Facility Survey of Delivery Points in Panna District, Madhya Pradesh

By

Usha Kiran

Dissertation submitted for the partial fulfillment of the

MBA Hospital and Health Management

Academic year, 2015-2017

The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer, Airport
Jaipur 302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: **www.iihmr.edu.in**

Facility Survey of Delivery Points in Panna District, Madhya Pradesh

By

Usha Kiran

Dissertation submitted for the partial fulfillment of the

MBA Hospital and Health Management

Academic year, 2015-2017

National Health Mission, Madhya Pradesh

The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer, Airport
Jaipur 302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: www.iihmr.edu.in

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that Usha Kiran student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone dissertation training at National Health Mission, Madhya Pradesh from 6 February 2017 to 5 May 2017.

The Candidate has successfully carried out the study designated to her during dissertation training and her approach to the study has been sincere, scientific and analytical.
The Dissertation is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.

Col(Dr.) Ashok Kaushik
Dean, Academics and Student Affairs
The IIHMR University, Jaipur

Dr. Anoop Khanna
Professor
The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Near Sanganer Airport, Jaipur- 302029, Rajasthan, India.
Ph.: 0141- 3924700, 2791431- 32, Fax: 0141 3924738, E-mail: iihmr@iihmr.edu.in, Web.: www.iihmr.edu.in

कार्यालय मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी जिला पन्ना म.प्र.

D.N 4759 12/5/17

The certificate is awarded to

Dr Usha Kiran

In recognition of having successfully completed her

Dissertation in the department of

District Health Society, Panna

And has successfully completed her study on

"Facility Survey of Delivery Points in Panna District of Madhya Pradesh"

Duration of three months (06th February to 09th March in Bhopal and till 06th May in Panna)

Organization:

National Health Mission, Madhya Pradesh

She came across as a committed, sincere and diligent person who has a strong drive and zeal for learning

We wish her all the best for her future endeavors

जिला कार्यक्रम प्रबंधक
एन.एच.एम. जिला पन्ना

मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी
जिला पन्ना (म.प्र.)

CERTIFICATE BY SCHOLAR

This is to certify that Facility Survey of Delivery Points in Panna Distict of Madhya Pradesh--A Study, submitted by Dr. Usha Kiran, Enrollment No. IIHMR-U/01/2015-17/0359 under the supervision of Dr. Anoop Khanna for award of Postgraduate MBA in Hospital and Health 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.

Usha Kiran

Signature

THE IIHMR 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 Panna district of Madhya Pradesh".

Signature of student

ACKNOWLEDGEMENT

I feel privileged in expressing my kindest gratitude to ***Dr. L. K. Tiwari (CMHO, Panna, MP)*** *under whose able guidance and supervision this study was conducted. The keen interest he evinced throughout this period and the graciousness with which he gave his valuable advice was his exclusive acumen.*

I also feel privileged in expressing my thanks to ***Smt. Jyoti Mandloi*** *(DPM, Panna) 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, Panna, MP. They extended their wholehearted co-operation in different phases of my project.

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.

(USHA KIRAN)

PREFACE

Internship Training is an integral part of MBA Hospital and Healthcare Management as part of curriculum of the course students of the 2nd year are required to undergo Internship and get better understanding of Health Care System.

- Overall monitoring and supervision of Maternal and Child Health Programs and Services as well as Resources under Package of Reproductive and Child Health Programme/National Rural Health Mission, District Health Society.
- Provision of Consultant Support to district and peripheral level programme support staff and grass root level functionaries.
- Monitoring of Maternal and Child Health Resources including Contractual Staff under RCH II/NHM Programme which will include relating to posting, transfer, Performance Monitoring, training etc.
- Monitoring of Financial Matters and guide the accountant in matters related to expenditure, releasing grant, Preparation of budget.
- Supervision and Assign Task to DPMU Staff, Nursing Mentor and establishing proper monitoring System and Provide Feedback Mechanism and Provide feedback for improvement.
- Overall logistic Management related to Maternal and Child Health, DPMU Panna.
- Necessary Support to Technical Consultants appointed at field level during the field visits.
- Analysis of Financial and Physical Progress Report and Corrective measures to improve the same regarding maternal and child health component.
- Identification of cause of unreasonable delay in achievement of milestones.
    - Regular report and feedback on Programme to MOH.

Abbreviations:

AMTSL: Active Management of Third Stage of Labor

ANM: Auxillary Nurse Midwife

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

PPH: Post-Partum Hemorrhage

RBSK: Rashtriya Bal Suraksha Karyakram

SHC: Sub-district Health Centre

SNCU: Special Newborn Care Unit

WHO: World Health Organization

Abstract

Background

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.

Objectives

To find out the gaps in the availability, functionality and utilization of the required inputs, including trained manpower, infrastructure, equipment and drugs at the delivery points in Panna, so as to plan and act to fill the gaps accordingly.

Methodology

Using a Supportive Supervision checklist, a mixed- method study(qualitative and quantitative research); descriptive, cross-sectional study was conducted to asses Gaps in inputs including infrastructure, equipment and drugs, trained Human resource in 8 delivery points in Panna, Madhya Pradesh

Results

The majority of the respondents (73.8%) had good general knowledge of the protocols followed in Labor Room but lacked detailed and in-depth knowledge of the component parts of the partograph, AMTSL, PPH management, pre-eclampsia and eclampsia mangement. knowledge of seven delivery trays setup. Factors affecting utilization were: little or no knowledge of the partograph (50%) in monitoring labor, also lack of detailed knowledge on AMTSL, PPH management(60%), availability of non- expired drugs(40%), shortage of staff (51.5%), and the fact that most of the staff were less motivated towards their work.

Conclusion

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. 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.

Keywords: Availability, Utilization,Functionality, protocols, Partograph, Labor Room monitoring, Equipments.

Table of Contents

1. *Introduction*

The Government of India is committed and focused on reducing maternal and newborn mortality in the country. Substantial 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 widely 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.

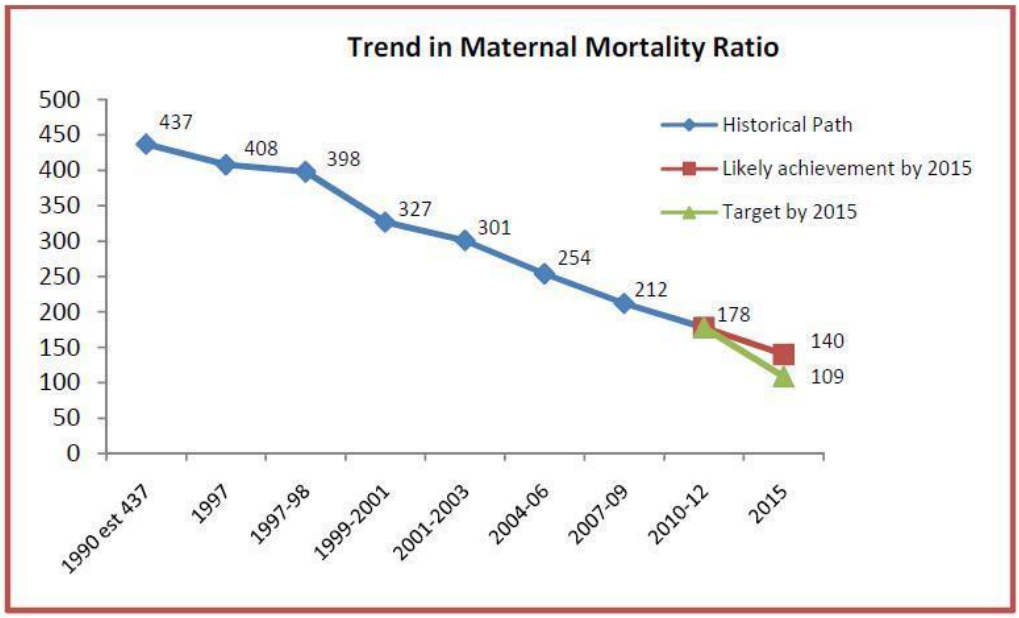
Gap analysis was conducted at the delivery points in Panna, which is one of the 17 High Priority Districts of Madhya Pradesh, to provide information for prioritizing the interventions so as to meet the objectives of reducing maternal and child deaths. This baseline data can also be used for setting targets 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 t he deficiencies and strengthen the health system.

1. *Literature Review*:

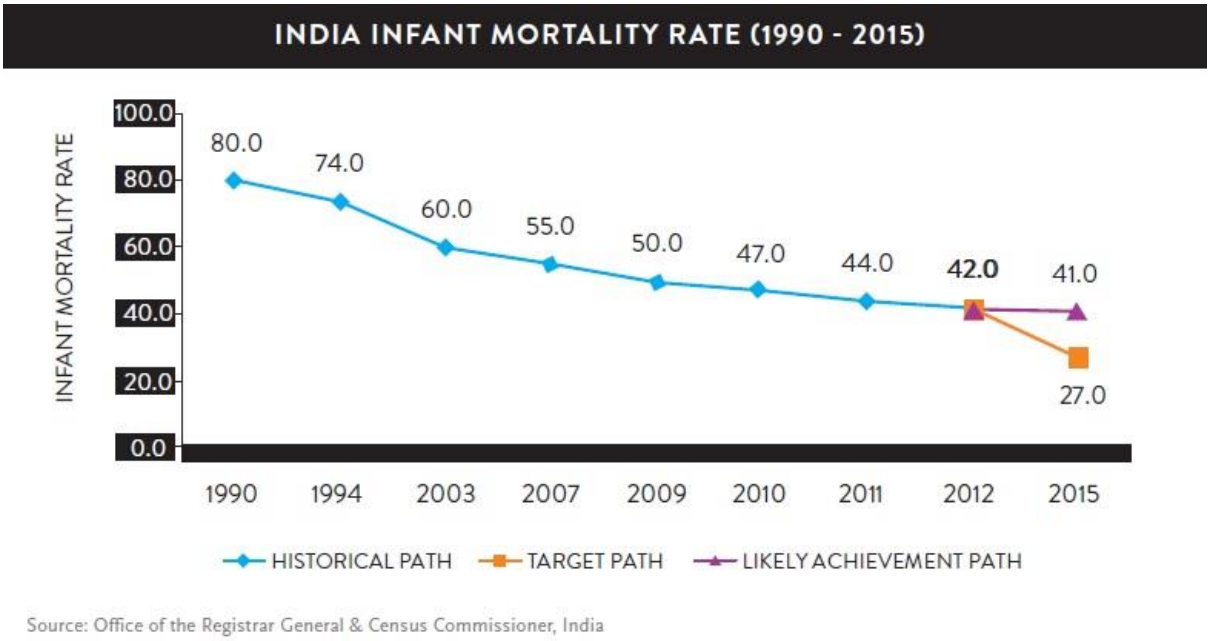
Each year in India, roughly 30 million women experience pregnancy and 28 million have a live birth. Of these, an estimated 69,000 maternal deaths and one million newborn deaths occur each year. In addition, millions more women and newborn suffer pregnancy and birth related ill-health. Thus, pregnancy-related 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

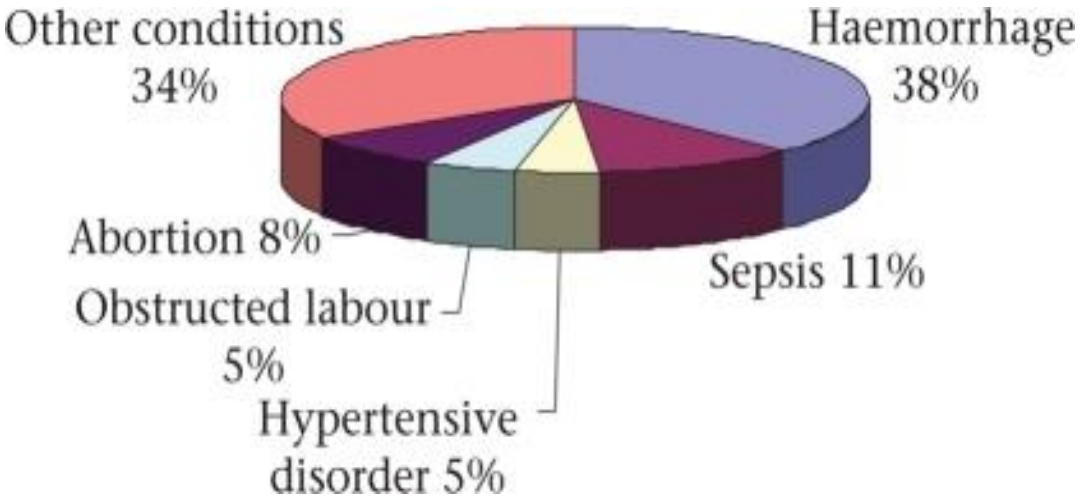
Figure 1



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

Figure 2

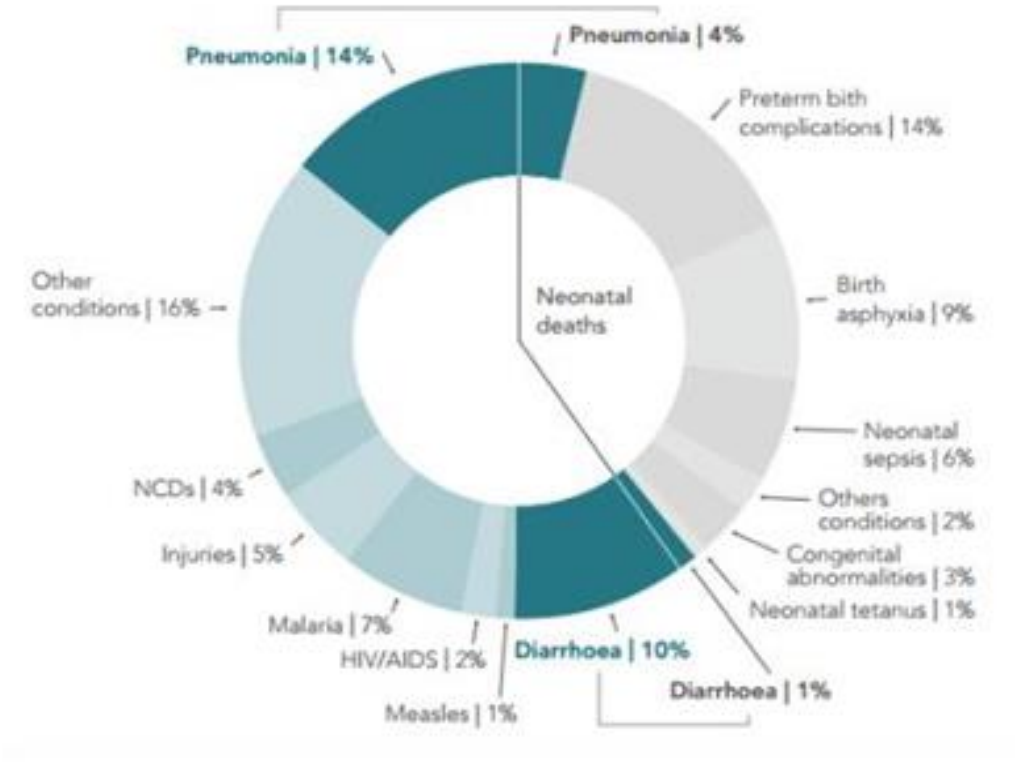
Causes of Maternal Mortality in India



Source: RGI (1197-2003)

Figure 3

Causes of Infant Mortality



Source: WHO

Figure 4

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 Panna 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.

2. *Research Question:*

1. Are the required inputs like essential equipments, skilled human resource, infrastructure and drugs available in the labor rooms of the delivery points in Panna district of Madhya Pradesh as per the checklists in MNH toolkit and Supportive Supervision checklist?
2. Are the required inputs functional i.e. are services being provided by using these inputs in Panna district of Madhya Pradesh?
3. What is the pattern of utilization of health services in Panna district in Madhya Pradesh?

3. *Research Objective:*

4.1 GENERAL OBJECTIVES

To assess the current status in the availability, functionality and utilization of the required inputs, including trained manpower, infrastructure, equipment and drugs at the delivery points in Panna, so as to plan and act to fill the gaps accordingly.

4.2 SPECIFIC OBJECTIVES

1. To assess the current status in the availability of the required inputs.
2. To assess the current status in the functionality of the required inputs
3. To delineate the pattern of utilization of health services in the district Panna of Madhya Pradesh.

4. *Methodology:*

The main objective of conducting district level situation analysis in high priority district Panna of Madhya Pradesh is to rapidly understand the gaps in implementation of a set of strategic MCH services, so that a baseline for monitoring the progress of MCH is established, that can also be used for setting targets and strategies by the district administration.

5.1 Study Design

The study is mixed method study and employs a Descriptive, Cross-Sectional design that involves a closed ended questionnaire based survey. And was conducted to assess gaps in inputs (infrastructure, equipments, drugs and trained personnel) in the labor rooms of Delivery points in Panna district of Madhya Pradesh in the duration of 3 months, from February 2107 to April 2017.

5.2 Study Setting

The study was conducted in the delivery points in Panna district of Madhya Pradesh, during the months of February to April, 2017.

5.3 Sample Size

Sample size- 8 delivery points including 1 PHC, 6 CHCs and 1 DH. Total staff interviewed - 36 i.e. 25 SN out of 42, 11 ANM out of 24
Number of institutions covered:

DH: 1 (Panna)

CHCs: (Devendra nagar, Ajaygarh, Amanganj, Pawaii, Shahnagar, Gunnor)

PHCs: (Saleha, Raipura, Mohendra, Dharampur, Simaria)

Sample Selection: Convenience Sampling of the PHCs. i.e. PHC-Raipura

All CHCs were included.

The only DH was included.

5.4 Data Collection Methods:

Primary data will be 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 in Supportive Supervision checklist 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.

5.5 Study Tool

For qualitative and quantitative analysis, Primary data was collected by observing staff in labor room, physical verification of availability and functioning of required inputs in labor room.

- Inputs- trained manpower, infrastructure, equipment and drugs.

For this survey checklist in MNH Toolkit, Supportive Supervision Checklist was used.

6. General Profile of Panna District:

Panna District is located in the northern part of Madhya Pradesh. Panna district lies between 23° 45' and 25° 10' north latitudes and 79° 45' and 80° 40' east longitudes. It has an area of 7,135 km^2. It forms the northwestern part of Sagar District.

Total Population (census 2011): 10,16,028

Urban Population: 1,25,321

Rural Population: 8,90,707

Population Growth: 18.06%

Density: 140/km^2

Literacy: 66.08%

Table 1: Demographic Profile – District Panna (MP)

Indicators	National	State	Panna District
1. Maternal Mortality Ratio	167	221	322
2. Neonatal Mortality Rate	28	42	43
3. Infant Mortality Rate	40	54	85
4. U5MR	52	69	127
5. Total Fertility Rate	2.4	2.9	4.1
6.Crude Birth Rate	21.6	24.5	31.3
7.Crude Death Rate	7	7.7	11.3
8.Sex Ratio	940	930	959

Table 2: Child Survival Statistics- District Panna (MP)

Indicators	AHS 2011-2012	AHS 2012-2013	Yearly Change
1.Infant Mortality Rate	90	85	5
2. Neonatal Mortality Rate	65	61	4
3.Post NMR	25	24	1
4. U5MR	133	127	6
5. Maternal Mortality Ratio	386	322	64

7. *Results*

Labor Room

7.1 Infrastructure

	Separate Labor Room	7 Trays Available	Functional Kelly's Pad(Rubber)	BMWM	Privacy	16 Protocols	Functional NBCC
Raipura	Yes	Yes	No	Yes	Yes	Yes	Yes
Gunnor	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pawaii	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Amanganj	Yes	No	No	Yes	No	Yes	No
Ajaygarh	Yes	No	No	No	No	No	No
Shahnagar	Yes	No	No	Yes	No	No	No
Devendra Nagar	Yes	Yes	No	Yes	Yes	Yes	Yes
DH Panna	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7.2 Practices

	Partograph	AMTSL	Initiating Early Breast Feeding	Inj. Vit K1	0 Day Immunization
Raipura	Yes	Yes	Yes	Yes	Yes
Gunnor	Yes	Yes	Yes	Yes	Yes
Pawaii	No	Yes	Yes	Yes	Yes
Amanganj	No	No	Yes	Yes	Yes
Ajaygarh	No	No	Yes	Yes	Yes
Shahnagar	No	No	Yes	Yes	Yes
Devendra nagar	Yes	Yes	Yes	Yes	Yes
DH Panna	Yes	Yes	Yes	Yes	Yes

7.3 Equipment

	Autoclave	Delivery Kit
Raipura	No	Yes
Gunnor	No	Yes
Pawaii	No	Yes
Amanganj	No	No
Ajaygarh	No	No
Shahnagar	No	Yes
Devendra nagar	Yes	Yes
DH Panna	Yes	Yes

7.4 Delivery kit

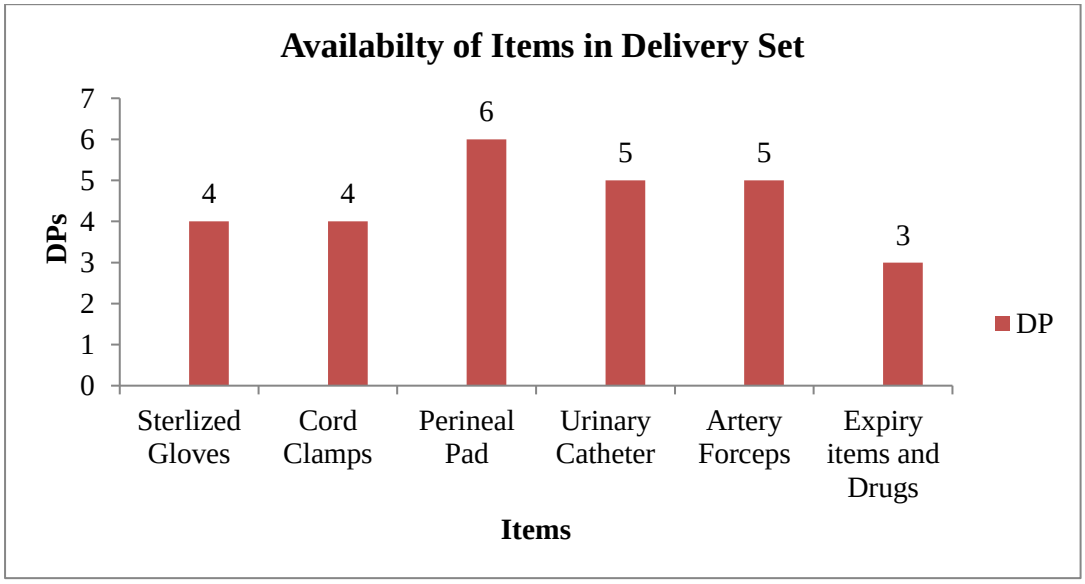


Figure 5

7.5 Baby Tray

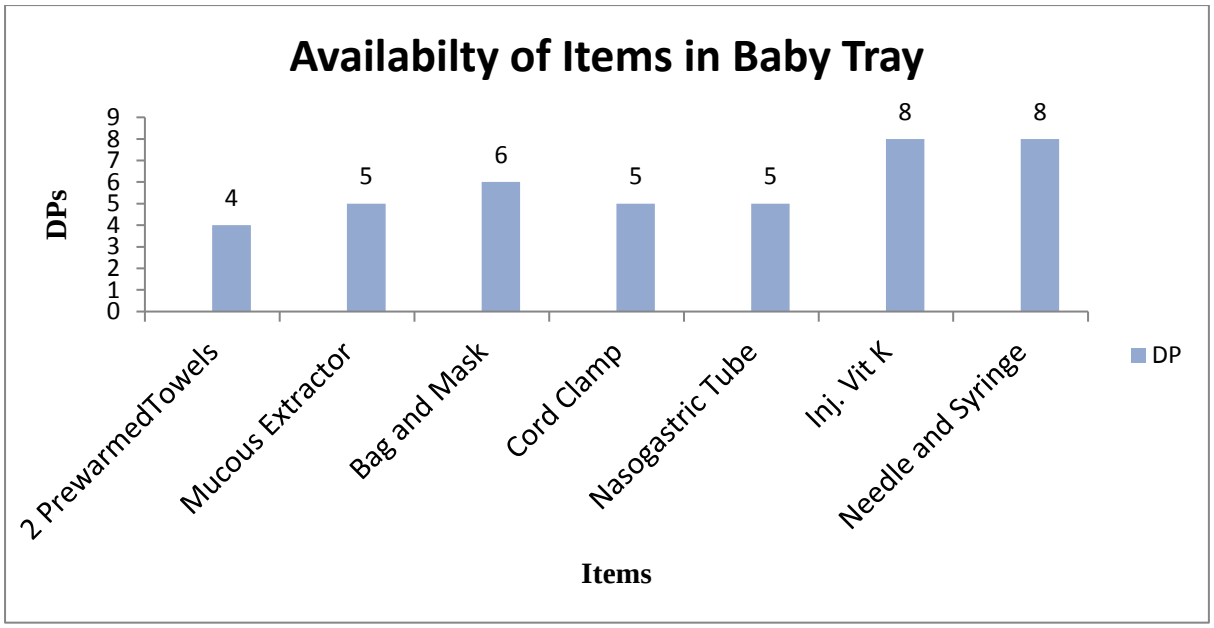


Figure 6

7.6 Intra-partum and Immediate Post- partum Practices

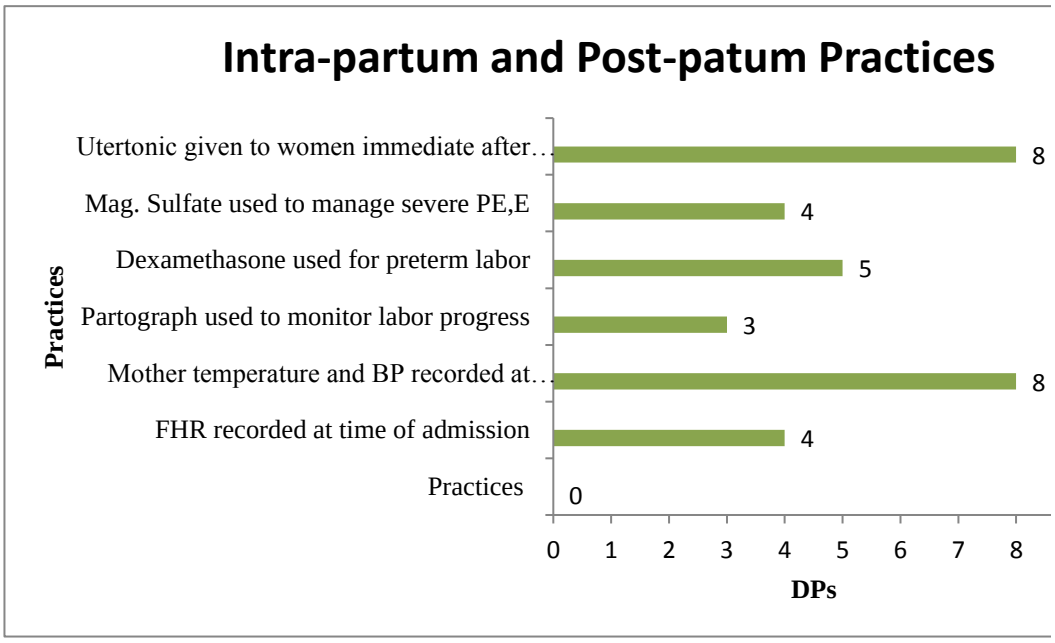


Figure 7

7.7 Functionality of Available Essential Supplies

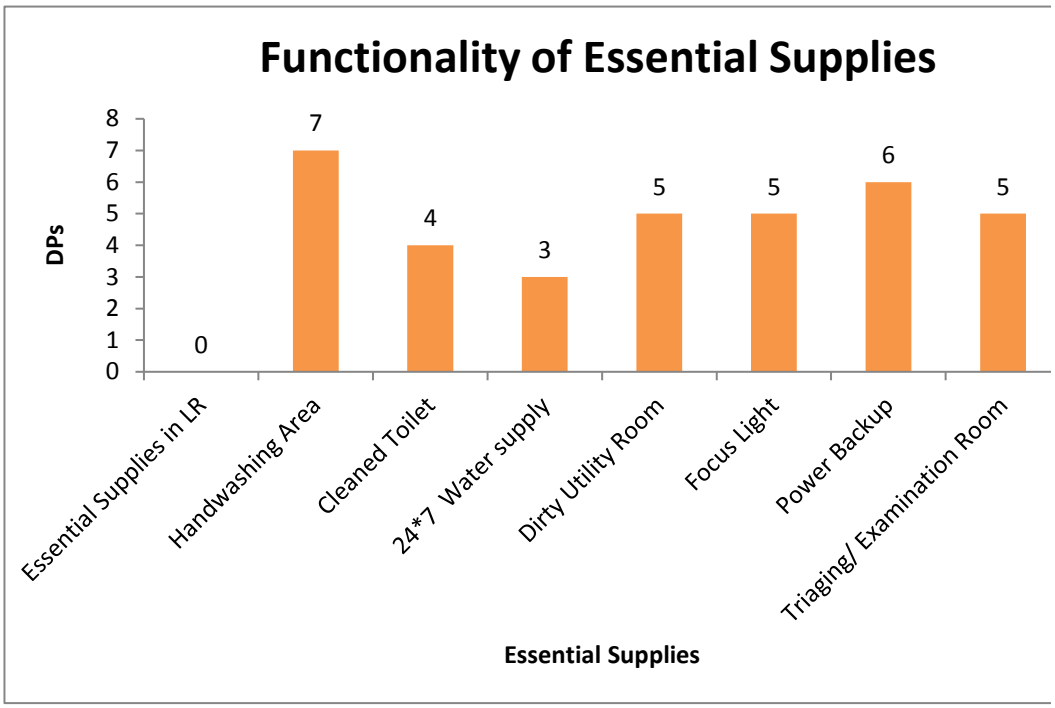


Figure 8

8. Utilization of Essential Supplies

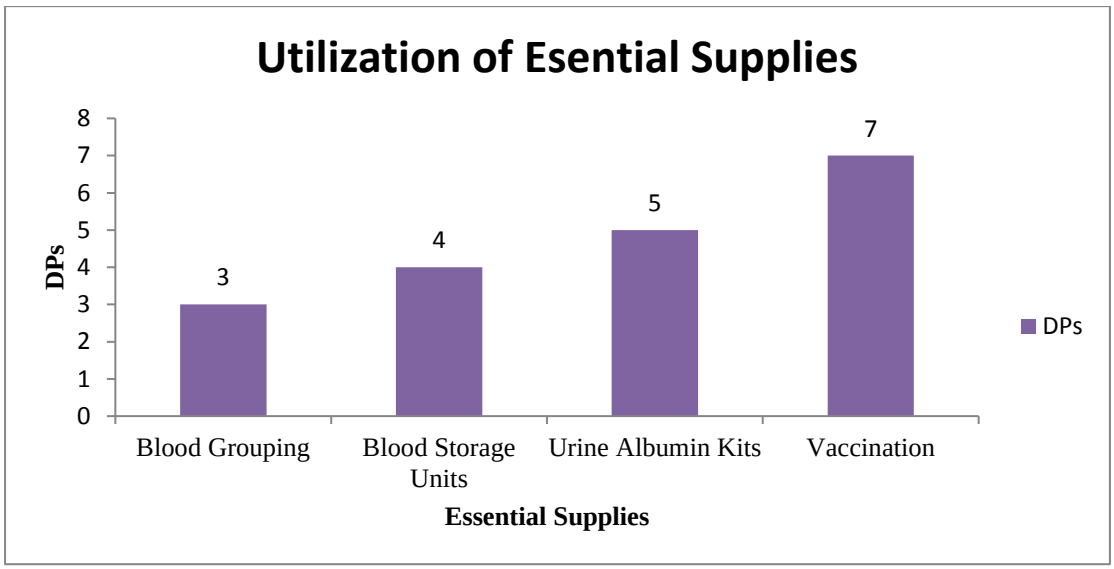


Figure 9

9. Human Resource

Number of Existing HR Related to MCH Services

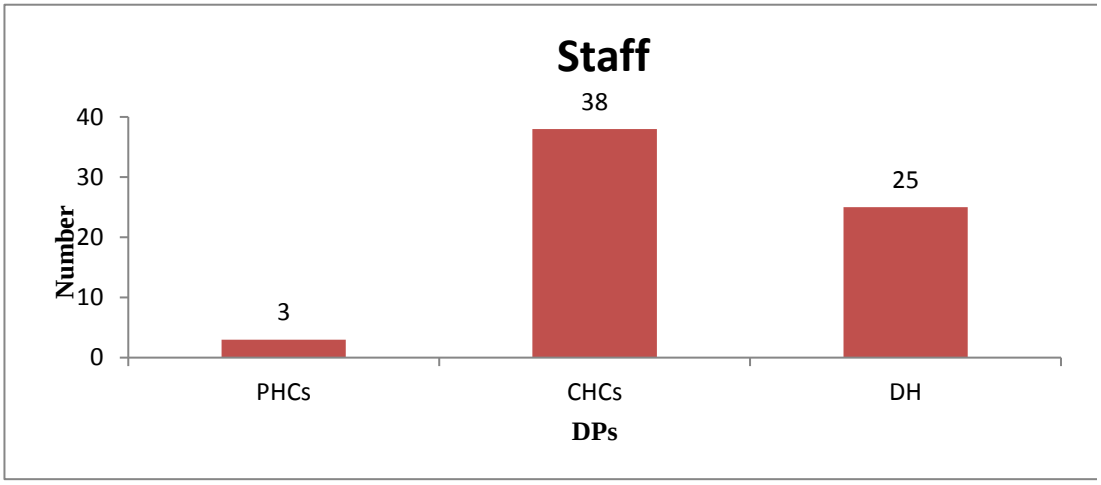


Figure 10

10. Training

Training Status of HR Related to MCH Services:

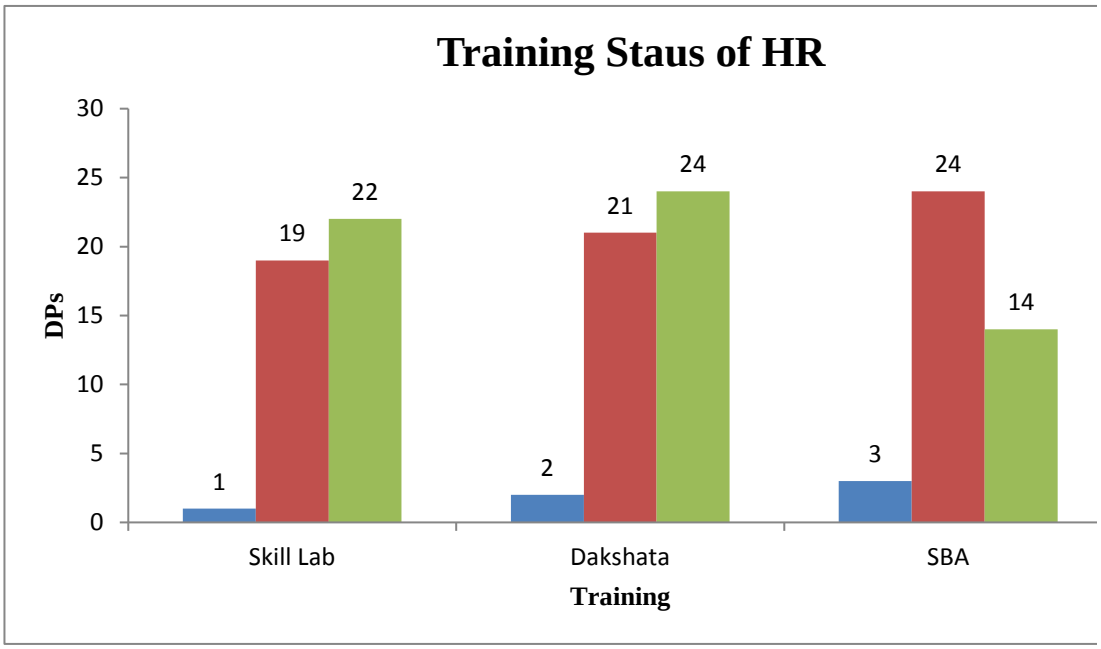


Figure 11

8 *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.

9. 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 intervention which required availability and functionality of adequate essential equipments, drugs, skilled human resource, and infrastructure (WHO 2014).

10. References

- Faizi, A.A. (1996): Planning Of Health Services in Madhubani District of Bihar. A Study on Availability, Accessibility, Utilization and Location of Future PHCs. Unpublished Ph.D. Thesis.

- Ghosh, B.N. and A.B. Mukherjee (1989): An analysis of public health services coverage of primary healthcare in West Bengal. Journal of Public Health XXXIII (1) 26-30

- KS Joseph and MS Kramer
  Review of the evidence of fetal and early childhood antecedents of adult chronic disease
  Epidemiol Rev, 18(1996), 158-174