

Facility Survey of the Delivery Points in Tikamgarh District of Madhya Pradesh

By

Amanjot Kaur

*Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management*

Academic year, 2015-2017



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TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr. Amanjot Kaur** student of **MBA Hospital and Health Management** from The IIHMR University, Jaipur has undergone internship training at National Health Mission, Madhya Pradesh from **February 6th, 2017 to May 5th, 2017**.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.



Dr. Ashok Kaushik
Dean - Academics and Student Affairs
The IIHMR University, Jaipur



Dr. (Brig) S. K. Puri
Advisor
The IIHMR University, Jaipur

The certificate is awarded to

Dr. Amanjot Kaur

In recognition of having successfully completed her internship at

National Health Mission, Madhya Pradesh

And has successfully completed her project on

Facility Survey of Delivery Points in Tikamgarh District

Of Madhya Pradesh

She comes across as a Committed, Sincere and Diligent person who has a strong drive and
zeal for learning

We wish her all the best for future endeavours

8/5/17

Mrs. Kiran Binzani

District Program Manager

National Health Mission

Dist. Tikamgarh (MP)

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Facility Survey of Delivery Points in Tikamgarh District of Madhya Pradesh** and submitted by Dr. Amanjot Kaur, Enrollment No. IIHMR-U/01/2015-17/0252 under the supervision of Dr. (Brig) S.K. Puri for award of MBA in Health and Hospital Management of the University carried out during the period from 6 February 2017 to 5 May 2017 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Amanjot Kaur
Signature

THE IIMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that all ethical issues have been considered while collecting data for my dissertation titled "Facility Survey of Delivery Points in Tikamgarh district of Madhya Pradesh".

Amanjit Kaur
Signature of student

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*I feel privileged in expressing my kindest gratitude to **Dr. Varsha Rai** (CMHO, Tikamgarh, MP) under whose able guidance and supervision this study was conducted. The keen interest she evinced throughout this period and the graciousness with which she gave her valuable advice was her exclusive acumen.*

*I also feel privileged in expressing my thanks to **Smt. Kiran Biziani** (DPM, Tikamgarh) whose guidance and support was always there for me.*

I would be failing in my duties if I miss to acknowledge and thank all those co-operating people who formed the subject of this study. These include the entire team of CMHO office, Tikamgarh, MP. They extended their wholehearted co-operation in different phases of my project.

*I am indebted to my family especially my **mother Dr. Malwinder bir Kaur** who helped me in every possible way during my training.*

In the end I thank all those fellows and colleagues who have helped me in making this project a success and my apologies to anyone whose name I would have inadvertently forgotten to mention here.

(AMANJOT KAUR)

ABSTRACT

Title: *Facility Survey of Delivery Points in Tikamgarh District Of Madhya Pradesh*

Author: Dr. Amanjot Kaur, MBA-HM-Hospital and Health, IIMR University, Jaipur.

Guide: Brig. Dr. S K Puri, Advisor, IIMR, Jaipur.

Introduction: The institutional delivery in India has improved around sixty four per cent in the last ten years. Neonatal and Maternal mortality has also shown a declining trend but the decline has not been proportional to increase in institutional delivery rates. Studies have suggested that one of the reasons of this situation could be unavailability of required inputs like infrastructure, skilled human resource, essential equipments and drugs at the health facilities. Tikamgarh is a high priority district in Madhya Pradesh is also facing a similar situation. In order to understand the reason there was a need to assess the facilities on the basis of the required inputs.

Objective: The objective of study is to assess inputs(essential equipments, human resources and their training status, infrastructure and protocols)in labor room of health facilities in Tikamgarh district.

Methods: Descriptive study was conducted to assess required inputs in labor rooms at health facility in Tikamgarh.

Sample Selection: Convenience Sampling of all the CHCs (Badagaon, Baldeogarh, Prathvipur, Jatara, Niwari, Khargapur and Palera) and district hospital was included.

Result: As the district is a high priority district, the availability and utilization of the inputs at all the Delivery Points is very poor. CHC Jatara is the DP which has the worst state of all the inputs. Neither was there availability of the required inputs, nor were the staff trained to use the same or skilled to follow the standard protocols. On the other hand, the DH is the Best DP of the district. It can act as a model which can be followed by all the other DPs.

Conclusion: Availability, accessibility, affordability, equity, efficiency and quality of MNH services highly depend on the distribution, functionality, availability and quality of infrastructure, equipments, human resource. Therefore, it is concluded that adequate/inadequate availability of inputs can be one of the reasons affecting the performance of these facilities.



Abbreviations:

BEmOC: Basic Emergency Obstetric Care

BMWM: Bio Medical Waste Management

CEmOC: Comprehensive Emergency Obstetric Care

CHC: Community Health Centre

CMHO: Chief Medical and Health Officer

DH: District Hospital

DP: Delivery Point

FRU: First Referral Unit

MCH: Maternal and Child Health

MNH: Maternal and Newborn Health

NBCC: New Born Care Corner

PHC: Primary Health Centre

PNC: Post Natal Care

RBSK: Rashtriya Bal Suraksha Karyakram

SBA: Skilled Birth Attendant

SHC: Sub-district Health Centre

SNCU: Special Newborn Care Unit

WHO: World Health Organization

1. Introduction

The Government of India is dedicated and focused on reducing maternal and newborn mortality in the country. Considerable efforts have been made to achieve this goal through a number of initiatives, one of them being Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) strategic approach implementation. Also, India has made significant improvements in the rate of institutional deliveries in the country (owing to initiatives like Janani Suraksha Yojna) with a vision to ensure access to evidence based practices at the time of childbirth. Despite these efforts and increased numbers in institutional deliveries, the goal of achieving desired reduction in maternal and newborn mortality in the country is difficult to be realised in absence of high-quality of intra-partum and immediate postpartum care at institutions.

The National Health Mission has made it broadly known that improving quality of care at the time of childbirth and considering mothers and newborn as a dyad for focus of intervention during the said period have the potential to save a majority of maternal and newborn lives. To ensure that the services are available and provided as per the standards, checklists have been prepared, including protocols and practices followed in the labor room, New Born Care Corner (NBCC), Maternity Ward, knowledge, training and practices followed by the staff posted in the respective departments. These checklists are to be used and filled by the monitoring staff, including MCH consultants, Nursing Mentors, RBSK coordinators during their visits of these facilities as their role is to provide supportive supervision to all the staff and departments.

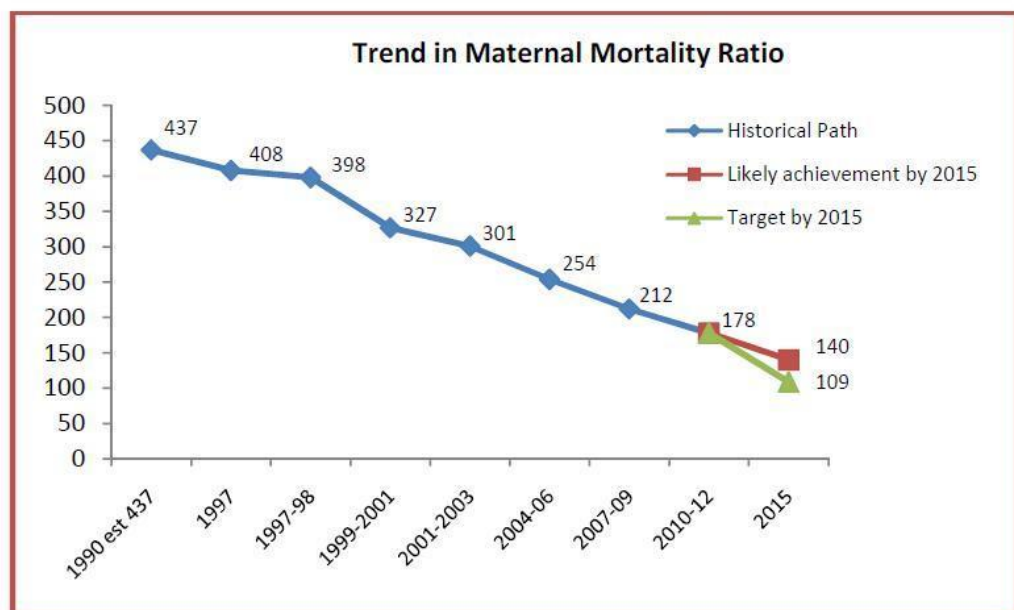
Gap analysis was conducted at the delivery points in Tikamgarh, which is one of the 17 High Priority Districts of Madhya Pradesh, to provide information for prioritizing the interventions so as to meet the objectives of reducing maternal and child deaths. This baseline data can also be used for setting targets and strategies by the district administration. More specifically, the analysis was aimed at measuring the gaps in resource availability and utilization (infrastructure, equipments, trained human resource, and drugs), strategies for behaviour change at block level to ensure utilization, timeliness, continuity and quality implementation of essential interventions.

This document highlights the results of gap analysis and provides planners and program managers with adequate information and evidence to initiate and strengthen district level health planning to address the deficiencies and strengthen the health system.

2. Literature Review:

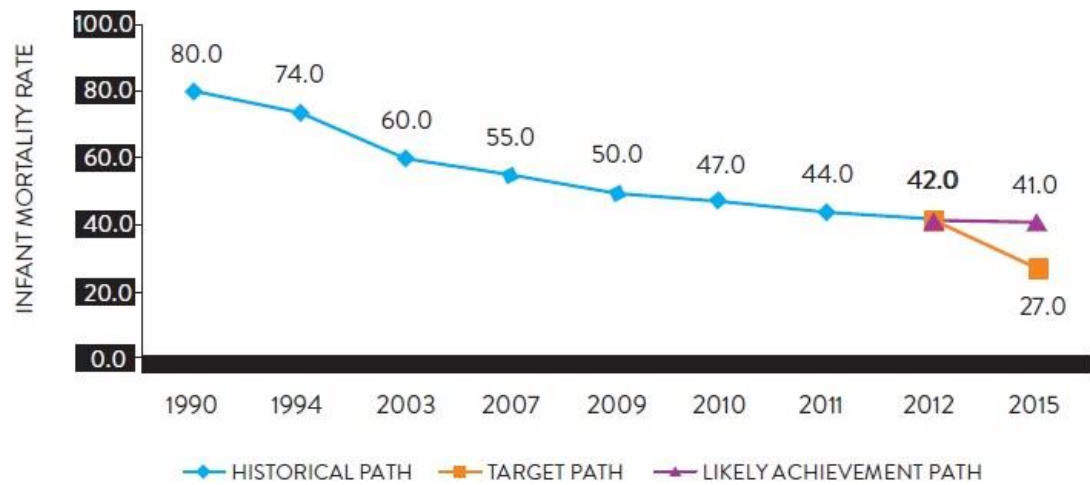
Each year in India, roughly 30 million women experience pregnancy and 28 million result in a live birth. Of these, an estimated 69,000 maternal deaths and one million newborn deaths occur each year. In addition, millions more women and newborn suffer pregnancy and birth related ill-health. Thus, pregnancy-related mortality and morbidity continues to have a huge impact on the lives of Indian women and their newborn.

The maternal mortality ratio is the number of women who die from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 100,000 live births.



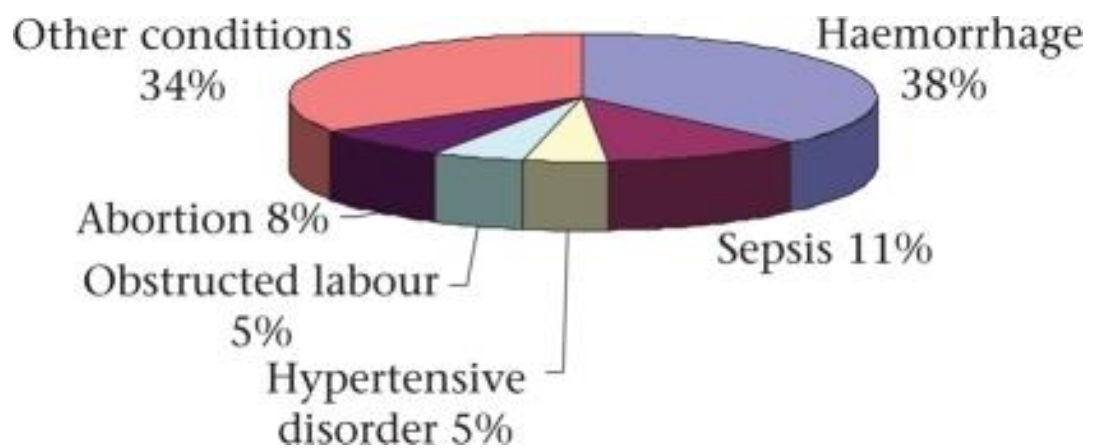
Source: Sample Registration System, Office of Registrar General of India

INDIA INFANT MORTALITY RATE (1990 - 2015)



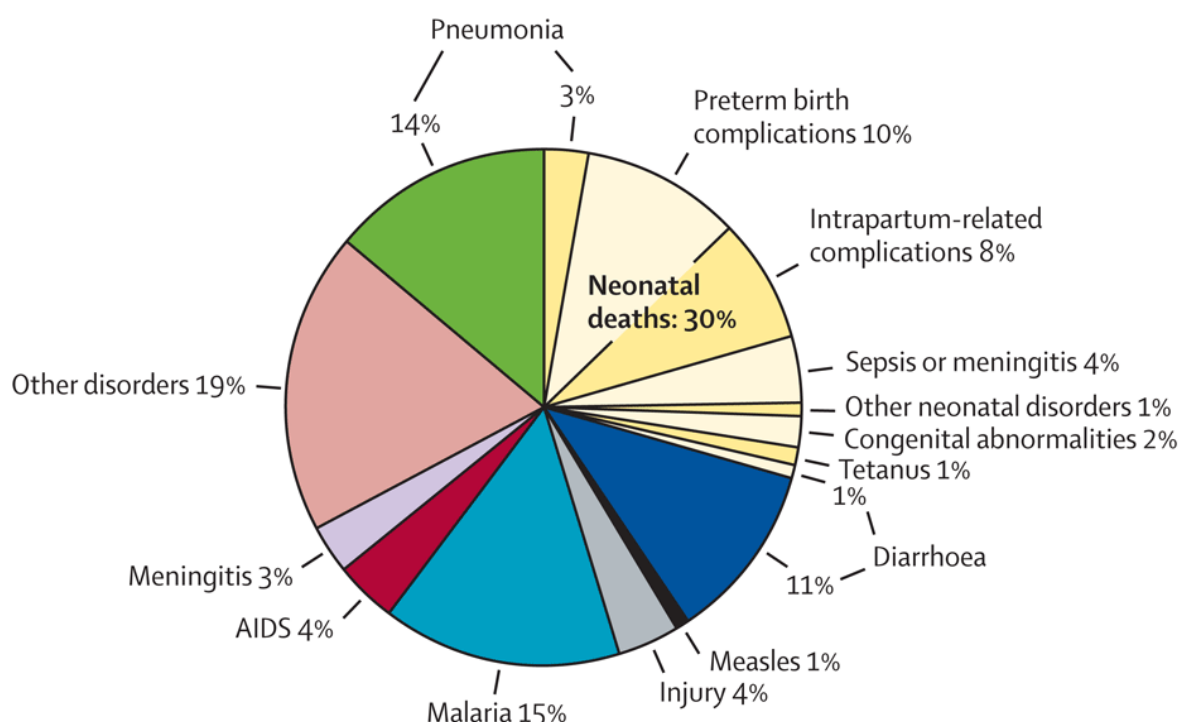
Source: Office of the Registrar General & Census Commissioner, India

Causes of Maternal Mortality in India



Source: RGI (1197-2003)

Causes of Infant Mortality



Source: WHO

As is evident from the data, majority of the maternal and newborn deaths are occurring either during pregnancy or within 48 hours of delivery. This is the time period when the pregnant woman and later both the mother and the newborn are at the health facility. Despite this fact, their deaths are happening which indicates that there is either non-availability of services or non-utilization of the available services.

Public health facilities such as the District Hospital (DH)/Sub-district Hospital (SDH)/Community Health Centre (CHC)/Primary Health Centre (PHC)/Sub-district Health Centre (SHC) are categorized depending on the levels (1, 2 and 3) of maternal and child health care and service delivery. Among these levels, some have been categorized as delivery points based on their performance and case load.

MCH Centres:

Level 3 – (Comprehensive Level-FRU): All FRU-CHC/SDH/DH/area hospitals/ referral hospitals/tertiary hospitals where complications are managed including C-section and blood transfusion. An FRU shall be equipped also with a Newborn Stabilization Unit (NBSU) at CHC/SDH/others or Special Newborn Care Unit (SNCU) at DH and above. A District Hospital irrespective of caseload has to be a Level 3 institution.

Level 2 – (Basic Level): All 24x7 facilities (PHC/Non-FRU CHC/others) providing BEmOC services; conducting deliveries and managing of medical complications (not requiring surgery or blood transfusion) and have either a NBCC or NBSU.

Level 1 – All sub-centres and some PHCs which have not yet reached the next level of 24x7 PHC: where deliveries are conducted by a skilled-birth attendant (SBA). An NBCC must be established in all such facilities.

Delivery points: Provision of service for delivery in a facility generally serves as an important indicator to assess whether the facility is operational or not. The concept of delivery point emerges from this presumption. Among the facilities, designated as L1, L2 and L3 there are some facilities which are conducting deliveries above a minimum benchmark. These facilities are designated as Delivery Points According to Government of India (GoI) mandate; these functional facilities should be the first to be strengthened for providing comprehensive reproductive maternal newborn and child health (RMNCH) services. Benchmarks for each level of facility are based on actual average number of deliveries being conducted per month.

A gap identification and analysis was done at various delivery points in Tikamgarh district of Madhya Pradesh in order to prioritize the activities required to fill these gaps and thus improving maternal and newborn health in the long run.

3. Research Question:

Are the required inputs like essential equipments, skilled human resource, infrastructure and drugs available in the labor rooms of the delivery points in Tikamgarh district of Madhya Pradesh as per the checklists in MNH toolkit?

4. Research Objective:

Specific Objective: To find out the gaps in the availability and utilization of the required inputs, including trained manpower, infrastructure, equipment and drugs at the delivery points in Tikamgarh.

General Objective: Establishing a baseline for monitoring the progress of MCH services, that can further be used for setting targets and strategies by the district administration.

5. Methodology:

Observational Study

Type of study: Descriptive cross sectional study was conducted to assess inputs (infrastructure, equipments, drugs and trained personnel) in the labor rooms of Delivery points in Tikamgarh district of Madhya Pradesh in the duration of 3 months, from February 2107 to April 2017.

Data for the study was collected during the months of February, March and April 2017 by the researcher in Tikamgarh district of Madhya Pradesh to find out the current situation of labor rooms at the delivery points. The primary data was collected from the institutions with the help of checklist provided in the MNH Toolkit which contain the information regarding the RMNCH+A services. The checklist was filled by direct observation, remarks were noted and quality aspects were explored by interaction with respondents.

Number of institutions covered: 8

DH: 1 (Tikamgarh)

CHCs: (Prithvipur, Badagaon, Jatara, Baldeogarh, Niwari, Khargapur, Palera)

Sample Selection: Convenience Sampling of the CHCs.

The only DH was included.

Data Collection Methods:

Primary data was collected by observing available staff in labor room, physical verification of availability and functioning of required infrastructure, drugs and equipments in the labor room. Primary data was collected with the help of checklists provided in the MNH Toolkit as well as the standard assessment lists which have been designed for the use by Monitoring Personnel and the Supportive Supervisors. The checklists were filled either by direct observation or by asking the concerned staff on duty about the listed services or equipment.

6. General Profile of Tikamgarh District:

Tikamgarh District is located in the northern part of Madhya Pradesh. It forms the northwestern part of Sagar District. It lies on the Bundelkhand Plateau between the Jamni, a tributary of Betwa and Dhasan rivers. It extends between the latitude 24 degree 26 minute and 25 degree 34 minute N and between 78 degree 26 minute and 79 degree 21 minute Longitudes. The maximum length of the district is about 119 Km from North to South and width about 80Km. Tikamgarh District is bounded by Chhatarpur district to east, Lalitpur district Uttar Pradesh to West, Jhansi to North and Sagar to South. The western and Eastern boundaries are formed by two big rivers.

Table 1: Demographic Profile – District Tikamgarh (MP)

Indicator	State	District
Total Population (census 2011)	72,626,809	1,445,166
Urban Population		249,873
Rural Population		1,195,293
Male Population		760,355
Female Population		684,811
Crude Birth Rate (AHS- 2012-2013)	24.5	25.9
Crude Death Rate (AHS- 2012-2013)	7.7	7.1
Sex Ratio (census 2011)	931	901
Child Sex Ratio (census 2011)	943	892
Total Literacy Rate (%) (census 2011)	69.32	61.43

Table 2: Major Indicators (AHS- 2012-2013)

SN	Indicator	State	District
1	Maternal Mortality Ratio	227	322 (Sagar Division)
2	Neonatal Mortality Rate	42	43
3	Infant Mortality Rate	62	61
4	U5MR	83	84
5	Total Fertility Rate	3.1	3.3

Results and Findings

7) Labor Room

7.1 Infrastructure

	Separate Labor Room	7 Trays Available	Functional Kelly's Pad	BMWM	Privacy	16 Protocols	Functional NBCC
Prithvipur	Yes	Yes	No	Yes	Yes	No	Yes
Badagaon	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Jatara	Yes	No	No	No	Yes	No	Yes
Niwari	Yes	Yes	No	No	No	No	No
Baldeogarh	Yes	Yes	No	No	No	No	No
Kharagpur	Yes	Yes	No	No	Yes	No	No
Palera	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DH Tikamgarh	Yes	Yes	Yes	No	Yes	No	Yes

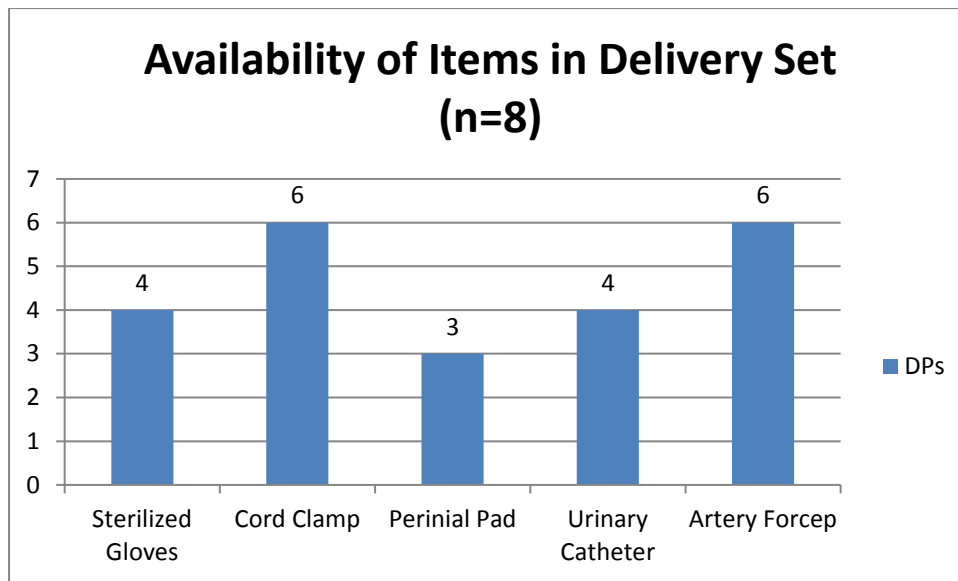
7.2 Practices

	Partograph	AMTSL	Initiating Early Breast Feeding	Inj. Vit K1	0 Day Immunization
Prithvipur	No	Yes	Yes	Yes	Yes
Badagaon	Yes	Yes	Yes	Yes	Yes
Jatara	No	Yes	Yes	Yes	Yes
Niwari	No	No	Yes	Yes	Yes
Baldeogarh	Yes	No	Yes	Yes	Yes
Kharagpur	No	Yes	Yes	Yes	Yes
Palera	Yes	Yes	Yes	Yes	Yes
DH Tikamgarh	Yes	Yes	Yes	Yes	Yes

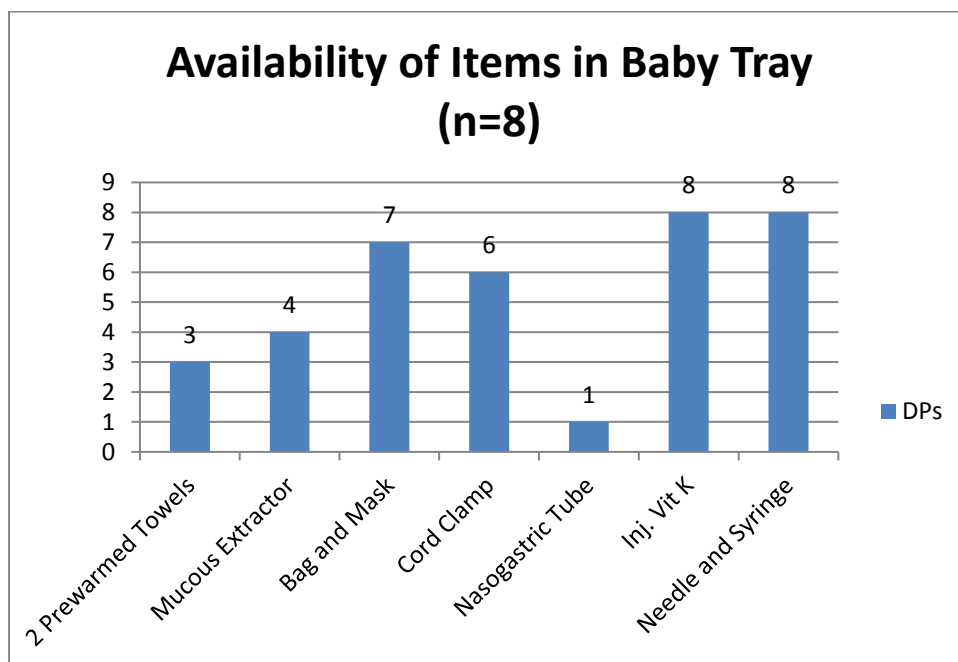
7.3 Equipment

	Autoclave	Delivery Kit
Prithvipur	No	No
Badagaon	No	Yes
Jatara	No	No
Niwari	No	Yes
Baldeogarh	No	No
Kharagpur	No	No
Palera	No	Yes
DH Tikamgarh	No	Yes

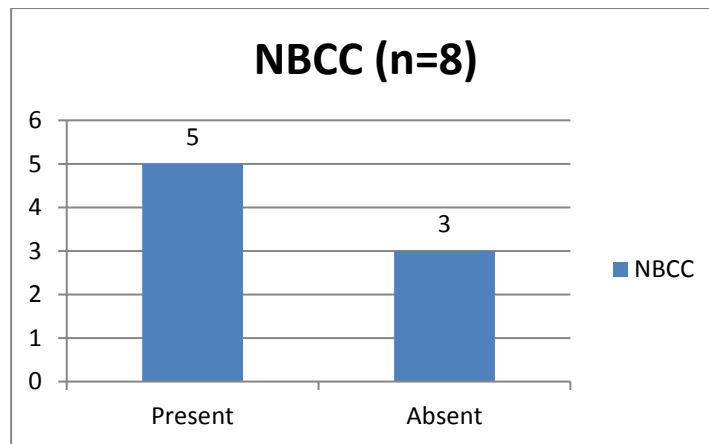
7.4 Delivery kit



7.5 Baby Tray

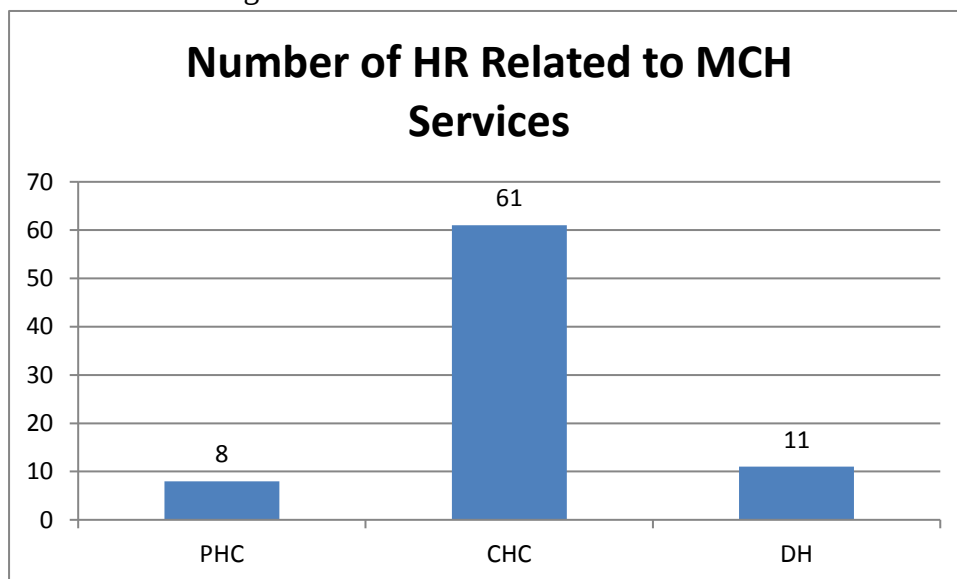


8) New Born Care Corner



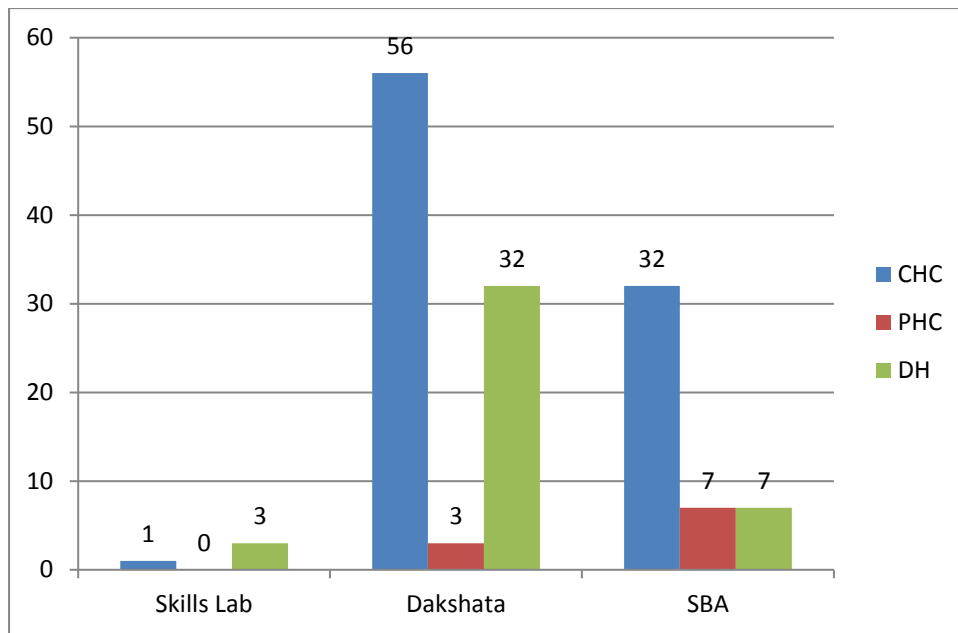
9) Human Resource

Number of Existing HR Related to MCH Services



10) Training

Training Status of HR Related to MCH Services:



Discussion:

As is seen from the data collected and presented in the form of graphs, the outcome of pregnancy is positive (i.e. safe delivery of a healthy newborn and a healthy mother) when there are all the inputs as per the standard guidelines, including infrastructure, equipment, drugs, trained staff and following of standard procedures.

Filling of the partograph is important to recognise the danger signs, if any, in the pregnant women. Therefore, it is of great importance that all the staff is well trained and experienced in filling the partograph accurately. This would help in timely detection of danger signs and thus timely initiation of corrective measures to be taken.

A functional radiant warmer is necessary, without fail, to ensure the management of any newborn who has either respiratory distress/ birth asphyxia or is of low birth weight. Such newborns need essential newborn care which cannot be provided at the labor table or in the mother's lap. The radiant warmer is necessary to prevent hypothermia in the newborn and also if the newborn requires resuscitation.

For the purpose of new born resuscitation, a functional ambu bag with masks of sizes 0 and 1 should always be available at the radiant warmer. Also, it is imperative that the staff posted in the labor room is trained to use it effectively on the newborn.

The training of the staff posted in the labor room is also of paramount importance, because if the staff is not knowledgeable about the standard protocols and procedures to be followed, mistakes are bound to happen which may turn out to be harmful to the woman and her child.

Sterilization and Bio Medical Waste Management are also of great importance in order to control infection, both to the mother and the newborn. Proper sterilization of all the instruments used during delivery and resuscitation, if required, is mandatory to prevent infection. Also, all the soiled material should be disposed off as per the BMWM protocols, so that it can be sent to the processing effectively.

All the above mentioned points are a part of the checklists which are used during the monitoring and supervision visits to the delivery points. They are, no doubt, of great importance during and after the delivery so that a positive outcome is got from the woman's pregnancy and in the long run, to reduce Maternal Mortality and Neonatal Mortality.

Conclusion:

As is evident from the study, the load of Maternal Deaths and Neonatal Deaths can be reduced to a large extent if all the protocols regarding infrastructure, equipment and drugs, trained Human resource are followed as per the guidelines and standards. Also the procedures which are to be followed in the labor room as well as during PNC are to be as per the standards. All these factors combined, along with a positive supportive supervision and good communication at all levels (block-district-state) in order to converse and fill the gaps, are the key to deliver satisfactory services to pregnant women. Only planning and initiating programs once is not the way to meet the goals or objectives of any programme. For this, regular monitoring and supervision is required, starting right from the ground level up to the highest administrative level. Only then will the gaps be identified in time, and corrective measures planned and appropriate action taken.

Around 70 percent of maternal deaths can be prevented by small interventions which required availability and functionality of adequate essential equipments, drugs, skilled human resource, and infrastructure (WHO 2014).