Work Plan & Methodology

Methodology

Research Design
The study intends to use Exploratory Research design to evaluate the functioning and operationalizing of the FRUs regarding the Comprehensive Emergency Obstetric Care, Newborn Care and Status of the Blood Storage Units and Blood Banks in the State. The focus group will be the low performing or weak delivery points where the total number of deliveries and number of caesarean deliveries are below the set target. Thus, this study will determine the key aspects involved in operationalization of the FRUs. For this study, primary research and secondary research will be used. The research is designed to answers questions like

a) What are the critical determinants for operationalization of FRUs?
b) To what extent does the shortage of manpower affect the emergency services?
c) What factors determine availability of new born care at FRUs?
d) How can the shortage of manpower and blood supply be overcome?
e) Are the Trained specialist delivering their services to full extent?

Further steps in research will include mapping of the existing health facilities, available manpower, and other resources for each district to determine the Gaps.

Primary Sources:
Primary research is conducted using questionnaire and respective checklist surveys that will be sent to the all FRU centres. Here, the questionnaires and checklist will be used to collect quantitative data and the interviews will be used to provide qualitative insights into the data collected. The researcher plans to use a structured non-disguised checklist and questionnaire containing both open ended and close ended questions.

As stated above, this researcher will partially base his findings through both quantitative research methods because this permits a flexible and iterative approach. During data gathering the choice and design of methods are constantly modified, based on ongoing analysis.

Secondary Sources:
Secondary data sources are based from the recent literatures related to Mother and Child health care, and FRUs.
Guidelines set for operationalization of FRUs, by Ministry of Health and family welfare, Government of India.

Facility Base Newborn Care Guideline by MoH&FW

Food and Drug Control Authority (FDCA) guideline.

Health Reports Published by the Gujarat state Commissionerate Health and Family Welfare Department.

Various information related to Maternal Health and FRUs printed in Newspapers, Health Magazines

Health Journals and Articles published on websites.

**Sampling Technique:**

“Census” method is used for the research for data collection and no sampling technique is used. This study is carried out for complete enumeration of FRU centers located across Gujarat state. The researcher will be collecting data on variables from every FRU center as the population size of FRUs is small hence, the census method is used for data collection.

**Sample Size:**

This research incorporates the data from all 163 FRUs located in Gujarat state. The grant-in-aid hospitals and Municipal Corporation Hospitals which are designated as FRUs are excluded from the study as accurate and timely response was unavailable from these centers.

**Research Area:**

Gujarat state has been chosen for this research as the maternal mortality rate is high in this state. The state Health Ministry has incorporated many plans for improvements in the CEmOC services provided at FRU centers. The study is carried out for FRUs located in all six health regions including Ahmedabad, Gandhinagar, Bhavnagar, Surat, Rajkot and Vadodara region, A majority of the population in Gujarat is located in Rural areas and FRUs serve as a good means of providing health services to these areas. Hence this study covers all the first referral units located in the rural and tribal regions of Gujarat state

**Analysis of Data**
Since the research design is based on Exploratory study, the researcher has opted to use the indicator checklists as a tool for this research since it is easy to construct checklist, they can help to reduce errors, increase efficiency, and effectively manage the complexities. Moreover, copies of the checklists indicators could reach a considerable number of respondents either by mail or by personal distribution. Generally, responses to checklists are objectified and standardized and these make tabulation easy. But more importantly, the representative’s replies are of their own free will because there is no interviewer to influence them. This is one way to avoid biases, particularly the interviewers' bias. The researcher will also use graph and charts for data presentation.

For validation purposes, the researcher will include the parameters based on the Guidelines set for operationalization of First Referral Units set by Government of India. Information is collected is based on 42 different indicators for each FRU. This information is then thoroughly mapped with the guidelines to identify the gaps on three critical determinants for FRUs:

1. Availability of Specialists manpower for carrying out comprehensive emergency obstetric care.
2. Status of facility based new born care at all FRUs centers
3. Availability of Blood Supply and Blood Storage facility at these centers.

A separate checklist is prepared for each of the three critical determinants of FRUs mentioned above. The Checklist for assessing the status of manpower will include indicators such as total deliveries performed, number of C-section conducted etc. similarily the checklists for asseing the facility based new born care would include indicators such as availability of Sick new born care unit, New born stabilizing uints, availability of new born care specialists and so on. The status of the third determinant shall be evaluated based on the FDCA license obtained by Blood Storage units, the number of blood banks and Blood Storage units available at each FRUs. The data obtained on the lines of these indicators will be analyzed using Microsoft excel and plotting graphs and Charts from it.

Data Collection Plan

This will be based on Surveys, using both questionnaires and interviews, and focus groups to collect information about First Referral Units’ status. Surveys can be conducted face to face, by mail, by telephone, and over the Internet.

The Data shall be collected by the following three methods:
1. Carrying out field visits to FRU centers and performing assessments of facilities based on the check list prepared on the lines of the guidelines set for operationalization of FRUs, Facility based New born care and guidelines for Blood supply set by Ministry of health and Family welfare, Government of India.

2. Carrying out personal interview with the specialist staff based on the questionnaire prepared for post performance review. The research will also involve steps to tally, score and tabulate all the responses in the provided interview questions. Moreover, the interview shall be done using a structured interview. It shall consist of a list of specific questions and the interviewer does not deviate from the list or inject any extra remarks into the interview process. The interviewer may encourage the interviewee to clarify vague statements or to further elaborate on brief comments. Otherwise, the interviewer attempts to be objective and tries not to influence the interviewer's statements. The interviewer does not share his/her own beliefs and opinions. The structured interview is mostly a "question and answer" session.

3. Data collection from the data base of Chief District Health Officer (CDHO) at all 24 districts level and from Regional Deputy director (RDD) at all six health regions level. This study assumes that the survey used is an effective measurement tool to identify the key areas for operationalization of FRUs. This study also assumes that each participant will honestly ad thoroughly answer each question.

Proposed plan of work:

The proposed plan includes study of field conditions, the first chapters will focus on the background of work related to Public Health guidelines and the guidelines for the operationalization of FRUs. The subsequent chapter i.e chapter 2 would deal with review of literature of the work done by various researchers in this field, particularly in the referral Health units and Public Health administration as a whole. Chapter 3 covers research methodology comprising of the Gap analysis of the FRU centers in relation to the FRUs Operationalization guidelines, the study of various indicators, growth drivers and Inhibitors for the success of the FRUs implementation. Thereon Chapter 4 will deal with Critical Factors for operationalization of FRUs for providing EmOC services which include availability of specialists manpower, status of new born care facility and availability Blood Storage/ blood supply facility at FRU centers. The chapter 5, deals with the quality improvement process for EmOC services at FRUs. The Final chapters include recommendations on factors that need to be emphasized for successful operationalization of FRUs keeping focus on the overall quality improvement.
The main steps to be carried out for the work are:

1. Carrying out facility survey for the State’s 163 FRUs
2. Analysis of findings i.e physical performance for FRUs
3. Analysis of the skilled medical manpower eg. Specialist (Obs.&Gyn., Anesthetics, Pediatricians & General Surgeons) available or appointed at FRUs and in the State.
4. Analysis of Newborn Care status for FRUs
5. Analysis of the state Blood Storage Units and Blood Bank status in context with FRUs
6. Analysis of the CEmOC and LSAS trained medical Officers of the state for their post training performance.

Key Indicators would include:

1. Cesarean Section (C-Section)
2. Institutional Total Delivery
3. New born care equipments,
4. Availability of Blood Banks
5. Status of Blood Storage Units

GAP Analysis:

The Gap analysis is based on the health infrastructure and staffing norms as per the Operationalization guidelines for First Referral Units, Facility Base Newborn Care guidelines by MoH&FW and Food and Drug Control Authority (FDCA) guidelines. The study will also include the complete analysis of the proposal for operationalisation of FRU.