

**NATIONAL FAMILY HEALTH SURVEY (NFHS)-4
INDIA**

**REPORT OF PRETEST
Conducted during December 2013**

February 2014



**(स्थापना / Established in 1956)
बेहतर भविष्य के लिए क्षमता निर्माण
Capacity Building for a Better Future**

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1.0 Background of NFHS

The National Family Health Survey (NFHS) was initiated in India in the early 1990s with the first NFHS conducted in 1992-93. Since then, India has successfully completed NFHS-2 in 1998-99 and NFHS-3 in 2005-06. All the three surveys were conducted under the stewardship of the Ministry of Health and Family Welfare (MoHFW), Government of India, with the International Institute for Population Sciences (IIPS) as the nodal agency, and technical assistance provided by United States Agency for International Development (USAID) through ICF Macro (presently known as ICF International). USAID has been the primary funder of the NFHS surveys, but for the most recent survey (NFHS-3) DFID, the Bill and Melinda Gates Foundation, UNICEF, UNFPA and the Government of India have also provided funds. NACO and the National AIDS Research Institute (NARI) provided technical assistance for the HIV component of NFHS-3. The major objective of the NFHS has been to strengthen India's demographic and health database by providing information that is both reliable and relied upon, to strengthen the survey research capabilities of Indian institutions to provide, analyse, and disseminate high quality data, and to anticipate and meet the country's needs for data on emerging health and family welfare issues.

In 2014-2015, India will implement the fourth round of National Family Health Survey (NFHS)-4. Like its predecessors, NFHS-4 will be conducted under the stewardship of the Ministry of Health and Family Welfare (MoHFW), Government of India coordinated by the International Institute for Population Sciences (IIPS), Mumbai, and implemented by a group of Field Agencies and Population Research Centres (PRCs). These Field Agencies will be selected by following a rigorous selection procedure. Technical assistance for NFHS-4 will be provided by ICF International, USA. NFHS-4 will be funded by the United States Agency for International Development (USAID), DFID, the Bill and Melinda Gates Foundation (BMGF), UNICEF, UNFPA, the MacArthur Foundation and the Ministry of Health and Family Welfare (MoHFW), Government of India.

2.0 Specific Objectives and Scope

NFHS-4 has two specific objectives: a) to provide essential data on health and family welfare needed by the Ministry of Health and Family Welfare and other agencies for policy and programme purposes, and b) to provide information on important emerging health and family welfare issues. Therefore, NFHS-4, will:

- Provide estimates of the levels of fertility, infant and child mortality, and other family welfare and health indicators by background characteristics at the national and state levels; and
- Measure trends in family welfare and health indicators over time at the national and state levels.
- Provide information on several other emerging issues including:
 - Perinatal mortality, adolescent reproductive health, high-risk sexual behaviour, safe injections, tuberculosis, and malaria;

- Family welfare and health conditions among slum dwellers;
- Non-communicable diseases;
- Use of emergency contraception; and
- HIV prevalence for adult women and men at the national level and for 11 State/groups of States/UTs including high HIV prevalence states. The HIV prevalence estimates from the survey will be used to calibrate the HIV estimates that are based on surveillance data.

The scope of NFHS-4 has also greatly expanded over NFHS-3:

- In addition to the 29 states, NFHS-4 will cover all six union territories for the first time. For the first time, NFHS-4 will provide estimates of most indicators at the district level for all 640 districts in the country as per the 2011 Census. Final decisions on indicators to be estimated at the state level will be taken at latter stage. The sample has been designed to provide information on sexual behaviour, husband's background and woman's work, HIV/AIDS knowledge, attitudes and behaviour and domestic violence at the state and national levels, while most other indicators will also be provided at the district level. Indicators will also be provided separately for slum and non-slum areas in the same eight cities as done in NFHS-3.
- NFHS-4 will provide information on HIV prevalence for women age 15-49 and men age 15-54 at the national level and for 11 group of States/UTs. The exact grouping of states for HIV prevalence estimates has been finalized in consultation with the National AIDS Control Organisation (NACO). As was done in NFHS-3, blood samples will be collected from women and men in the form of dried blood spots (DBS) on filter paper cards and sent for HIV testing to the designated laboratories.
- Given the need to report most demographic and health indicators at the district level, the NFHS-4 sample size is expected to be approximately 571,660 households, up from about 109,041 households in NFHS-3.
- The survey will use three Schedules (Household, Woman and Man), and information will be collected from all women age 15-49 and, in a subsample of households, men age 15-54. This is expected to yield a total sample of 628,826 women and 94,324 men eligible for interview. In these households information on 267,272 children below age 5 will also be collected.
- For the first time, data will be collected using Computer Assisted Personal Interviewing (CAPI) on mini-notebook computers. CAPI will eliminate the need for a separate data entry operation and for data editing in the field. With essential data consistency checks built into the programming, data are also expected to be of better quality. Additionally, data will be sent back to the central office more frequently, enabling fast in feedback to teams on quality or other concerns, as needed. It is expected that about 12-15 field agencies will be selected to carryout data collection across the country.
- Anaemia testing and height and weight measurements for women (age 15-49), men (age 15-54) and children under age 5 will also be included in NFHS-4. All related estimates will be provided at the district level.
- The domain of clinical, anthropometric and biochemical testing (CAB) has also been further expanded in NFHS-4 to include blood glucose and hypertension measurements and estimates to be provided at the district level.

- As with anaemia, testing of these new CAB components in the field will be conducted using portable equipments. A recently developed, improved model of the HemoCue instrument will be used for anaemia testing and the same type of battery-operated portable Glucometers that are currently used in the DLHS-4 will be used for blood glucose testing. Lancets and all blood-contaminated materials will be disposed off in a biohazard bag according to an established protocol. Only medical or other personnel with specific training on the procedures and universal precautions regarding blood-borne pathogens will be employed for conducting anaemia and blood glucose testing's and collection of blood samples for HIV testing.

3.0 Pretest

3.1 Purpose of Pretest

Data collection in all the previous rounds of NFHS surveys has been a huge challenge and NFHS-4 is no exception. Since NFHS-4 will be providing indicators at the district level the sample size will be much bigger making it a mammoth task. In each selected household, three different types of schedules (household, woman and man) will be canvassed based on predefined eligibility criteria for the woman's and man's interviews. In addition, the clinical, anthropometric and biochemical testing (CAB) will be done for individuals in these households again based on some predefined eligibility criteria. Hence, a lot of planning and preparation is required in advance to ensure that in every selected household the whole process of multiple interviews and CAB testing's by various investigators is well coordinated and completed in the minimum time. As CAB component involves collection of blood samples and data on biomarkers, it is important to understand the reactions of respondents to the range of tests to be conducted including HIV testing. It was also decided to examine their responses on getting a signed consent for CAB testing.

Besides, a new feature introduced in NFHS-4 survey is that all data will be collected using Computer Assisted Personal Interviewing (CAPI) on mini notebook computers. Data collection in CAPI will ensure better quality with fewer inconsistencies and missing cases, save data entry time, and reduce the scope of field editing.

Hence, to ensure high data quality through use of the CAPI and other related field procedures are carried out smoothly, the need for thorough testing prior to the actual survey areas. Pretesting will also ensure that the main survey is carried out with minimum disruptions and within the estimated time frame. For this reason, it was decided to conduct a pretest to test all the instruments tools and protocols of each component of the survey on a smaller scale.

3.2 Objectives of Pretest

Some of the important objectives of the pretest were –

- 1. Team composition and workload per team:** To assess the workload in a PSU of 25-30 households in terms of number of household members, number of eligible women and men for individual interviews, and number of children, women and men eligible for the CAB component.
- 2. Questions in Schedules:** To capture any clause or errors related to sequencing of questions, coding categories, wording of questions (English and Hindi), etc.

- 3.CAPI:** To test CAPI based schedules in terms of (a) household allocation from supervisor's computer to individual interviewer and vice versa, assigning eligible individual interviews from one interviewer to another, etc, using Bluetooth technology, (b) inbuilt skips, instructions for interviewers, response category ranges, etc, (c) synchronizing completed schedules interviewer to supervisor, supervisor to main office, etc and (d) coordination between health investigators and interviewers/supervisor for recording observations in CAPI.
- 4.Interview time:** To estimate the time required to complete interviews of the different eligible respondents like eligible woman - unmarried, married with and without children born after January 2008, eligible man – unmarried and married, and time taken for CAB component for each eligible adult respondent and child.
- 5.Non-response:** To assess the level of non-response of individual interviews and CAB components and reasons of non-responses.
- 6.Reactions on instruments:** To assess eligible respondent's and community's reaction towards questions on sensitive topics like sexual behaviour, domestic violence and contraceptive use and also assess their participation in the CAB component.
- 7.Training procedures and team coordination:** To improvise on the training procedures (schedules, presentations, manuals, household assignment sheets, etc.) and receive crucial feedbacks from the interviewers after training and field experiences. If necessary, amend the protocols based on the field experience of team members.

3.3 Recruitment of Field Staff, Training and Procedures Adopted for Pretesting

The planning and preparation for pretest started well in advance. First, the English versions of the NFHS-4 Schedules (Household, Woman, Man and Biomarker) were finalized and were subsequently translated into Hindi for the pretest. Approvals from the technical committee and ethical review boards were taken appropriately before the start of the pretest. As per the recommendations of the IRB, IIPS, the consent forms (English and Hindi) were modified and also translated into Marathi.

The pretest was conducted in the Hindi speaking areas of Navi Mumbai, Maharashtra. Five areas (3 rural, 1 urban and 1 urban-slum) in Panvel Taluka, Raigad district were identified for the pretest fieldwork.

The pretest training was held at YUVA Centre at Kharghar, Navi Mumbai. The training centre has good infrastructure facilities in terms of well equipped training rooms (separate for CAPI and CAB), affordable accommodation for field teams and in-house catering facility that could provide breakfast, tea and lunch. Another advantage of the venue for training was its proximity to the 5 areas selected for pretest fieldwork.

As for the first time NFHS is to be conducted in CAPI instead of the standard paper-pen schedules, it was necessary to ensure that at every stage of implementation the CAPI procedures were thoroughly tested during the pretest.

For the pretest about 40 field investigators who had prior experience in large scale surveys were called for interview on 24 November, 2013. Most of them had worked in DLHS-4 survey which is a CAPI based large scale survey. Their prior experience was a huge advantage and almost all the candidates who appeared for the interview were found suitable and recruited. All the investigators were graduate and had prior experience in large scale survey using CAPI. Besides, due care was taken for the selection of health investigators, especially in terms of their

background and prior experience of working as health investigators. Out of the 40 candidates, 38 candidates (20 males and 17 females) were selected for the pretest training, including 11 candidates (10 males and 1 female) who satisfied the eligibility criteria for CAB component and were retained as health investigators. Annexure of this report gives the details of the fieldwork teams.

3.4 Training of Investigators

Training of investigators was held during 25 November-7 December, 2013 at the YUVA Centre, Kharghar followed by 5 days of fieldwork. Training of investigators is a crucial component in order to ensure high quality data and during the training it is not only imperative to ensure that the participants get a good understanding of all the field tools and procedures but they are also convinced about the importance of the survey and adhering to all the protocols laid down for conducting the survey.

NFHS-4 coordinators from IIPS and the ICF team conducted the training. The training began on 25 November 2013 with a brief inauguration session, followed by overview of the NFHS-4 project, its objectives and the purpose of having a pretest. The participants were later introduced to a session on interviewing techniques and rapport building.

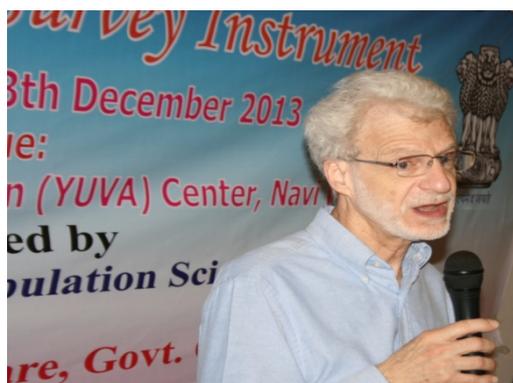


Director & Sr. Prof. F.Ram (IIPS) addressing the inaugural Session



Prof. T.K.Roy giving lecture on Contraception and Calendar method

During training, the participants were first introduced to the paper-pen schedules of all the three schedules (Household, Woman and Man). Each question in all the different sections of the three main schedules were discussed in detail.



Dr. Fred Arnold giving lecture on Child Immunizations and Health



Prof. B. Paswan giving lecture on Identification Details, Consent and Roster

Mock interviews were organized to demonstrate certain interviewing techniques and recording of responses. After a couple of sections were covered, practice sessions also were simultaneously conducted to make the participants more familiar with the schedule and

interviewing techniques. The participants were also asked to practice interviews amongst themselves by filling in the responses in the paper-pen version of the schedules.



Prof. S.K.Singh allocation on rapport building and interviewing techniques



Prof. Chander Shekher giving lecture on Reproduction and Fertility preferences

The filled-in schedules were checked and necessary feedbacks provided. After 4 days of joint classroom training of schedules, the health investigators started the CAB training separately from day five onwards. The schedule training continued for the field interviewers till 7th day.



Prof. H. Lhungd̄m discussed on HH Assets and Amenities



Dr. Manoj Alagrajan and Blake clarifying doubts during Practice

After 7 days of classroom training with paper-pen schedules, on the 8th day the interviewers were introduced to CAPI and hands on training was provided. For the next 6 days the interviewers were trained on CAPI with several practice rounds. During the training period, some inconsistencies with regard to wording or translation of questions and other CAPI related issues that came up were discussed and necessary changes made in the software. The prior experience of the investigators with CAPI and also several rounds of practice made them very familiar and thorough with the schedule flow. At the end of the training, on day 13, all of them were confident in not only conducting the interviews in CAPI but also in handling CAPI and understanding all the procedures.



Dr. Abhishek Singh lecture on Pregnancy and Delivery



Dr. Dhanajay W. Bansod discussed on Reproduction, Marriage and Cohabitation



Dr. Sharang P. Pedgaonkar and Dr. Manas R. Pradhan during Mock Interview

Another feature of the pretest training was the joint training of field investigators and health investigators to ensure homogeneity in their understanding of the survey protocols and simultaneous implementation of the two components. In spite of joint training of health investigators along with the field investigators, there were specific training for health investigators, especially on the process of pricking and blood collection. Even demonstration of CAB components was also done in the presence of all field investigators so that they also have some basic understanding of CAB component and provide quality assistance to the health investigators. The detailed time schedule of training of the pretest is given in Annexure II.

3.5 CAB Training

One of the main objectives of the pretest was to assess the problems encountered while administering the bio-marker in the field. All the health investigators were given rigorous training on all aspects of survey tools and protocols, including CAB component.

A batch of 11 (10 males and 1 female) health investigators was given separate training from 29th November onwards, which consisted of class room and practical training on Clinical, Anthropometric, Biochemical (CAB) measurements and test to be conducted under NFHS-4. The training was facilitated by 1 Biomarker specialist from ICF International, 2 ICF consultants, 1 IIPS Faculty member and one Project Officer of IIPS. A review of the field problems was done on the last day of the training, i.e. December 13, 2013. In order to enhance the effectiveness of interaction with respondents and to minimize the problems arising from inadequate understanding of Biomarker testing all the team members were thoroughly trained. Special sessions included objectives, contents and coverage of NFHS-4, rapport building with community members, head of the household and respondents of household and integration of CAB component with the household survey. In the classroom sessions, each and every test to be carried out was discussed in detail.



HI's Training conducted by Ms. Mercy

The resource persons explained the purpose of each test, their expected responses, possible problems that may be encountered while testing and the ways to overcome the problems. It is worth mentioning here that the nine days of classroom sessions were full of participatory practice sessions including demonstration and practices in groups with active involvement of all the trainers and resource persons. Thus during CAB training, classroom and practice sessions were given equal emphasis.

In the NFHS-4 pretest, the following CAB measurements and tests were conducted on eligible respondents in the selected households once the individual interviews were completed:

- Weight and length measurement of children under six months of age
- Weight and height/length measurement of children 6-71 months, women 15-49 years and men 15-54 years
- Anaemia testing of children 6-71 months women 15-49 years and men 15-54 years
- Blood Pressure measurement for women 15-49 years and men 15-54 years
- Random Blood Sugar Test for women 15-49 years and men 15-54 years

- Dried Blood Spots (DBS) preparation for women 15-49 years and men 15-54 years (households with man's interview)

The CAB component training focused on the following areas:

- Thorough understanding of the linkages with household, woman's, man's and biomarker schedules
- Understanding of the eligibility criteria for different CAB measurements and tests
- Eliciting consent for different CAB measurements and tests
- Methods, equipments and protocols for carrying out CAB measurements and tests

Universal blood collection protocols were followed and following supplies were used for blood collection:

- Latex gloves
- Alcohol preps (pack of 2 pieces of swabs soaked in 70% isopropyl alcohol for each respondent) for cleansing of the site for skin puncture
- Single use automated- self retracting lancets (UNISTIK 3 normal) with penetration depth of 1.8 mm and 23 gauge needle
- Sterile gauze pieces for wiping blood drops from puncture site
- Adhesive plaster strips for covering the skin puncture site

Benefit to the respondents

- Informed each individual respondent about her/his Height, Weight, Haemoglobin level, Blood Pressure, Random Blood Sugar status
- Provided information brochure on anaemia, which contains basic information on causes, symptoms and prevention of anaemia including pictorial dietary guidance.
- Information brochure on causes and preventing high blood pressure, diabetes, with steps to be taken for different levels of high blood pressure and abnormal Random Blood Sugar
- Referral form for respondents who have severe anaemia, abnormally high Blood Pressure and Random Blood sugar levels
- ICTC referral to all respondents who are willing to undergo HIV test at the designated ICTC centre
- Information on salt Iodization status

4.0 Major issues and observations on CAB component

- All the health investigators could acquire the expected levels of skills in drawing blood drops, which is critical for successful implementation of the CAB component. Nearly 245 DBS samples were collected out of which in 215 DBS samples the health investigators were able to fill all five circles on the filter paper cards. Minimum 3 completely filled circles are necessary for completion of the test algorithm and internal and external quality control test.
- Getting signature on the consent form has resulted in refusal for CAB tests about 20 percent. Some of the repetitive parts (sentences about survey information) could be removed from the consent statement. It will also ensure better flow and ease in administration.
- The set of anthropometry equipments weigh around 6 Kgs. The health investigators will require a separate backpack customized for these equipments. The other supplies and equipments can be carried in an additional bag.

- There is a play (sidewise movement) possible in the foot piece of the infantometer (SECA 417). This play is less than 7 mm.
- Many alcohol preps used during pretest were packed without alcohol.
- Paper packaging of gauze pieces makes the tearing of pack easy in comparison to polyethylene packaging.
- Some of the gloves were getting torn while attempting to wear them. Better quality of gloves would be needed for the main survey.
- The delivery of additional 3 anthropometric equipment sets was delayed by the vendor as a result the field work had to be carried out with two sets.
- The Glucometer used goes into hibernation mode after 90 seconds of in activity. So blood sample has to be taken within that period. However, the process of reactivation is easy and involves the step of withdrawing the blood glucose strip once and reinserting it. This issue can be solved by replacing the device (without compromising on the quality standards and technical specifications of the device) or through appropriate measures during training and practice sessions.
- The health investigators acquired the necessary skills of recording Blood Pressure properly during training and practice sessions and all the devices used worked well. However, to ensure there will no issue with the placement and positioning of the inflatable arm cuff while recording Blood Pressure, it has been suggested to procure a device, which has technological provision to indicate proper placement of the arm cuff (all other technical specifications and methodology of use remaining the same as in the device pre-tested).

Note: Due to this, it is important to introduce a clause on timeline of delivery, Quality for all the supplies for the main survey work.

Number of Samples covered during the Pretest for Biomarker components	
Total Households Covered	149
Height and weight (Children below 6 yrs)	15
Height and weight (Women 15 - 49 yrs)	80
Height and weight (Men 15 - 54 yrs)	47
Anaemia (Children 6 - 71 months)	31
Anaemia (Women 15 - 49 yrs)	146
Anaemia (Men 15 - 54 yrs)	92
Blood Glucose (Women 15 - 49 yrs)	146
Blood Glucose (Men 15 - 54 yrs)	92
Blood Pressure (Women 15 - 49 yrs)	139
Blood Pressure (Men 15 - 49 yrs)	90
HIV (Total number of DBS samples)	245

4.1 Field Practice Preparation

Throughout the training period it was ensured that all the interviewers and health investigators have a thorough and extensive practice of the respective modules. The interviewers were trained for both paper- pen and CAPI based schedules. The trainees who showed better understanding of the schedules and demonstrated good leadership qualities were selected as team supervisors.

Each field team comprised of 7 members - one supervisor, 3 female interviewers, 1 male interviewer and 2 health investigators. Personnel from IIPS and ICF were also allocated to each team to coordinate the various field activities and resolve any CAPI/CAB related issues and to

ensure that fieldwork is conducted smoothly. The PSUs selected for pretest were visited by the field coordinators and supervisors days before the actual pretest fieldwork was to commence. The local community leaders were contacted and briefed about the NFHS-4 pretest and their cooperation and participation was requested, especially those from the sampled households. It is worth mentioning that supervisors of the five teams were given a letter of introduction and they informed the headman (Pradhan/Sarpanch) of the village about the visit to their village/area and the nature of the work (survey in 25 households including interviewing men and women and also collecting blood samples).

All the supplies required for the CAPI and CAB components and logistical support required for conducting the fieldwork were arranged in a timely manner.

As this was the first time NFHS survey was being conducted in CAPI, all possible preparations were made to have a complete testing of the CAPI related procedures. The CAPI software was loaded into the Lenovo notebook computers (Mini-Laptops) and each team member other than the health investigators were provided with one such CAPI machine. In order to have a thorough testing of the CAPI software and also to gauge the response to the sensitive sections of the schedule in the pretest, all eligible men from the sampled households were interviewed. Also, for all the eligible women in the sampled households the entire schedule (excepting domestic violence which was restricted to one eligible woman per household) was administered. All adults who completed their individual interview and eligible children were tested for the CAB component.

5.0 Fieldwork and Implementation of Survey Protocols

In order to gain experience and to have better insights into the implementation of survey protocols across different types of localities/areas, three different types of PSUs were chosen for field practice-3 rural PSUs, 1 urban (slum) PSU and 1 urban (non-slum). All the five PSUs were in and around Panvel Taluka where necessary permissions were obtained from the concerned officials and community leaders. The 5 PSUs were chosen ensuring that there was a substantial proportion of Hindi speaking households in each locality.

All the five selected places/locations were in Raigad district. Two of these locations were within the city and three locations were villages located approximately within 8 km from Panvel Station. After the classroom training and practice sessions, all the participants were grouped into five teams to initiate the pretest in selected areas. A brief description of different PSUs/locations visited by teams is presented in the Table 1.

Table1. Description of selected PSUs for Pretest (MH- Maharashtra)

State	District	Taluka	PSU	Type	Location
MH	Raigarh	Panvel	Shivajinagar	Urban (Slum)	Panvel Station Road, Panvel
MH	Raigarh	Panvel	Takka	Urban (Non-slum)	Takka village, Panvel
MH	Raigarh	Panvel	Palaspe	Rural	A village 2 km from Panvel
MH	Raigarh	Panvel	Girawle	Rural	A village 4 km from Panvel
MH	Raigarh	Panvel	Shirdone	Rural	A village 6 km from Panvel

It was decided to cover about 22-35 households (Hindi speaking) in each of the 5 PSUs selected for the pretest. No house listing was done in the 5 PSUs and the households were selected randomly by the Supervisors, keeping in mind Hindi speaking households from all the parts of the PSU. In each PSU about 30-35 households were selected.

Our fieldwork started on 8th December and completed on 12th December. On an average each team complete 27-28 Households in their respective PSU. On an average 35 Woman interviews were completed by each team and 30 women interviews completed along with CAB components. The other details are given in Table 2 and Table 3.

	Male	Female	Total
Household Population	372	340	712
Number of household			149

	Team 1	Team 2	Team 3	Team 4	Team 5
Household	31	32	31	29	26
Eligible Women	33	41	59	48	40
Eligible Women Interview Completed	32	32	39	41	34
Eligible Women Int. + CAB Completed	30	21	29	40	30
Eligible Men	48	37	57	44	39
Eligible Men Interview Completed	25	15	28	24	22
Eligible Men Interview Completed + CAB	24	11	18	14	14
Eligible Children for CAB	14	18	07	13	08
Eligible Children CAB completed	10	11	02	13	06

After completion of household schedule, health investigator completed the CAB component (height, weight, anaemia, blood pressure, blood glucose and DBS sample) with eligible candidates. As per the survey protocols, for the CAB component prior consent was taken from the eligible respondents and in case of adolescents and children below 6 years, informed consent were taken from their parents. Around 45-50 minutes needed to complete the CAB Tests of a respondent. In the households where CAB could not be completed the same day, the health investigators visited the same household the very next day to complete the CAB tests.

Also, investigators have to take appointments for Man's Interview early in the morning so that they can complete it before the men leave for their job. Salt testing kits were provided to the investigators to check iodine content in the salt used for cooking in the households.

6.0 Pretest Experiences

On the fifth day (12th December 2013) after completion of fieldwork the teams returned to the training centre (YUVA, Kharghar) and made preparations for the feedback session. Each team supervisor was asked to present a consolidated presentation showing households covered and number of eligible respondents (women and men) completed, including coverage of CAB

components. The supervisors were also asked to highlight the field experiences of their team members pertaining to schedule design, CAPI and CAB related issues, respondent concerns, etc.

A debriefing session was organized on 13th December, 2013 during which the field investigators presented their observations/and experiences. Representatives from MoHFW and USAID were also present along with all the faculty coordinators and other staff of the NFHS-4 team. Some valuable suggestions and experiences of the entire fieldwork operation were shared by the field teams during the feedback session. For each component of the survey the important suggestions highlighted are given below.



Teams presenting their experiences of Pre-test fieldwork during the Feedback Session

Responses Related to:

Individual interview

- The overall response to individual interview was good in each of the PSUs. However, the completion rates were higher in the rural PSUs especially among women mainly because the male respondents were away at work. In urban PSUs (both slum and non-slum) the respondents could not give time as they were either away or were busy with their household chores.
- In the slum PSUs, in spite of sincere effort by the interviewers to ensure privacy and confidentiality, in a couple of households interviews of other eligible members were refused, after completing the interview of one or more members in that household due to some of the sensitive questions particularly with regard to sexual life and domestic violence.

Due to the longer time taken to complete one woman's interview (especially with children born after January 2008) including the CAB component, other interviewers had to be in postponed or refusal encountered in that household. The interviewers had to often make several visits to contact and interview the eligible respondents in a household.

- Team members also reported that in some households not selected for pretest wanted them to cover their households and wanted to know why they were not included in the survey.
- Some household members suggested the survey be advertised like NSSO, etc. for wider publicity and the public are aware that such survey is authentic. Such advertisement would ensure better response from the households.

Schedule

- In most of the PSUs, both male and female interviewers did not face problem when asking questions on sexual life and contraception, even to unmarried respondents. Only a small section of respondents expressed their displeasure in answering these questions. Interviewers did not report any problem in administering questions on domestic violence though privacy could be obtained with great difficulty especially in the urban slum PSU.
- The respondents also found some Hindi words used in a few specific questions difficult to comprehend. The interviewers had to probe and explain a little more in such situations. Hence, interviewers have suggested to simplify the words to communicate the meaning more easily to the respondents.

- Interviewers found that many households could not report the brand of mosquito nets they were using.
- Interviewers said more clarity needed with regard to coding categories of some questions like roof type, toilet facilities, water source, etc. These feedbacks can be implemented in the forthcoming training sessions.

CAPI

- The robust CAPI used ensured that interviewing in CAPI was smooth to a large extent. The allocation of households by the supervisor to team members (and vice versa), and transfer of data from interviewer to interviewer using Bluetooth technology were successfully executed with no major glitches. As and when any team member encountered any issue related to CAPI it was immediately communicated to the faculty and field coordinators and ICF team members. Many times the issue was resolved telephonically or by personally visiting the field team. In only a couple of instances, a correction in the main programme was necessary and any problem which could not be resolved instantly were noted down for further action. However, during the pretest fieldwork there was no report of any interview that could not be completed due to CAPI related problem. So, overall the CAPI interviews were conducted smoothly.
- Any unresolved issues with regard to CAPI that came up during fieldwork will be rectified and updated in the post pretest version of CAPI.
- A few more data consistency checks need to be incorporated for specific section/ question and these will be implemented in the next version after another round of discussion within the core team.
- The CAPI instructions for some of the questions and spellings or some Hindi words in CAPI need to be re-checked. The Hindi text used in CAPI is Unicode font and found to contain some spelling errors especially with words having half alphabets such as *swasthya*, *school*, etc.

Team composition

- In some households, there were more than one eligible men to be covered. But since the team had only one male interviewer, it was difficult to cover all the eligible men as most of them would be available at around the same time, that is, very early in the morning or late in the evening.

Time taken for individual interview and CAB

- Average time taken for household interview: 30-40 mins.
- Average time taken for woman's interview:
 - ✓ Unmarried eligible women: 45-60 mins.
 - ✓ Ever Married Women with no eligible children: 60-75 mins.
 - ✓ Ever Married Women with two eligible children: 90-120 mins.
- Average time taken for man's interview: 45-60 mins.
- Average time taken for CAB (Child): 25-30 mins.
- Average time taken for CAB (Adolescent and Adult): 45- 50 mins.

7.0 Conclusion

As the NFHS-4 survey has many components, it is very time consuming and a challenging task. To achieve the survey objectives, it is important to generate reliable data of high quality. Hence, a survey of this magnitude needs careful planning and implementation with thorough monitoring and supervision of fieldwork activities. Based on the pretest experiences, the survey tools, procedures and protocols have been modified/rectified which will ensure that the main survey is carried out with minimum problems. The apprehension that the inclusion of questions on sensitive topics like on sexual behavior, HIV and domestic violence would have an impact on the response rates was nullified. There were almost no refusals reported in the individual interviews due to sensitive issue and the overall participation of the community in all the areas was more than one expectation. Most respondents who completed the individual interview reported willingly participated in the CAB tests. In case of non-completion/participation in the individual interview or CAB testing, the main reason reported was non-availability of the eligible respondent at the time of visit by the investigator. Some of the suggestions made during training and after fieldwork with regard to the schedules (wording, Hindi translation, skips, etc.), CAPI and CAB testing will be incorporated and modifications made in the respective tools before the main survey (ANNEXURE- I gives list of suggestions for modifications).

The other fieldwork related experiences pertaining to field protocol, team composition, etc. will also be considered at the time of planning and implementation of the main survey. Overall, the pretest was conducted smoothly and successful in achieving its objective of testing all the tools and procedures, and thereby ensuring that the NFHS-4 survey will be carried successfully in all the States and UTs.

ANNEXURE-I
Modifications suggested in Schedules after Pretest

Modifications common to Household, Woman and Man Schedules		
Consent statement updated in both English and Hindi		
Cover page: Garo, Khasi, and English was added in the language code		
Cover page: 'Respondent's Mother Tongue' was added		
Cover page: 'Language of Interview' was added		
Cover page: 'Translator Used' was added		
Woman's Schedule		
Question No.	Pre test Schedule	Modification after Pretest
Cover page	LINE NUMBER OF MAN	Cover page: LINE NUMBER OF WOMAN
Qs.224	CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN 2009 OR LATER.	CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN JANUARY 2009 OR LATER.
Qs.249	Qs 249 A was not there	Qs 249A was added with filter for currently pregnant and skip to 254
Qs.257	SANITORY NAPKINS	SANITARY NAPKINS (spelling changed)
Qs.321	OTHER TRADITIONAL METHOD(option X)	OTHER MODERN METHOD (option X)
	OTHER MODERN METHOD (option Y)	OTHER TRADITIONAL METHOD(option Y)
Qs.355	Repeated line "IF NONE, RECORD '00'" was deleted.	
Qs.454	"IF THE SAME DAY, RECORD '00'" was added	
Qs.715	"(other than you)" to the end of the question was added	
Qs.905	Married, Gauna Not Performed removed from first box	
Qs. 906	Married, Gauna Not Performed removed from first box and second box re-labelled as OTHER	
Qs.930C	Are you able to read text messages?	Are you able to read text (SMS.) messages?
Qs.1112	In the last 12 months, how often have you done this to your last husband: often, only sometimes, or not at all?	In the last 12 months, how often have you done this to your (last) husband: often, only sometimes, or not at all?
Qs.1118	Hindi text of Qs.1118 A and Qs. 1118 B switched	
	"RECORD ALL MENTIONED" added	Qs 253,257 321, 448,453
	Filter/ Skip Changed	Qs 814,919,1133
Man's Schedule		
	Q102-103 was moved after 107, Section 1 renumbered	
Qs.229	Skip removed for never had sex	
Qs.301A	Filter and Skip added	
Qs.303	"RECORD ALL MENTIONED. CORRECT 301 (IF NECESSARY)" was added and codes for other to X and Y was changed	
Qs.320	Codes 22 onward changed	
Qs.502	Code 8 DK and 7 Refused, refused skip to 534 was added	
Qs.503	code 98 DK with skip to 518, add 96 Refused with skip to 534 was added	
Qs.524	Code 1 and 8 changed to code 96 and 98	
Qs.614	"(other than you)" was added to the end of the question	
Qs.626	"daily, weekly, occasionally, or never" was added to the English	
Qs.701A	Filter for not currently married, skip to 704 was added	
Qs.835	"OR 228 OR 229 = DK/REFUSED" to skip to 843 was added	
	Don't know/Refused added in Questions	Qs.229,501
Household Schedule		
Col 2	instruction were changed to match the procedure used in CAPI	
Col 12	extra "?" in Hindi text was removed	
Col 19	school year 2014-15 in Hindi text was changed to 2013-14	
Qs. 35	Codes were changed	
Qs. 51	Code for Don't Know 9998 added	

ANNEXURE-II
NATIONAL FAMILY HEALTH SURVEY (NFHS)-4
PRETEST AGENDA (25 Nov. - 13 Dec. 2013)

Day/Date	Time	Activity	Resource Person
Day 1/ Monday/ 25 Nov 2013	9:30 - 10:00AM	Registration	Director, IIPS; MoHFW, ICF International
	10:00 - 11:00AM	Introduction to Participants, Welcome and Inauguration	
	11:00 - 11:15AM	Tea Break	B. Paswan
	11:15AM - 12:00PM	Introduction to NFHS-4, Objectives and Plan for pretest	
	12:00 - 1:00PM	Rapport Building & Techniques of Interviewing	S.K. Singh
	1:00 - 2:00PM	Lunch	
Day 2/ Tuesday/ 26 Nov 2013	2:00 - 3:00PM	<u>HOUSEHOLD SCHEDULE</u> Identification Details, Consent and Roster	B. Paswan
	3:00 - 3:15PM	Tea Break	Hemkhothang Lungdim Manas R. Pradhan (<i>Interviewer</i>) Sarang P. Pedgaonkar (<i>Respondent</i>)
	3:15 - 5:15PM	Household Assets and Amenities	
	5:15 - 6:00PM	Mock Interview (Sections – Identification Details, Consent, Roster and Household Assets and Amenities)	
	10:00 - 10:30AM	Recap of Day 1	
	10:30 - 11:30AM	Group practice (Household Schedule)	Abhishek Singh
11:30 - 11:45AM	Tea Break		
Day 3/ Wednesday/ 27 Nov 2013	11:45AM - 1:00PM	<u>WOMAN'S SCHEDULE</u> Identification Details, Consent and Background Characteristics (Section 1)	
	1:00 - 2:00PM	Lunch	
	2:00 - 3:00PM	Reproduction (Section 2)	Chander Shekhar
	3:00 - 3:15PM	Tea Break	Chander Shekhar Vaidehi Y. (<i>Interviewer</i>) Married Investigator (<i>Respondent</i>)
	3:15 - 4:15PM	Reproduction (Cont'd.) (Section 2)	
	4:15 - 6:00PM	Mock Interview (Section 1 to 2)	
Day 3/ Wednesday/ 27 Nov 2013	10:00 - 10:30AM	Recap of Day 2	T.K. Roy/Previous day presenters
	10:30 - 11:30AM	Marriage and Cohabitation (Section 3A)	Manoj Alagarajan
	11:30 - 11:45AM	Tea Break	T.K. Roy
	11:45AM - 1:00PM	Contraception (Section 3B)	
	1:00 - 2:00PM	Lunch	
	2:00 - 3:00PM	Contraception (Cont'd.)	T.K. Roy
3:00 - 3:15PM	Tea Break	Hemkhothang Lungdim	
3:15 - 4:00PM	Contacts with Community Health Workers (Section 3C)		
4:00 - 6:00PM	Pregnancy and Delivery (Section 4)	Abhishek Singh	

Day/Date	Time	Activity	Resource Person
Day 4/ Thursday/ 28 Nov 2013	10:00 - 10:30AM	Recap of Day 3	B. Paswan/ Previous day presenters
	10:30 - 11:30AM	Postnatal Care and Children's Nutrition (Section 4)	Fred Arnold/Blake Zachary
	11:30 - 11:45AM	Tea Break	
	11:45AM - 1:00PM	Child Immunizations and Health (Section 5)	Blake Zachary/Fred Arnold
	1:00 - 2:00PM	Lunch	
	2:00 - 3:00PM	Utilization of ICDS Services (Section 5A)	B. Paswan
3:00 - 3:15PM	Tea Break		
3:15 - 4:30PM	Fertility Preferences (Section 6)	Chander Shekhar	
4:30 - 6:00PM	Mock Interview (Sections 3A to 6) CAB Training for Health Investigators from next day (29 Nov 2013)		
Day 5/ Friday/ 29 Nov 2013	10:00 - 10:30AM	Recap of Day 4	Hemkhothang Lungdim/ Previous day presenters
	10:30 - 11:30AM	Other Health Issues (Section 7)	Laxmi Kant Dwivedi
	11:30 - 11:45AM	Tea Break	
	11:45AM - 1:00PM	Sexual Life (Section 8)	S.K. Singh
	1:00 - 2:00PM	Lunch	
	2:00 - 3:00PM	Husband's Background & Woman's Work (Section 9)	B. Paswan
3:00 - 3:15PM	Tea Break		
3:15 - 4:15PM	HIV/AIDS (Section 10)	S.K. Singh	
4:15 - 6:00PM	Mock Interview (Section 7 to 10)		
Day 6/ Saturday/ 30 Nov 2013	10:00 - 10:30AM	Recap of day 5	Chander Shekhar/ Previous day presenters
	10:30 - 11:30AM	Household Relations along with discussion on selection of women (Section 11)	Fred Arnold/Blake Zachary
	11:30 - 11:45AM	Tea Break	
	11:45AM - 1:00PM	Overview of calendar	T.K. Roy
	1:00 - 2:00PM	Lunch	
Day 7/ Sunday/ 1 Dec 2013	2:00 - 6:00PM	Group practice (Woman's Schedule)	
	10:00 - 10:30AM	MAN'S SCHEDULE Identification Details, Consent and Background Characteristics (Section 1)	Manas R. Pradhan
	10:30 - 11:15AM	Reproduction, Marriage and Cohabitation (Sections 2A and 2B)	Dhananjay W. Bansod
	11:15 - 11:30AM	Tea Break	
	11:30AM - 12:00PM	Contraception and Male Involvement (Section 3)	Manoj Alagarajan
	12:00 - 12:30PM	Fertility Preferences (Section 4)	Laxmi Kant Dwivedi.
	12:30 - 1:00PM	Sexual Life (Section 5)	S.K. Singh
	1:00 - 2:00PM	Lunch	
2:00 - 2:30PM	Other Health Issues (Section 6)	Hemkhothang Lungdim	
2:30 - 3:00PM	Attitudes Towards Gender Roles (Section 7)	Manas R. Pradhan	
3:00 - 3:15PM	Tea Break		

Day/Date	Time	Activity	Resource Person
	3:15 - 4.00PM	HIV/AIDS and Other Sexually Transmitted Infections (Section 8) Mock Interview (Sections 4 to 7)	Sarang P. Pedgaonkar
	4:15 – 5:00PM		Dhananjay W. Bansod (<i>Interviewer</i>) Hemkothang Lungdim (<i>Respondent</i>)
	5:00 – 6:00PM		S.K. Singh & Sarang P. Pedgaonkar
Day 8-13/ Monday- Saturday/ 2-7 Dec 2013	10:00AM – 6:00PM	Introduction & Handholding of CAPI (Training and Practice)	Alex Izmu khambetov
	1:00 – 2:00PM	Lunch	
	Second half of 7 Dec 2013: Preparation for fieldwork, revision of all protocols, etc.		
Day 14-18 Sunday- Thursday/ 8-12 Dec 2013	Fieldwork		
Day 19/ Friday/ 13 Dec 2013	10:00AM - 1:00PM	Fieldwork experiences and review Vote of Thanks	

CAB AGENDA (29th Nov. -7th Dec., 2013)

Date	Time	Topic	Facilitator
DAY 1			
29 Nov 2013		Overview of Survey	
	09:00hrs - 09:30 hrs	General Introduction of the CAB Component	CAB team
	09:30 hrs – 10:30 hrs	Overview of Biomarker Measurement Eligibility and Informed Consent	CAB team
TEA BREAK			
Anthropometry			
	10:45 hrs – 12:30 hrs	Materials and Equipment for Anthropometry Weight Measurement in Children and Adult	CAB team
	12:30 hrs – 13:30 hrs	Height/Length Measurement in Children and Adults	CAB team
LUNCH BREAK			
	14:30 hrs – 16:00 hrs	Practice session on Height and Weight Measurements	CAB team
TEA BREAK			
Blood Pressure Measurement			
	16:00 hrs – 17:30 hrs	Technique and Principle of Blood Pressure Measurement Preliminary Steps in Blood Pressure Measurement	CAB team
DAY 2			
30 Nov 2013	09:00 hrs – 09:30 hrs	Revision/discussion of previous day's work	CAB team
	09:30 hrs – 10:30 hrs	<i>Standardization of Health Investigators on Anthropometric Measurements</i>	CAB team
TEA BREAK			
	10:45 hrs – 13:30 hrs	<i>Standardization of Health Investigators on Anthropometric Measurements</i>	CAB team
LUNCH BREAK			
Blood Pressure Measurement			
	14:30 hrs – 15:30 hrs	Taking Blood Pressure Measurements and recording readings. Review Schedule.	CAB team
		What Symbols on Display mean	CAB team
		Providing Blood Pressure results and referrals	CAB team
TEA BREAK			

	15:30 hrs – 17:30 hrs	Practice session on Blood Pressure Measurement	CAB team
DAY 3			
02 Dec 2013	09:00 hrs – 09:30 hrs	Revision/discussion of previous day's work	CAB team
		General Procedures For Collecting Capillary Blood Drops From Children And Adults	
	09:30 hrs – 10:30 hrs	Materials and supplies for performing finger prick.	CAB team
TEA BREAK			
	10:45 hrs – 13:30 hrs	Steps in collecting capillary blood from adults and children. Precautions to observe when collecting blood samples.	CAB team
LUNCH BREAK			
	14:30 hrs – 15:15 hrs	Practice session on Anthropometry and Blood Pressure	CAB team
TEA BREAK			
	15:30 hrs-16:30 hrs	Practice session on Anthropometry and Blood Pressure	CAB team
		Haemoglobin (anaemia) Measurement	
	16:30 hrs – 17:30 hrs	Introduction to haemoglobin measurement	CAB team
DAY 4			
03 Dec 2013	09:00 hrs – 09:30 hrs	Revision/discussion of previous day's work	CAB team
		Haemoglobin (anaemia) Measurement	
	09:30 hrs – 10:30 hrs	Materials and supplies for haemoglobin testing	CAB team
TEA BREAK			
	10:45 hrs – 13:30 hrs	Collecting blood, measuring the level of haemoglobin and recording results. Precautions to observe during haemoglobin measurement.	CAB team CAB team
		Providing anaemia results in anaemia brochure and referrals for severe anaemia.	CAB team
LUNCH BREAK			
	14:30 hrs – 16:15hrs	Practice session on haemoglobin measurement	CAB team
TEA BREAK			
	16:30 hrs – 17:30 hrs	Cleaning of the HemoCueHb 201+ device	CAB team
DAY 5			
04 Dec 2013	09:00 hrs – 09:30 hrs	Revision/discussion of previous day's work	CAB team
		Blood Glucose Testing	
	09:30 hrs – 10:30 hrs	Brief overview on diabetes and its causes Material and supplies for blood glucose testing NFHS-4	CAB team
TEA BREAK			
	10:45 hrs – 13:30 hrs	Steps for measuring blood glucose in NFHS-4 Recording results of blood glucose measurements and providing results to respondents Blood glucose brochure and referral forms	CAB team
LUNCH BREAK			
	14:30hrs – 15:15 hrs	Practice session on blood glucose testing	CAB team
TEA BREAK			
	15:30 hrs – 17:30 hrs	Review the entire biomarker Schedule and the skip instructions.	CAB team
DAY 6			
05 Dec 2013	09:00 hrs – 09:30 hrs	Revision/discussion of previous day's work	CAB team
		Combined Haemoglobin and Random Blood Glucose Testing	
	09:30 hrs – 10:30 hrs	Materials and supplies required Order of performing the tests Recording results and providing results to respondents	CAB team CAB team CAB team
TEA BREAK			
	10:45 hrs – 13:30 hrs	Practice session on haemoglobin and blood glucose testing	CAB team

LUNCH BREAK			
		Combined Haemoglobin and Random Blood Glucose Testing and Dried Blood Spot (DBS) collection for HIV Testing	
		Materials and supplies required. Order of performing the tests.	CAB team CAB team
	14:30hrs – 15:45hrs	Recording results and providing results to respondents. HIV Brochure, VCT Referral and DBS Transmittal sheet. Packaging and storing DBS in the field and transfer to the laboratory.	CAB team CAB team CAB team
TEA BREAK			
	16:00hrs – 17:30hrs	Practical session	CAB team
DAY 7			
06 Dec 2013	09:00 hrs – 09:30 hrs	Revision/discussion of previous day's work	CAB team
	09:30 hrs – 10:30 hrs	Bio hazardous Waste Disposal	CAB team
TEA BREAK			
	10:45 hrs – 13:30 hrs	Practical session on combined testing	CAB team
LUNCH BREAK			
	14:30 hrs – 17:30hrs	General discussion and practical session	CAB team
DAY 8			
07 Dec 2013	9:00hrs – 13:00hrs	Practice session in community health centre	CAB team
LUNCH BREAK			
	14:30hrs – 17:30hrs	Assessment of general experience at the health centre, samples collected and any topics for discussion.	CAB Team
DAY 9			
08 Dec 2013		Starting of Fieldwork	CAB team

ANNEXURE-III

Team composition of Pretest Fieldwork

Role/ Responsibility	Team 1	Team 2	Team 3	Team 4	Team 5
Faculty Coordinator	<i>Dr. Manas R. Pradhan</i>	<i>Dr. D.W. Bansod</i>	<i>Dr. M. Alagarajan</i>	<i>Dr. L.K. Dwivedi</i>	<i>Dr. S.P. Pedgoankar</i>
	Prof. S.K. Singh	Prof. B. Paswan	Prof. H Lhungdim	Prof. Chander Shekhar	Dr. Abhishek. Singh
Field Coordinator	Dr. Mithilesh	Dr. Brijlal Patel	Ms.Ankita Siddhanta	Mr. Kalosona Paul	Dr. Anil Mishra
Supervisor	Mr.Amol Pawar	Mr.Swapnil Panchabudhe	Mr. Rahul Kumbhar	Mr. Sk Karim	Mr.Mahesh Maske
Female Investigator	Ms. Kanchan Nandagwali	Ms.Yogita Barai	Ms.Varsha Nagargoje	Ms. Swati Khule	Mrs.Anusaya Budekar
	Ms. Lalit Patil	Ms.Pallavi Giradkar	Ms.Shubhangi Tandulkar	Ms.Kavita Badgainya	Ms.Ujjwala Ghatol
	Ms.Babita Rathod	Ms.Priya Laxne	Ms.Loohana Pawde	Ms.Swati Arekar	Ms.Rasika Ingole
		Ms.Pratibha Khobre			
Male investigator	Mr.Daynesh war Gore	Mr.Kunal Athawale	Mr.Ganesh Nagolkar	Mr.Nandkishor Wankhade	Mr.Pramod Nikam
				Mr.Satish Pakhare	
Health Investigator	Ms. Rani Singh	Mr.Varah Joshi	Mr.Shriniwas R. Joshi	Mr. Yash Paras Katariya	Mr.Kamalesh D. Rakhade
	Mr.Pramod Bodkhe	Mr.Sheshnaraya n Dutonde	Mr.Tukaram Jadhav	Mr.Subham Joshi	Mr. Allabaksh Walikar
	Mr.Amit Patil				