

## Sampling Manual

### STUDY OF PRIMARY HEALTH CARE SERVICE DELIVERY IN NIGERIA

June 2002

#### I. INTRODUCTION

1. The purpose of this Sampling Manual is to facilitate the selection of the samples to be studied in the *Nigeria: Primary Health Care Service Delivery* project by documenting the steps and procedures to be followed in selecting the different representative samples for data collection in Lagos and Kogi States. A multistage sampling technique will be used for sample selection for the study:

- Stage 1: Local Government Area (LGA) Level
- Stage 2: Health Facility Level
- Stage 3: Health Facility Staff Level.

2. Each of the stages indicated above has defined and distinct sampling procedures to be followed. In what follows, we describe in some detail the steps and approaches for selecting these different samples.

#### II SAMPLE SELECTION

##### 2.1 Selection of LGAs

3. For this exercise, 15 LGAs are planned for selection in each state using a table of random numbers. The random selection of 15 LGAs out of a population of 20 in Lagos and 21 in Kogi states, is sufficiently large enough to accommodate the major characteristics of the population of the LGAs (e.g., whether rural or urban; whether newly created or old etc.) .
4. It is expected that the 15 randomly selected LGAs in each state will include the State capital LGAs. In the case of Lagos State, where the state capital is made up of a number of LGAs, it is very unlikely that at least **one** State Capital LGA will not be in the random sample. But in the case of Kogi State where there is only one state capital LGA (Lokoja), this will be purposively selected if it is not in the selected random sample. In this case, 16 LGAs will be studied in Kogi instead of the **planned** 15 LGAs.

##### 2.2 Selection of Facilities

5. In total, 252 health facilities will be selected for study representing on the average a minimum of 8 facilities per LGA (which is one-third of average facility per LGA in the two states). Because of more

variation in facility characteristics in Lagos State where the facility population is 192 in contrast to 753 in Kogi State, a higher selection ratio of 1 in 2 facilities is proposed for Lagos State compared with 1 in 5 for Kogi state. Accordingly, a total of 100 facilities will be selected in Lagos State and 152 in Kogi State.

6. To ensure that every selected LGA is represented in the sample facilities, we first undertake a purposive selection of 2 facilities per LGA by random selection from the facility list within each LGA. Thus, 30 facilities in each state would be chosen in this manner. All the remaining facilities in the selected LGAs will be **pooled** together in an Excel File. Seventy ( 70 ) facilities in Lagos and 122 in Kogi would then be chosen randomly from the remaining facility list in each state.

7. In the event that a selected facility is closed or non-operational for any reason, this will be replaced from a randomly selected replacement list of 10 facilities from Lagos State and 25 for Kogi. ARHEC coordinating field staff will randomly select the replacing facility from the list. If it is just an issue of the facility being closed at the time the interviewers arrive, then interviewers would make a repeat visit either later in the day or the next day, and record in the space provided on the questionnaire in which visit the interview took place, and make notes for why a repeat visit was required. However, a replacement facility would be chosen if and only if the facility no longer exists-- the building is being used for some other purpose, or has been empty for a long period of time with no prospects of re-opening. The interviewing teams would make notes for such facilities as well, providing explicit reasons for why it was necessary to use the replacement list.

8. The list of facilities to be visited (Tables 1 and 2) as well as the replacement list for closed or non-operational facility will be compiled prior to fieldwork.

### **2.3 Selection of Facility Staff**

9. **It is only from the total number of staff present in the facility during the time of visit of the interviewer that a random sample of staff to be interviewed will be selected.** At least one staff must be interviewed from 10 identified PHC staff categories making an average of 10 staff per facility and a total sample of 2520 interviewed staff per state. The staff to be interviewed should be selected from all staff “on duty” that day, following the guidelines in the sampling and field manuals.” On duty” is understood to mean general availability for service delivery in the facility during normal working hours that day. That includes everyone present in the facility when the interviewers arrive, plus any who are out doing work in the field (home visits, etc), and any who are out of the facility on a very short errand, but NOT including staff who are on leave or absent for unknown reasons when the interviewers arrive. If a staff member normally begins duty at the facility at a time later when the interviewers arrive, and in fact does arrive during the course of the day, he or she is considered “on duty”. The number of staff interviewed will be consistent with the facility manager’s listing of staff “on duty” that day in question 1.2.1 of the facility questionnaire. The interviewer will dissuade the manager from sending for staff who are off duty that day by saying firmly that there is no need because they will not be interviewed. If some

members refuse to answer questions, then replace with another staff until the sampling guidelines are satisfied.

10. If the number of staff present in the facility at the time of interview is less than or equal to 10, interview **all** that are willing to respond irrespective of their categories. When there are more than 10 staff present in the facility at the time of interview, the interviewer should first interview one staff in each staff category selected randomly. After this, the interviewer will randomly select at least up to 50% of each category of staff of the remaining staff .

11. The **head of the facility will be interviewed twice in ALL cases**, once as head and the other as staff.

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