like to add any comments? (fieldworker)

-

End Time: ___:___

4.4 Medication and Allergy Forms

University of BRISTOL

Focus on Mothers Medications Form v2

Focus on Mothers

Oakfield House, Oakfield Grove
Clifton, Bristol BS8 2BN

Tel: 0117 331 0012
There is an answer phone on this line
Email: focus-admin@bristol.ac.uk

CHILDREN OF THE 90s

Medications and Treatments Information

Are you currently taking any regular medication? Yes ☐ No ☐

If yes, which medication are you taking?
N.B. Please include prescribed tablets, painkillers, medicines, inhalers, sprays, injections AND medications, vitamins and minerals that you buy yourself.

	Name of Medication (Please copy name in full from container)	Amount, and how often (please copy from container)	Reason for taking
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

If you are unsure of the name or amount of any of your medications please bring the container / package to the clinic with you.

21934

If you need more space, please continue on the back page of this page