Study on Maternal Health Care Indicators in District of Madhya Pradesh

By

Sanjana Lamba

Dissertation submitted in partial fulfillment of the requirements of the degree

MBA Hospital and Health Management

Academic year, 2018-2020

The IIHMR University, Jaipur

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

Study on Maternal Health Care Indicators in District of Madhya Pradesh

By

Sanjana Lamba

Dissertation submitted in partial fulfillment of award of

MBA Hospital and Health Management

Academic year, 2018-2020

Victoria Hospital Jabalpur

The IIHMR University, Jaipur

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

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **A STUDY ON MATERNAL HEALTH CARE INDICATORS IN DISTRICT OF MADHYA PRADESH** and submitted by Sanjana Lamba Enrollment No. 0818 under the supervision of Dr. Nutan P. Jain for award of MBA in Hospital and Health in Health and Hospitals of the University carried out during the period from 6thMarch 2020 to 7th June 2020 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.

Signature

ABSTRACT

A STUDY ON MATERNAL HEALTH CARE INDICATORS IN DISTRICT OF MADHYA PRADESH

Author: Sanjana Lamba

Background: Maternal health is the health of women during pregnancy, childbirth, and the postpartum period. Healthcare Services can provide an opportunity to identify existing health risks in women and to prevent future health problems for women and their children. Madhya Pradesh is one of the states where maternal health indicator needs to be improved

Objectives: The objectives of the study were: (i) to review the maternal health program, and schemes implemented in MP. (ii) to study the common maternal health indicators by districts during 2015-16 as per NFHS-4 and NHSRC and (iii) to compare common maternal health indicators of NFHS 4 and NHSRC district fact sheets.

Methodology: Review of literature related to maternal and child health was done. The sources of data were National Health System Resource Center, New Delhi website and National Family Health Survey (NFHS 4); for the period 2015-16 because both the data sources are contemporary.. Government initiatives and schemes related to maternal and child health's were reviewed. Common indicators from the district fact sheet of Madhya Pradesh were studied and compared and analysis was done.

Key Results: According to NFHS 4 and NHSRC, districts like Shahdol, Sidhi recorded least Ante Natal checkup in first trimester whereas Indore division recorded highest Ante Natal checkup in the state, consumption of IFA tablet by pregnant women in Jabalpur division were at low risk of Anemia while Rewa, Sidhi, and Singrauli were at higher risk, Chambal division recorded the highest number of mothers receiving financial assistance under JSY while Indore division was recorded as lowest. Also Indore recorded the highest number of institutional deliveries in the state.

Conclusion: Districts like Sidhi, Rewa and Hoshangabad were the low performing districts as per both the data sources and the services needs to be strengthened while Bhopal was found to be high performing district among others

Key Words: NFHS 4, NHSRC, Ante Natal Care, Institutional Delivery, Madhya Pradesh

ACKNOWLDGEMENT

A successful project is a fruitful culmination of efforts by many people, some directly involved and some others who quietly encouraged and extended their support from the background.

With gratitude I acknowledge my indebtedness to the University President, **Prof. (Dr.) Pankaj Gupta** for fostering an excellent academic environment in this institution and also providing excellent facilities, which made my Endeavour possible. Faculties has always been an able guide and a remarkable source of inspiration whose unflagging zeal has catalyzed to strive for greater heights during the span of course in this institution.

I am fortunate to have Dr. Nutan P. Jain**,** Professor IIHMR UNIVERSITY, as my guide. I express my deep sense of gratitude and whole hearted and profound thanks to her for her constant guidance and encouragement throughout the project.

Last but not the least I thank my parents, classmates, friends and all who directly or indirectly have helped me throughout this project.

Finally, I would like to thank the Almighty for giving me strength and patience to work.

NAME: SANJANA LAMBA

TABLE OF CONTENT

I. LIST OF FIGURES

II. LIST OF TABLES

III. LIST OF ABBREVIATION

ASHA - Accredited Social Health Activists

ANC - Antenatal Care

ANM - Auxiliary nurse midwife

APH - Antepartum Haemorrhage

BCG - Bacille Calmette Guerin

CS - Caesarean Section

DPT - Diphtheria, pertussis, and tetanus.

EmOC - Emergency Obstetric Care

HPS - High Performing states

HIV - Human Immunodeficiency Virus

HMIS - Health Management Information System

IFA - Iron Folic Acid

JSY - Janani Suraksha Yojana

JSSK - Janani Shishu Suraksha Karyakaram

LaQshya - Labour room Quality Improvement Initiative

LPS - Low Performing States

LHV - Lady Health Visitor

MHRC - Maternal Health Rights Campaign

MMR - Maternal Mortality Ratio

MoHFW - Ministry of Health and Family Welfare

MP - Madhya Pradesh

MDG - Millennium Development Goals

MMSSPSY - Mukhya mantri Shramik Sewa Prasuti Sahayata Yojna

NFHS - National Family Health Survey

NRHM - National Rural Health Mission

NHSRC - National Health Systems Resource Centre

NHM - National Health Mission

NITI - National Institution for Transforming India

NQAS - National Quality Assurance Standards

OT - Operation Theatre

OPV - Oral Polio Vaccine

PMMVY - Pradhan Mantri Matru Vandana Yojana

PMSMY - Pradhan Mantri SurakshitMatritva Yojana

PNC - Postnatal Care

PPH - Postpartum Hemorrhage

RMNCH+A - Reproductive, Maternal, Newborn, Child and Adolescent Health

RMC - Respectful Maternity Care

SBA - Skilled Birth Attendant

SMART - Specific, Measurable, Attainable, Relevant, Time bound

SDGs - Sustainable Development Goals

TT - Tetanus Toxoid

UT - Union Territories

USG - Ultrasonography

VDRL - Venereal Disease Research Laboratory

WCD - Women and Child Development

WHO- World Health Organization

1. INTRODUCTION:

Maternal health is the health of women during pregnancy, childbirth, and the postpartum period. It encompasses the health care dimensions of family planning, preconception, prenatal, and postnatal care. Mother's health is a positive and fulfilling experience, in most cases, and for many women it is associated with suffering, ill health, and maternal morbidity and mortality. Although, reducing maternal mortality at times requires different strategies for promoting maternal health, as they are integrally related.

It is widely accepted that the use of maternal health services helps in reducing maternal morbidity and mortality. However, the utilisation of maternal health services is a complex phenomenon influenced by many factors. Health care utilization overall, and for maternal health specifically, has improved in India. These community health workers (Accredited Social Health Activists, Auxiliary Nurse Midwives, Anganawadi worker, staff nurses) provide routine antenatal care in the home or government run centres (sub-centre, primary health centre, community health centre). Anganawadi workers provide the most basic health services, while Accredited Social Health Activists (ASHA) are facilitators for care, providing prevention and education.

Maternal complications and poor perinatal outcome are highly associated with nonutilisation of antenatal and delivery care services and poor socioeconomic conditions of the patient. It is essential that all pregnant women have access to high quality obstetric care throughout their pregnancies.

India has made extensive efforts to achieve the same, which are visible through the sharp increase in the rate of institutional births (NFHS 4), but the concurrent high incidences of maternal mortality present a contradictory picture of the nation's progress in improving maternal health. Despite of the boom in the medical and health sector that India has witnessed in the past decades, progress in reducing maternal mortality at the national level is disappointing.

1.1 Antenatal , Postnatal care and Institutional delivery:

Antenatal care has been termed as one of the "four pillars" of safe motherhood by the WHO. High-quality antenatal, intra-natal and postnatal care and emergency obstetric care are the most important ways to reduce the maternal morbidity and mortality.(2) One of the strategies that has been adopted by the Indian government to combat high rates of maternal mortality is to ensure universal access to Antenatal Care (ANC), Emergency Obstetric Care (EmOC) and Skilled Birth Attendance. (3)

In India, although the institutional deliveries or birth by skilled attendants has increased many folds as per the NFHS 4, the coverage of full ANC and its components is still very low. (2) ANC full coverage which includes receipt of 3+ ANC, at least one dose of Tetanus Toxoid (TT) and consumption of 100 Iron Folic Acid (IFA) tablets or syrup is only 21 percent. When looked separately, IFA supplements for 90 days, an important intervention for reducing and preventing anemia among pregnant women is as low as 30 percent. Clearly, the utilization of health services is mainly limited to the hospital-based deliveries. This indicates that majority of pregnant women in the country are still not even getting the basic recommended ANC services. ANC is the gateway for other healthy behaviors adopted during and after pregnancy, like institutional delivery, providing newborn care, exclusive breastfeeding, complimentary feeding.(4) The maternal mortality and newborn mortality is expected to decline due to the presence of skilled birth attendants, supported by the essential infrastructure and referral services when required.

1.2 Sustainable Development Goals

With new Sustainable Development Goal (SDG) to reduce maternal mortality ratio to 70 per 100,000 live births by the year 2030, India needs to move beyond the hospital-based approach in addressing the reproductive health issues. (15)

India is one of the 193 signatories that accepted the Sustainable Development Goals (SDGs) agenda in the year 2015. SDGs are monitored at three different levels- Global, Regional and National. SDG-3 talks about good health and well-being. It addresses all major health priorities,

including reproductive, maternal and child health; communicable, non-communicable and environmental diseases; universal health coverage; and access for all to safe, effective, quality and affordable medicines and vaccines.(15) It also calls for more research and development, increased health financing, and strengthened the capacity of all countries in health risk reduction and management. (1)

Table1. Global indicator framework for the Sustainable Development Goals 3 Good Health and Well Being and targets of the Maternal and Child Health 2030 Agenda

	TARGET	INDICATOR
Target 3.1.	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	Maternal mortality ratio Proportion of births attended by skilled health personnel
Target 3.2.	By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	Under-five mortality rate Neonatal mortality rate
Target 3.4**.**	By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	• Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease • Suicide mortality rate
Target 3.5.	Strengthen the prevention and treatment of substance abuse, including narcotic drug	• Coverage of treatment interventions (pharmacological,psychosocial

	abuse and harmful use of alcohol	and rehabilitation and aftercare services) for substance use disorders • Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in liters of pure alcohol.
Target 3.7**.**	By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs reproductive age (aged 15–49	• Proportion of women of reproductive age years) who have their need for family planning satisfied with modern methods (aged 15–49. • Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group
	Target 3.8. Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	• Coverage of important health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and

		service capacity and access, among the general and the most disadvantaged • Proportion of people with l**arge household expenditures on health** as a s**hare of total household expenditure or income**

Source: UNDP

A. PURPOSE OF STUDY

Maternal health constitutes the health of women during pregnancy, childbirth and the postpartum period. According to the Health Index edition 2(2016-2018), Uttar Pradesh, Bihar, Odisha, Madhya Pradesh are the low performing states out of the 21 big state . Madhya Pradesh has been placed at 18th position with 40.09 points, ahead of Odisha (39.43), Bihar(38.46), UP and Rajasthan.(2016-2018). Pregnancy is not a disease, nor is childbirth a medical emergency. Prenatal and postpartum maternal health is critical to a mother's physical and mental well-being and contributes to her ability to render loving, proper care to her newborn child at birth and years thereafter. Pregnancy can provide an opportunity to identify existing health risks in women and to prevent future health problems for women and their children. Maternity is very common and motherhood is a blessing. If so, what and how Maternal Health is in Madhya Pradesh.

B. RESEARCH QUESTION

What was the status of Maternal Health Care in MP during 2015-16?

C. OBJECTIVES:

To review the maternal health program, and schemes implemented in MP.

To study the common maternal health indicators by districts during 2015-16 as per NFHS-4 and NHSRC.

To compare common maternal health indicators of NFHS 4 and NHSRC district fact sheets.

D. LITERATURE REVIEW

Chaturvedi, S., James, T. C., Saha, S., & Shaw, P. (2019). Introduction: Sustainable Development Goals and India. In *2030 Agenda and India: Moving from Quantity to Quality* (pp. 1-13). Springer, Singapore.

Achieving Sustainable Development Goals (SDGs) set up by United Nations [1], is the commitment of India. In September 2015, the United Nations General Assembly established the Sustainable Development Goals (SDGs) which specify 17 universal goals, 169 targets, and 230 indicators leading up to 2030. The Sustainable Development Goals (SDGs) have been criticized by some as "senseless, dreamy, garbled", as compared to the Millennium Development Goals (MDGs). As they are not Specific, Measurable, Attainable, Relevant, Time bound (SMART), and easy to communicate. Government of India appointed the National Institution for Transforming India (NITI Aayog) as the nodal agency to ensure coordination among government departments for implementation of SDGs.

Jat, T. R., Ng, N., & San Sebastian, M. (2011). Factors affecting the use of maternal health services in Madhya Pradesh state of India: a multilevel analysis. International journal for equity in health, 10(1), 59.

Maternal health services helps in reducing maternal morbidity and mortality. The utilization of maternal health services is a complex phenomenon and it is influenced by several factors. Therefore, the factors at different levels affecting the use of these services need to be clearly understood.

This study was designed as a cross sectional study. Data from 15,782 ever married women aged 15-49 years residing in Madhya Pradesh state of India. Multilevel logistic regression analysis was performed accounting for individual, community and district level factors associated with the use of maternal health care services. Type of residence at community level and ratio of primary health center to population and percent of tribal population in the district were included as district level variables in this study.

The results of this study showed that 61.7per cent of the respondents used antenatal services at least once during their most recent pregnancy. The percentage of mothers whose last delivery

was assisted by skilled personnel was 49.8 whereas only 37.4per cent women received postnatal care within two weeks after their most recent delivery.

Tiwari, R., & Gupta, S. (2018). Spatial inequalities in maternal healthcare utilization in Madhya Pradesh.

The study is mainly based on the secondary data collected through many sources. The most important among them are National Family Health Survey-4 (NFHS-4) data. Other data use for explanations and analysis are taken from the Census. GIS mapping is used to show spatial variation among the selected variables. The analysis is based on three critical elements of maternal health care that are full antenatal care, safe or institutional deliveries and postnatal care. Before the discussion on these issues general trends of maternal mortality in the state are presented here for better understanding. The state is facing two different types of challenges at one hand the spread of maternal health care facilities such as antenatal care is well below the national average on the hand the spatial distribution of these facilities are lagging behind in many districts. Both issues need immediate attention and appropriate planning measures. Programs such as Janani Suraksha Yojana the state government have taken many initiatives to improve the situation. Recently Mukhyamantri Shramik Seva (Prasuti Sahayata) Yojana, 2018 introduced to provide cash rewards for institutional deliveries for target groups.

Prusty, R. K., Gouda, J., & Pradhan, M. R. (2015). Inequality in the utilization of maternal healthcare services in Odisha, India. International Journal of Population Research, 2015.

This study aims to assess the level and pattern of maternal healthcare services utilization among different subgroups of women in Odisha with a special focus on the regional, economic, and educational inequality using the latest District Level Household and Facility Survey. Descriptive statistics and bivariate and multivariate analysis were used to understand the pattern of utilization of maternal healthcare services among women by different background characteristics. Concentration curve and decomposition analysis were used to understand the inequalities in utilization of maternal healthcare services and contribution of different socioeconomic factors. Results reveal wide regional variation in the utilization of maternal healthcare services. The

utilization of maternal healthcare services is more concentrated among affluent households. Economic inequality in safe delivery is high. The study found that the utilization of maternal healthcare services is considerably low in Odisha along with wide variation by region, economic standard, and literacy level. This region also lacks good health infrastructure and skilled health personnel. Utilization of maternal healthcare services which is the key to combat the maternal morbidities or death. Upgradation of health infrastructure including positioning skilled health personnel in public health centers in rural and disadvantaged regions can be the main priority in the health planning and programmes. Large scale healthcare awareness programmes in addition to promoting female literacy are pertinent to enhance the maternal healthcare seeking behavior.

Singh, R., Neogi, S. B., Hazra, A., Irani, L., Ruducha, J., Ahmad, D & Mavalankar, D. (2019). Utilization of maternal health services and its determinants: a cross-sectional study among women in rural Uttar Pradesh, India. Journal of Health, Population and Nutrition, 38(1), 13.

Proper utilization of antenatal and postnatal care services plays an important role in reducing the

maternal mortality ratio and infant mortality rate. This paper assesses the utilization of health care services during pregnancy, delivery and post-delivery among rural women in Uttar Pradesh (UP) and examines its determinants. To find out the determinants of utilization of maternal health services, three outcome variables were considered: at least three ANC visits during pregnancy, institutional delivery (delivery in a public/private health facility) and any PNC within 42 days of delivery. Utilization of maternal health services which includes antenatal services, institutional delivery and postnatal services was low in the study population. It was observed in our study that 83per cent of the women had utilized any ANC services and among them 61per cent reported

at least three ANCs during pregnancy. These proportions are high when compared to the overall figure of UP. According to National Family Health Survey-4 (NFHS-4), about 22per cent of mothers had at least four ANC visits in the rural area of UP. For both antenatal care and postnatal care, role of health worker was crucial as it was observed that women were more likely to avail ANC and PNC with increasing number of contacts with the health workers.

Gupta, S. K., Pal, D. K., Tiwari, R., Garg, R., Shrivastava, A. K., Sarawagi, R., ... & Lahariya, C. (2012). Impact of Janani Suraksha Yojana on institutional delivery rate and maternal morbidity and mortality: an observational study in India. Journal of health, population, and nutrition, 30(4), 464.

The Government of India initiated a cash incentive scheme—*Janani Suraksha Yojana* (JSY)—to promote institutional deliveries with an aim to reduce maternal mortality ratio (MMR). An observational study was conducted in a tertiary-care hospital of Madhya Pradesh, India, before and after implementation of JSY. The objectives of this study were to: (i) determine the total number of institutional deliveries before and after implementation of JSY, (ii) determine the MMR, and (iii) compare factors associated with maternal mortality and morbidity.

Among those who had institutional deliveries, there were significant increases in cases of eclampsia, pre-eclampsia, polyhydramnios, oligohydramnios, antepartum haemorrhage (APH), postpartum haemorrhage (PPH), and malaria after implementation of JSY. The scheme appeared to increase institutional delivery by at-risk mothers, which has the potential to reduce maternal morbidity and mortality, improve child survival, and ensure equity in maternal healthcare in India

Janani Surkhsha Yojana or JSY (literally meaning Maternal Protection Scheme) had been started as part of the National Rural Health Mission (NRHM) in India on 12 April 2005. The major objectives of JSY were to reduce maternal mortality ratio and infant mortality rate by encouraging institutional deliveries and focusing on institutional care among women, particularly those belonging to families below the poverty line.

It was concluded that JSY has increased the proportion of institutional deliveries in India, specifically among vulnerable populations. There are indications that the referral mechanism and other systems under this scheme are performing well, and it can be expected that the scheme will further increase institutional deliveries and contribute in reducing maternal mortality and bring health equity in the populations. There had been an increase in the reporting of maternal mortality and morbidity. The long-term financial and social investment in women's literacy would definitely add to the benefits under JSY in India.

Radhakrishnan, T., Vasanthakumari, K. P., & Babu, P. K. (2017). Increasing trend of caesarean rates in India: evidence from NFHS-4. JMSCR, 5(8), 26167-76.

NFHS 4 shows that in Assam, Chhattisgarh, Haryana, Jammu and Kashmir, Madhya Pradesh. Odisha, Punjab, West Bengal and south Indian states like Tamil Nadu and Karnataka have a high number of institutionalised deliveries in public healthcare institutions. Better diagnosis and early referral due to increased health care coverage have simultaneously increased the rate of caesarean deliveries at tertiary-care hospitals of India. The gap between the CS deliveries in private health institutions is higher than public health institutions in West Bengal, Odisha, Chhattisgarh, Jammu and Kashmir, Madhya Pradesh, Andhra Pradesh, Telangana and Bihar. The average annual rate of CS has increased in all states, which indicates the need for expansion of health care delivery system and to promote institutional deliveries in public sector in India. Increasing number of CS is an epidemic in India and CS delivery should be monitored. As suggested by professionals, experienced hands with high quality midwifery led team for delivery is an effective way to reduce C sections. Awareness building, effective antenatal care and healthcare management also help to reduce the high rate of CS. The improvement in quality of care in public health institutions will attract the women to seek for maternal health care.

3. METHODOLOGY

The following steps were taken to conduct the study:

Step 1: Review of literature related to maternal and child health

Step 2: Identify sources of data availability while the Intern cannot go out due to lockdown.

During search data was found available on: National Health System Resource Center (NHSRC), New Delhi website it was for the period 2015-16.

Keeping in view the duration of NHSRC data, the study included National Family Health Survey (NFHS 4) data to compare because of almost the same duration.

Step 3: Listed out common indicators which were available with both the sources.

Step 4: Government initiatives and schemes related to maternal and child health were reviewed.

Step 5: Common indicators from the district fact sheet of Madhya Pradesh were studied and compared.

Step 6: Data analysis

Step 7: Documentation

4. RESULTS

4.1 Policies, Strategies and Programmes for Maternal Healthcare in Madhya Pradesh

There are schemes which were launched under government of Madhya Pradesh for the pregnant women. The government of Madhya Pradesh stands committed to improving the state statistics and strengthens the system by launching various schemes such as

Sardar Vallabh Bhai Patel Yojna,

Deen Dayal Upadhyay Yojna,

Pradhan Mantri Matratva Vandana Yojna,

Janani Suraksha Yojna,

LaQshya

Dakshata

Mukhyamantri Shramik Sewa Prasuti Sahayata Yojna

Pradhan Mantri Surakshit Matritva Yojana Abhiyan

- **Reproductive, Maternal, New-born, Child and Adolescent Health**:

The Reproductive, Maternal, New-born, Child and Adolescent Health (RMNCH+A) framework built upon the continuum of care concept and is holistic in design, encompassing all interventions aimed at reproductive, maternal, newborn, child, and adolescent health under a broad umbrella, and focusing on the strategic lifecycle approach and was launched in 2013. Based on the framework, comprehensive care is provided to women and children through five pillars or thematic areas of reproductive, maternal, neonatal, child, and adolescent health.

It essentially aims to address the major causes of mortality and morbidity among women and children. This framework also helps to understand the delays in accessing and utilizing health care services. It aims to reach to maximum people to provide continuum of services, constant innovations, routine monitoring.

Health facilities were strengthened based on the delivery load, services offered, available infrastructure. Improvements in terms of basic infrastructure, availability of essential drugs, equipment and other supplies, and the service delivery-related processes followed at the public health facilities in High Priority Districts. This perhaps also translated into improved knowledge and quality of care at the health facilities. It has recognized the importance of integrating interventions across the life stages and addressed inequitable health care delivery for vulnerable population groups. A Strategic Approach to Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) in Ministry of Health and Family Welfare, Government of India

Table2. Status of key RMNCH+A/RCH Indicators

INDICATOR (SRS 2015-2017)	CURRENT STATUS (SRS2015-2017)	NATIONAL HEALTH POLICYTARGET (SRS 2015-2017)	SDG 2030 TARGET
Maternal Mortality Ratio	122	100 BY 2020	< 70
Neonatal Mortality Rate	23	16 BY 2025	< 12
Infant Mortality Rate	33	28 BY 2019	-
Under 5 Mortality Rate	37	23 BY 2025	≤ 25
Total Fertility Rate	2.2	Replacement level fertility	=1

Source: SRS 2017

- **Janani Suraksha Yojna**

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Health Mission. The scheme, launched on 12 April 2005 by the Hon'ble Prime Minister, is under

implementation in all states and Union Territories (UTs), with a special focus on Low Performing States (LPS). SY is a centrally sponsored scheme, which integrates cash assistance with delivery and post-delivery care. The Yojana has identified Accredited Social Health Activist (ASHA) as an effective link between the government and pregnant women. The scheme focuses on poor pregnant woman with a special dispensation for states that have low institutional delivery rates, namely, the states of Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Assam, Rajasthan, Orissa, and Jammu and Kashmir. While these states have been named Low Performing States (LPS), the remaining states have been named High Performing states (HPS).

The objective is to reduce maternal and infant mortality by promoting institutional delivery among pregnant women. It was implemented to promote institutional deliveries so that skilled attendance at birth is available and women and new born can be saved from pregnancy related deaths.

According to National Health Mission, the scheme provides performance based incentives to women health volunteers known as ASHA (Accredited Social Health Activist) for promoting institutional delivery among pregnant women. Under this initiative, eligible pregnant women are entitled to get JSY benefit directly into their bank accounts**.** The cash assistance for mothers in rural area is Rs 1400 in low performing states and Rs 700 in high performing states. In urban areas the benefit is Rs 1000 in low performing states and Rs 600 in high performing states. (11)

In both LPS & HPS, BPL/SC/ST women are entitled for cash assistance in accredited private institutions. ASHA package of Rs. 600 in rural areas include Rs. 300 for ANC component and Rs. 300 for facilitating institutional delivery. ASHA package of Rs. 400 in urban areas include Rs. 200 for ANC component and Rs. 200 for facilitating institutional delivery.

- **Pradhan Mantri Matru Vandana Yojana** :

Pradhan Mantri Matru Vandana Yojana (PMMVY) is a Maternity Benefit Programme that is implemented in all the districts of the country and is implemented since January 2017.

To provide compensation for the wage loss in terms of cash incentives so that the woman can take adequate rest before and after delivery of the first living child. It is a partial compensation which is a part of a plan to provide a total sum of Rs. 6,000 on an average to the woman. The remaining cash incentive (of Rs. 1,000) is provided under Janani Suraksha Yojana (JSY) after institutional delivery. To improve health seeking behavior amongst pregnant women and lactating mothers.(12)

According to Ministry of Women and Child Development, Cash incentive of Rs 5000 in three instalments i.e. first instalment of Rs 1000/ - on early registration of pregnancy at the Anganwadi Centre (AWC) / approved Health facility as may be identified by the respective administering State / UT, second instalment of Rs 2000/ - after six months of pregnancy on receiving at least one ante-natal check-up (ANC) and third instalment of Rs 2000/ - after child birth is registered and the child has received the first cycle of BCG, OPV, DPT and Hepatitis - B, or its equivalent/ substitute.

The eligible beneficiaries would receive the incentive given under the Janani Suraksha Yojana (JSY) for Institutional delivery and the incentive received under JSY would be accounted towards maternity benefits so that on an average a woman gets Rs 6000.

- **LaQshya**

Ministry of Health & Family Welfare, Government of India launched an ambitious program LaQshya on 11th December 2017. Under the initiative, a multi-pronged strategy has been adopted such as improving infrastructure up-gradation, ensuring the availability of essential equipment, providing adequate human resources, capacity building of health care workers and improving quality processes in the labour room. The Quality Improvement in the labour room and maternity OT will be assessed through NQAS (National Quality Assurance Standards).

The aim of the LaQshya program is to reduce preventable maternal and newborn mortality, morbidity and stillbirths associated with the care around delivery in the Labour Room and Maternity Operation Theatre (OT) and ensure respectful maternity care. It will minimize the risks associated with childbirth.

To reduce maternal and newborn mortality & morbidity due to APH, PPH, retained placenta, preterm, preeclampsia & eclampsia, obstructed labour, puerperal sepsis, newborn asphyxia, and sepsis, etc.

To improve Quality of care during the delivery and immediate post-partum care, stabilization of complications and ensure timely referrals, and enable an effective two-way follow-up system.

To enhance satisfaction of beneficiaries visiting the health facilities and provide Respectful Maternity Care (RMC) to all pregnant women attending the public health facility.

According to National Health Mission, LaQshya has strengthened critical care in Obstetrics, dedicated Obstetric ICUs at Medical College Hospital level and Obstetric HDUs at District Hospital are operationalized under LaQshya program. The Quality Improvement in labour room and maternity OT will be assessed through NQAS (National Quality Assurance Standards). Every facility achieving 70per cent score on NQAS will be certified as LaQshya certified facility. Furthermore, branding of LaQshya certified facilities will be done as per the NQAS score. Facilities scoring more than 90per cent, 80per cent and 70per cent will be given Platinum, Gold and Silver badge accordingly. Facilities achieving NQAS certification, defined quality indicators and 80per cent satisfied beneficiaries will be provided incentive of Rs 6 lakh, Rs 3 lakh and Rs 2 lakh for Medical College Hospital, District Hospital and FRUs respectively.

- **Pradhan Mantri Surakshit Matritva Yojana Abhiyan**:

The Pradhan Mantri Surakshit Matritva Abhiyan has been launched by the Ministry of Health & Family Welfare (MoHFW), Government of India.This scheme is being implemented since year 2016. Hon'ble Prime Minister of India highlighted the aim and purpose of the Pradhan Mantri Surakshit Matritva Abhiyan in the 31st July 2016 episode of Mann Ki Baat. PMSMA guarantees a minimum package of antenatal care services to women in their 2nd/3rd trimesters of pregnancy at designated government health facilities. The programme follows a systematic approach for engagement with private sector which includes motivating private practitioners to volunteer for the campaign; developing strategies for generating awareness and appealing to the private sector to participate in the Abhiyan at government health facilities.

The objective is improving the quality and coverage of Antenatal Care by doing timely detection, referral, treatment and follow-up of high risk pregnancies. It aims at reaching out to all pregnant women who are in the 2nd & 3rd trimesters of pregnancy.

The check-up is envisaged on 9th day of every month. If this day of the month is a holiday, then the check-up is organized on the next working day. In this scheme, antenatal check-up is provided at public health facilities as well as private clinics. The service is provided by the Medical Officer and Obstetrics and Gynecology specialist.

According to National Health Mission, when a pregnant woman visits the government health facility (DH, SDH, CHC- FRUs etc) designated to provide PMSMA services, she would be provided the following set of services:

- Registration : The ANM / Staff nurse would register the pregnant woman coming to the PMSMA Center and provide her a Mother and Child Protection Card and Safe Motherhood booklet.
- Examination : The Staff Nurse/ANM will take the height and weight of the pregnant woman, check her pulse and BP and record the findings and send the mother to the laboratory for diagnostics.
  - Lab Investigations : Hemoglobin, Urine Albumin and Sugar, Malaria, VDRL, HIV, Blood Grouping, Screening for GDM using OGTT etc.
  - Ultrasonography (USG): All PMSMA beneficiaries who have registered would receive an examination by an Obstetrician / medical officer with the report of their investigations. Based on the examination and reports of investigations & USG reports, a red sticker / stamp would be added on to the MCP card of women who are found to be ‘high risk’.
- Injection Tetanus Toxoid, Tablet Iron Folic Acid, Tablet Calcium and any other medication prescribed by the Medical Officer
- Counselling : All pregnant women would receive group counseling (in groups of 10-12) on diet, sleep, regular ANC check up, institutional delivery, breast feeding, contraceptives etc
- Transportation facilities would be provided to pregnant women residing in difficult / inaccessible areas where public transport is either not available or very poor, PW from vulnerable communities and in blocks with home deliveries > 20per cent.

- **Janani Shishu Suraksha Karyakaram (JSSK):**

Government of India launched this scheme on the year 2011. In this scheme all pregnant women who give child birth in government health facilities are entitled for free facilities.

The scheme aims to eliminate out of pocket expenses incurred by the pregnant women and sick new borne while accessing services at Government health facilities.

The scheme is estimated to benefit more than 12 million pregnant women who access Government health facilities for their delivery. Moreover it will motivate those who still choose to deliver at their homes to opt for institutional deliveries. (10)

According to National Health Mission, the initiative entitles all pregnant women delivering in public health institutions to absolutely free and no expense delivery, including caesarean section. The entitlements include free drugs and consumables, free diet up to 3 days during normal delivery and up to 7 days for C-section, free diagnostics, and free blood wherever required. This initiative also provides for free transport from home to institution, between facilities in case of a referral and drop back home. Similar entitlements have been put in place for all sick newborns accessing public health institutions for treatment till 30 days after birth.This has now been expanded to cover sick infants.

- **DAKSHATA**

The initiative has been launched in the state of M.P on 26 th May, 2015, through a focused approach of a concise training package for competency enhancement for providers; developing a system of post-training follow-up and mentoring; ensuring availability of essential commodities, supplies and equipment in the labour rooms and system to measure quality of care on a regular basis.

The purposes of DAKSHTA are:

To strengthen the competency of the providers of the labour room, including medical officers, staff nurses, and ANMs to perform evidence-based practices as per the established labour room protocols and standards.

To implement enabling strategies to ensure transfer of learning towards improved adherence to evidence based clinical practices.

To improve the availability of essential supplies and commodities in the labour room and the postpartum wards.

To improve accountability of service providers through improved recording, reporting and utilization of data.

Implementation of the MNH Tool kit at the delivery points, in a phased manner. (13)

According to National Health Mission, Dakshata has strengthen the intra-partum and immediate postpartum care by enhancing the competency of the health care providers in performing evidence-based practices as per the established labor room protocols and standards.

It has improved the availability of essential supplies and commodities in the labor room and accountability of service providers through improved recording, reporting and utilization of data.

- **Mukhyamantri Shramik Sewa Prasuti Sahayata Yojna**-

The Mukhya Mantri Shramik Sewa Prasuti Sahayata Yojana was launched on 1st **April, 2018**. The scheme was flagged off by the CM, Shivraj Singh Chouhan.

The aim of the scheme was to create a high risk pregnancy early identification, safe birth, pregnancy and vaccination after birth of the baby, cash incentive for women and child health and creating favorable environment.

First installment Rs 4000 During pregnancy,4 prenatal check-up until the last trimester by doctor / ANM in the prescribed period. and second installment of Rs. 12000 / - will be payable for

delivery in government hospital, on early breastfeeding and registration of the newborn in institutional birth and on giving 0 doses BCG, OPV and Hepatitis B vaccination to the infant.

Under the scheme16 thousand rupees will be provided in two installments. The eligible beneficiaries of the Janani Suraksha Yojana of the Central Government, operated in State, will also get the benefit of this scheme. At the first pregnancy, the eligible beneficiary will be paid Rs. 3000 / – as the first and second installment in the Pradhan Mantri MatritvaVandana Yojana (PMMVY). Benefits of scheme will be available to pregnant women, nurses and unorganized women workers of more than 18 years of age. Maternity Aid will be available at the Government Hospital and at the maximum of two live birth deliveries.

4.2 Madhya Pradesh Health Index:

According to the Health Index edition 2, Uttar Pradesh, Bihar, Odisha, Madhya Pradesh are the worst performing states out of the 21 big states. Madhya Pradesh has been placed at 18th position with the index score of 38.39 under the performance category as Aspirant- Not Improved.

I. Maternal Health in Madhya Pradesh

The indicators compared in this study includes per cent ANC registration in 1st trimester, 100 IFA tablets given, per cent of mothers received financial assistance under JSY delivered in institution, per cent of institutional births, per cent of public facility birth, per cent of home delivery by SBA, per cent of birth by c-section, per cent of private facility birth by c-section, per cent of public facility birth by c- section. Due to large set of data, it is divided into divisions taking Madhya Pradesh as standard and categorizing the low and high risk division in Madhya Pradesh. There are 10 divisions namely Bhopal, Gwalior, Narmadapuram, Chambal, Jabalpur, Indore, Rewa, Sagar, Shahdol, Ujjain.

i. Early Registration for Ante Natal Checkup

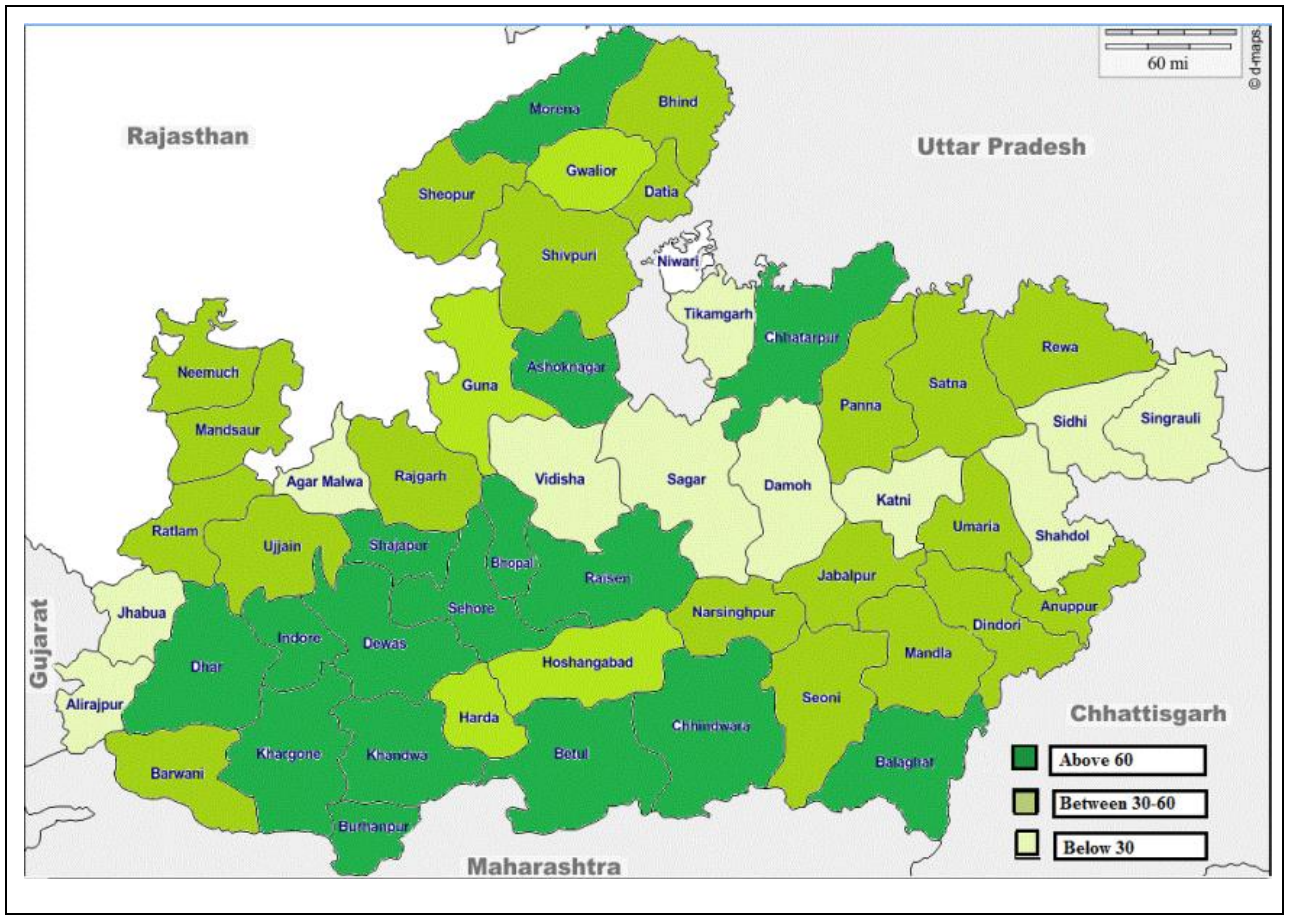
Antenatal check-up is an important event for better maternal healthcare throughout pregnancy. There are 4 mandatory ANC visits required for optimal maternal care. ANC in first trimester has

a positive impact on the health of mother. The Ante Natal check up in Madhya Pradesh was found out to be 53 percent.

Indore division which includes Indore, Barwani, Burhanpur, Dhar, Jhabua, Khandwa, Khargone, and Alirajpur recorded highest Ante Natal checkup in first trimester in Madhya Pradesh while Shahdol division which includes Anuppur, Shahdol, Umaria recorded the lowest Ante Natal check and therefore considered at risk. (Fig1.)

The districts which are located in Shahdol division i.e, Sidhi, Singrauli are traditionally least developed regions. Most of the districts of Narmada basin performing reasonably well in comparison the district located outside the Narmada basin.

Fig1. Per cent distribution of pregnant women registration for ANC services within first trimester of pregnancy by districts in MP.



Source: NFHS 4

According to NHSRC data, Bhopal recorded the highest Ante Natal checkup in first trimester in Madhya Pradesh and Shahdol had recorded least Ante Natal checkup in first trimester. (Table1.)

It is worth to mention here that Narmada basin is wealthier than the other part of the state due to better productivity of the land. Due to high industrial activity and broad urban coverage only Indore, and Bhopal division have higher antenatal check up percentage.

Pradhan Mantri Surakshit Matritva Yojana Abhiyan and Mukhyamantri Shramik Sewa Prasuti Sahayata Yojna contributed in enhancing the ANC service in Madhya Pradesh.

Table3. Per cent distribution of pregnant women registration for ANC services within first trimester of pregnancy by High and Low performing districts in MP.

District	%ANC registration in 1st trimester
Vidisha	75
Bhopal	68
Ujjain	67
Shahdol	65
Madhya Pradesh	63
Hoshangabad	61
Rewa	59
Jabalpur	58
Sidhi	58
Gwalior	40
Indore	34

Source: NHSRC

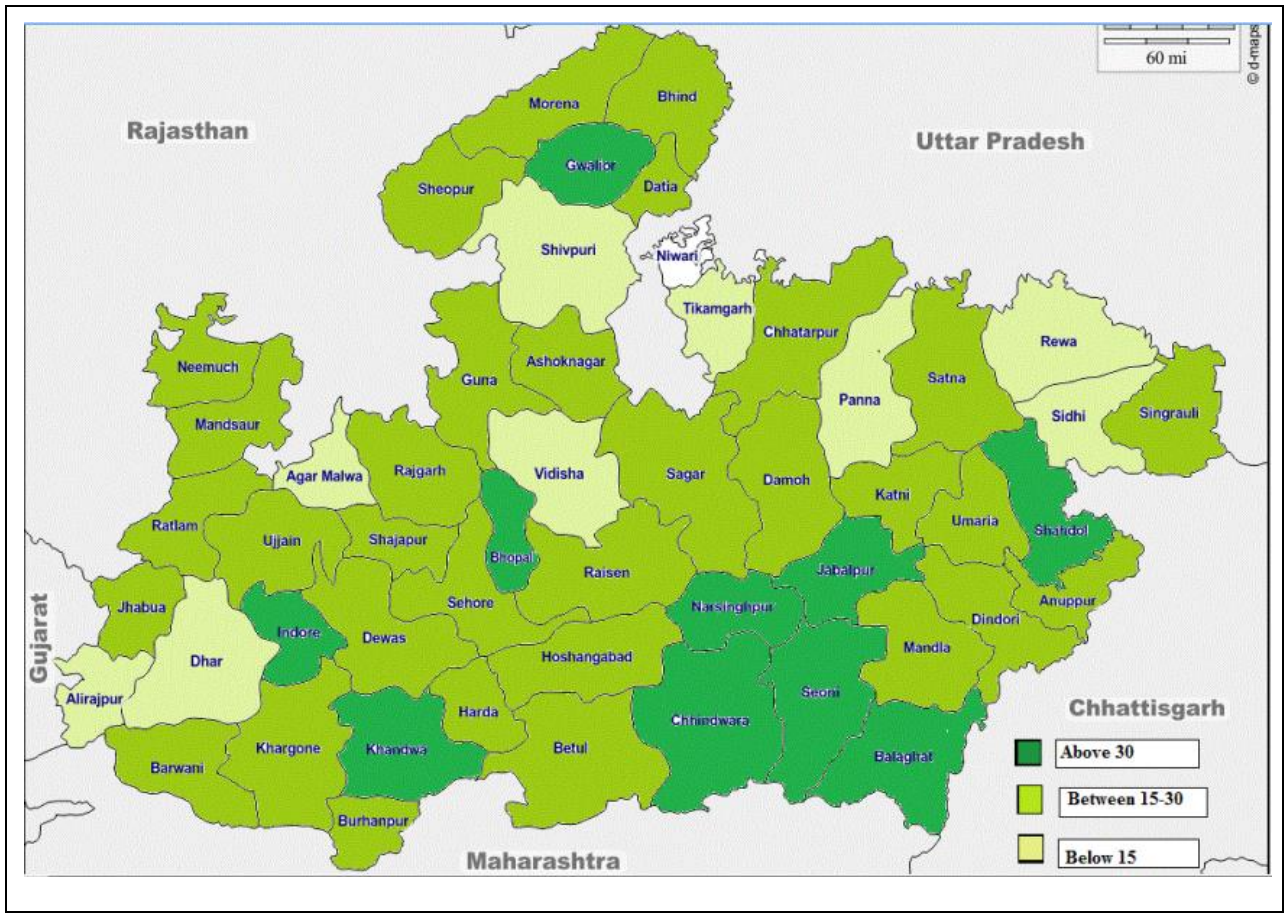
ii. 100 IFA tablets received by pregnant women

The primary goal of antenatal care is to have a healthy child as well as healthy mother at the end of pregnancy. Basic components of Antenatal Care services include number of antenatal checkups, tetanus toxoid injections and IFA tablets. According to NFHS 4, the percentage consumption of IFA tablet by pregnant women in Madhya Pradesh was 23.50. Jabalpur division

including katni, Chhindwara, Dindori, Narsinghpur, Seoni, Balaghat, Mandla were at low risk of Anemia while Rewa, Sidhi, and Singrauli were at higher risk. (Fig2.)

The provision of consumption of 100 iron and folic acid (IFA) tablets during pregnancy forms an essential component of the safe motherhood services. Under Pradhan Mantri Surakshit Matritva Yojana Abhiyan women receive fre e of cost medicines which includes IFA tablets.

Fig2. Per cent distribution of pregnant women receiving 100 IFA tablet by districts in MP



Source: NFHS 4

As per NHSRC, consumption of IFA tablet by pregnant women in Madhya Pradesh was recorded as 100 per cent in most of the districts while districts like Rewa, Sagar, Sidhi recorded the least consumption of IFA tablet by pregnant women as compared to other districts. (Table2.)

Table4. Per cent distribution of pregnant women receiving 100 IFA tablet by High and Low performing districts in MP

District	100 IFA tablets received
Bhopal	100
Hoshangabad	100
Vidisha	100
Shahdol	100
Ujjain	100
Madhya Pradesh	100
Gwalior	97
Indore	96
Jabalpur	94
Rewa	89
Sidhi	86

Source: NHSRC

iii. Pregnant women received financial assistance under JSY delivered in institution

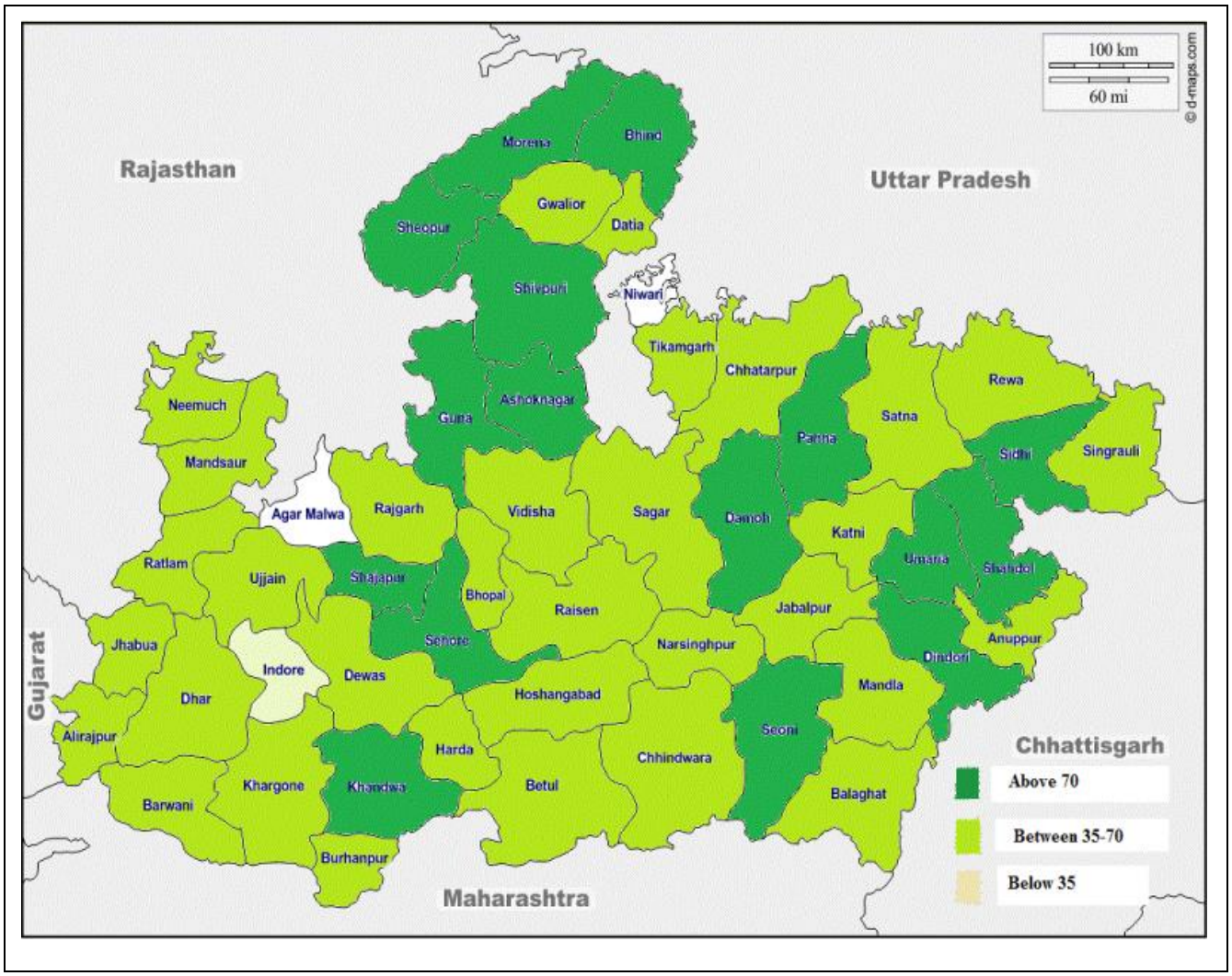
As the JSY scheme focused on to mainstreaming the marginalized group like Scheduled Caste, Scheduled Tribe and Other Backward Castes (OBCs) in the society to access the institutional delivery services, the results show an increase in percentage of women who had utilized institutional delivery. One of the challenges faced by Madhya Pradesh is its high rate of Maternal Mortality. Poor antenatal care and lack of Institutional deliveries poses major maternal deaths in Madhya Pradesh.

A cash incentive to women on delivering in a health facility increased the utilisation of maternal health services. According to NFHS-4, percentage of mothers receiving financial assistance under JSY in Madhya Pradesh was 61per cent.

Chambal division recorded the highest percentage with 74per cent of mothers receiving financial assistance under JSY while Indore division was recorded as lowest with 34per cent. A study

identified cash incentive as the most important factor behind opting for an institution for delivery, more so if the institution was a government. The scheme has an potential to improve child survival and ensure equity in maternal healthcare.

Fig3. Per cent distribution of mothers received financial assistance under JSY delivered in institution by districts in MP.



Source: NFHS 4

JSY was launches with the objective to reduce maternal and infant mortality by promoting institutional delivery among pregnant women. ASHA is a major source of information in awaring people about JSY.

As per NHSRC, the percentage of mothers receiving financial assistance under JSY in Madhya Pradesh recorded as 85per cent while Sidhi and Vidisha recorded 52 and 62.05 percent respectively i.e, least among other districts. On the other hand Mandsaur and Hoshangabad recorded the highest percent of mothers received financial assistance under JSY with 99.6 percent. (Table3)

Table5. **Per cent distribution of mothers received financial assistance under JSY delivered in institution by High and Low performing districts in MP.**

District	% of mothers received financial assistance under JSY delivered in institution
Hoshangabad	99.5
Indore	96.2
Bhopal	91.5
Jabalpur	90.5
Ujjain	89.4
Madhya Pradesh	85.8
Shahdol	84.6
Rewa	80.09
Gwalior	77.8
Vidisha	62.1
Sidhi	52.7

Source: NHSRC

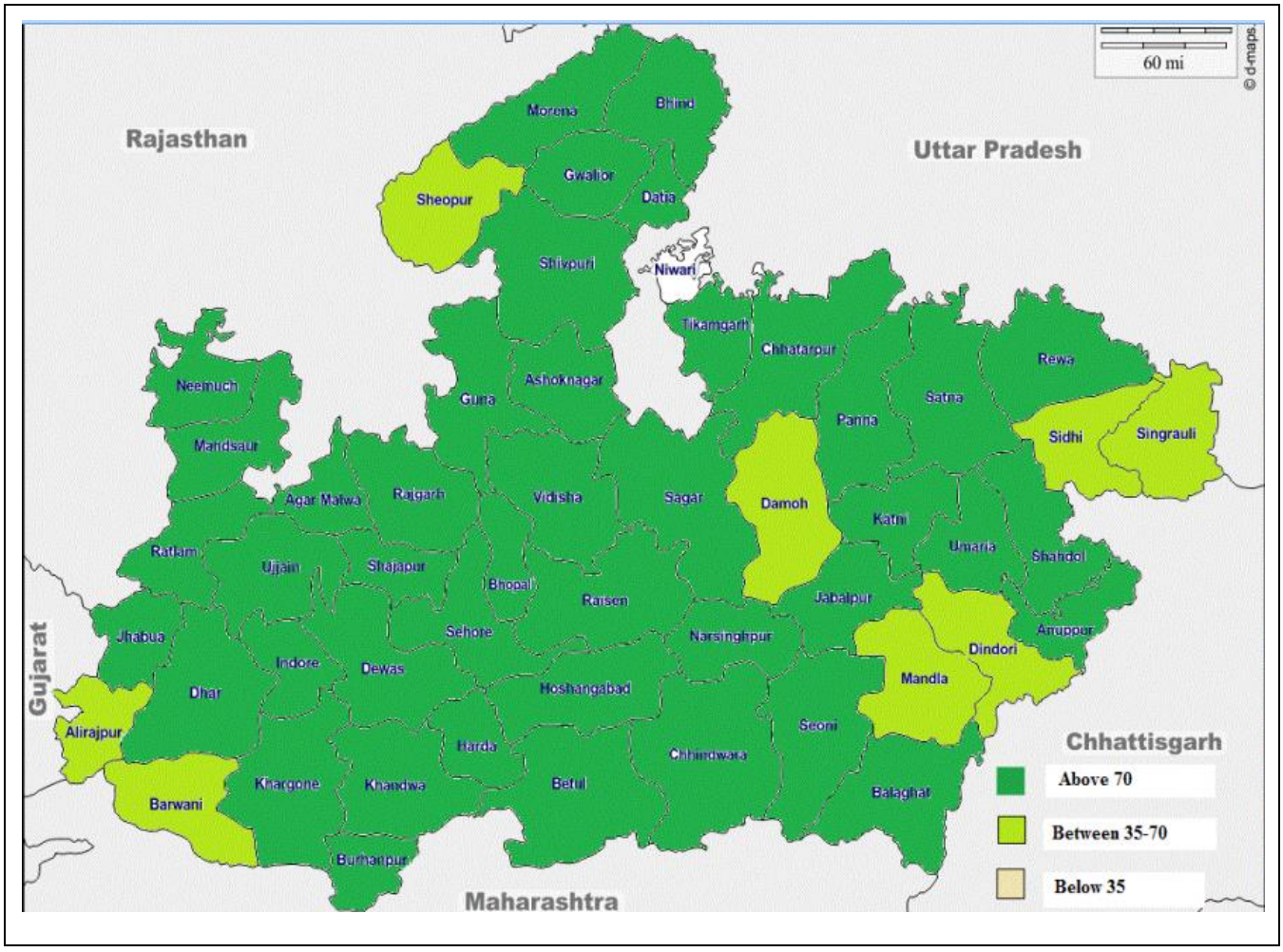
iv. Institutional Deliveries

There is a huge increase in institutional deliveries in the low performing states and this has attributed to the immense popularity of the JSY scheme. Madhya Pradesh has one of the highest utilisation **rates** of the JSY programme nationwide. It has succeeded in raising institutional birth proportions significantly. There are indication, that the referral mechanism and other systems under this scheme are performing well, and the scheme has increased the institutional deliveries and has contributed in reducing maternal mortality and bringing health equity in the populations.

The deliveries are conducted by doctor/nurse/LHV/ANM/other health personnel which is a good sign for the state.

According to NFHS 4, the percentage of Institutional delivery in the state of Madhya Pradesh was found out to be 81per cent. Overall all the districts are well performing with Indore having 95per cent i.e., highest percentage of institutional delivery in the state.

Fig4. **Per cent distribution of institutional births by District in Madhya Pradesh**



Source: NFHS 4

As per NHSRC, Institutional deliveries in Madhya Pradesh was recorded to be 89.7 with district Singrauli and Sidhi being the least in having institutional deliveries while Indore and Bhopal recorded the highest institutional deliveries i.e, 99.8 and 98.3 percent. (Table4.)

Table6. Per cent distribution of institutional births by High and Low performing District in Madhya Pradesh.

District	% of institutional births
NHSRC	
Indore	99.8
Ujjain	98.5
Bhopal	98.3
Gwalior	96.2
Madhya Pradesh	95.8
Jabalpur	94.9
Rewa	90.9
Shahdol	90.5
Hoshangabad	89.7
Vidisha	82
Sidhi	76.5

Source: NHSRC

v. Public Facility Deliveries

For the institutional deliveries public health institutions play important role. After the launch of JSY and LaQshya the out of pocket expenditure has decreased while the quality of care has been improved. Chambal which includes Bhind, Morena and Sheopur records the highest public facility delivery i.e, 78.3per cent, while Sagar, damoh, chhatarpur has 4.1per cent of home deliveries by skilled birth attendant. Home deliveries in Madhya Pradesh are 2.3per cent and are eventually decreasing which is a good sign.

According to the both the data sources, home deliveries are being conducted without or minimal assistance of the SBA and required medical and paramedical professionals. Madhya Pradesh recorded 70 percent of institutional delivery, conducted in public facility. As per NHSRC, the recorded number of home deliveries in Madhya Pradesh is 10.2, where Barwani and Sidhi recorded the highest home deliveries i.e., 33.4 and 23.9 per cent without any SBA assistance.

Despite much of the training activities of health care and SBA their ground level intervention is abysmally poor which ultimately affect the health of rural pregnant women in terms of higher maternal morbidity and mortality.

Table7. **Per cent distribution of Public facility Delivery by High and Low performing Districts in MP**

District	% of public facility birth
Shahdol	88.2
Rewa	86.8
Jabalpur	80.8
Madhya Pradesh	79.8
Hoshangabad	79.2
Sidhi	75.9
Ujjain	74.1
Vidisha	72.3
Gwalior	72.2
Bhopal	69.1
Indore	59.3

Source: NHSRC

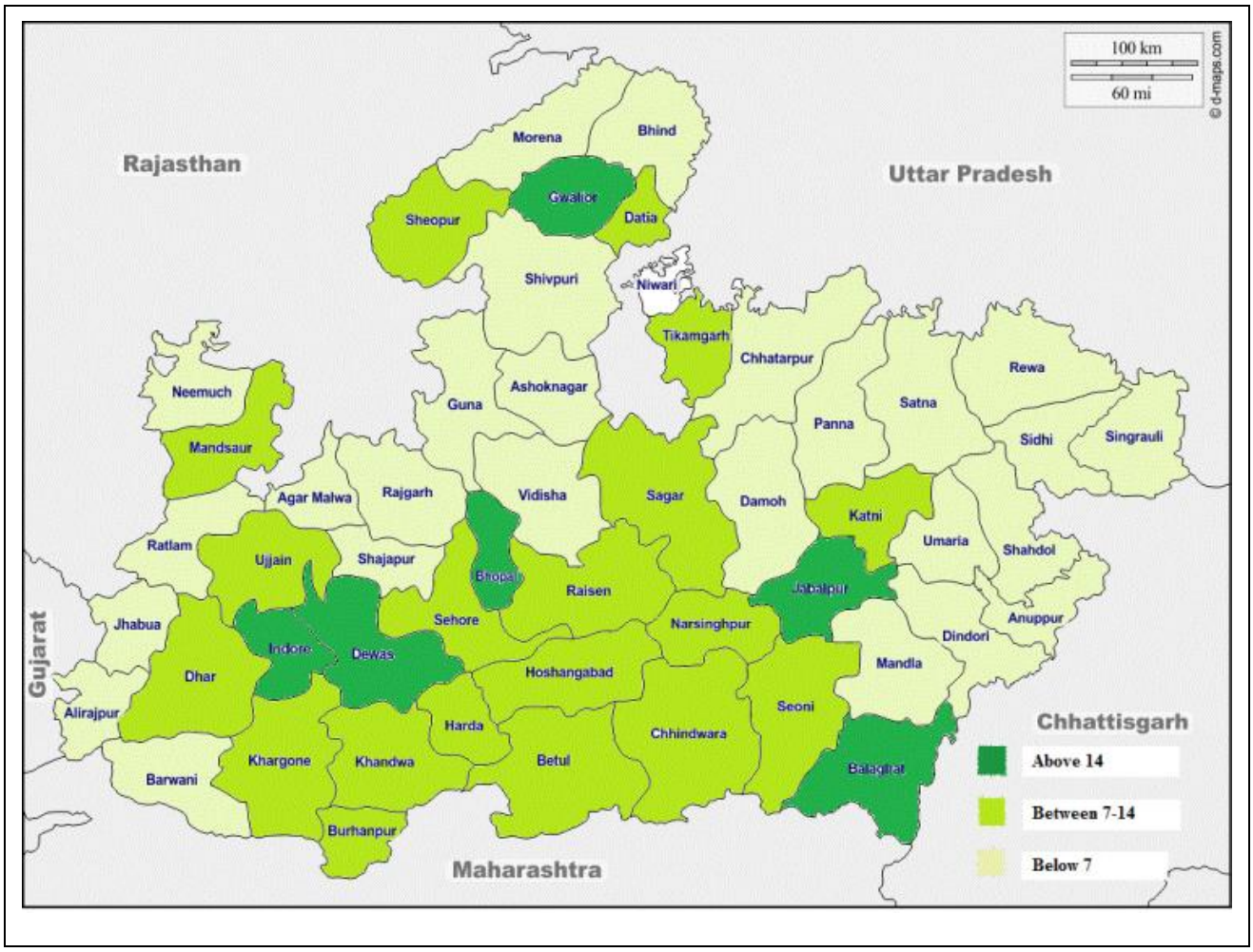
vi. Caesarian-section

As the proportion of CS deliveries are more common in private sector it gives one indication that the private hospitals are more inclined towards CS deliveries and is most likely for the purpose of money minting. Multiple births also increase the possibility of undergoing C-section delivery. Complications during pregnancy are important factors that may raise the chances of planned caesarean delivery. According to NFHS 4 and NHSRC, Madhya Pradesh records only 8.6per cent of c-section, where Indore and Bhopal have the highest caesarean section rate with 21.7per cent and 19.4per cent respectively and rewa having the least c-section rate with3.5per cent.

According to NFHS 4, it has been seen that the private CS deliveries are more as compared to the CS deliveries in public facility. Madhya Pradesh accounts for 41per cent of private CS deliveries and 5.8 per cent of public CS deliveries.

Jabalpur and Gwalior were the highest in private facility CS delivery with 54 per cent and 49.1& respectively while Indore was highest in recording the public institution CS delivery with only 14 per cent.

Fig5. **Per cent distribution of birth by C-Section by District in Madhya Pradesh**



Source: NFHS 4

As per NHSRC, Madhya Pradesh records only 10.1 percent of c-section, with Bhopal, Gwalior and Indore having the highest caesarean section rate i.e, 30.8 percent, 24 percent and 19 percent

respectively and rewa having the least c-section rate with 2.8 percent. It has been observed that the low level of CS deliveries in public sector is an indication of lack of competent health work force in the form of specialists, both obstetricians and the Anaesthetists. Necessary steps needs to be taken to deploy required number of specialists so that CS deliveries could be conducted as and when needed in the public health facility.

Table8. **Per cent distribution of birth by C-Section by High and Low performing District in Madhya Pradesh.**

District	% of birth by c-section
Bhopal	30.8
Gwalior	24.1
Hoshangabad	22.1
Indore	19.8
Ujjain	18.1
Indore	16.2
Madhya Pradesh	11.8
Shahdol	10.1
Vidisha	7.8
Rewa	5.5
Sidhi	2.5

Source: NHSRC

The result highlighted that the indicators show better in the districts with higher levels of urbanization, located in industrial region and agriculturally fertile Narmada plain. Districts with higher concentration of tribal population, such as Jhabua, Mandala, Dindori, Shahdol, and Umaria also need a lot of improvement in utilization of maternal health care facilities like Antenatal care service, Institutional delivery and Caesarian-section.

5. DISCUSSION:

From the NFHS 4 and NHSRC, it is evident that various health schemes have resulted in improved maternal health indicators. Under PMMY scheme, money is being transferred to the accounts of the beneficiaries. Under the PMSMYA scheme comprehensive and quality antenatal checkups for pregnant women is being done across India. JSY has resulted in an increase number of antenatal mothers delivering in institutions. The JSSK scheme has resulted in increasing access to health facilities by doing away with out of pocket expenses on medical inpatient care and transportation required to take pregnant from home to the health facility and back. Mukhyamantri Shramik Seva (Prasuti Sahayata) Yojana, introduced to provide cash rewards for institutional deliveries.

Madhya Pradesh shows improvement in availing the ANC services. Provision of ANC has helped the state in the maintenance of safe motherhood and has would provided for early identification in case of abnormality. (17) Both data sources confirms that MP is faring well in utilizing IFA tablet for 90 days or more but still needs further improvement. The provision of services by ASHA and ANM workers like distribution of IFA tablets, micronutrients, prevention from tetanus could promote and improve health. Maternal health services for all women are made available free of cost in all government health facilities. Government has also made free the provision of referral transport for delivery care. Health care providers are being trained to provide skilled birth attendance and emergency obstetric care.

According to a recent study by Dr.Rambooshan Tiwari, programs such as Janani Suraksha Yoajana the state government have taken many initiatives to improve the situation. Recently Mukhyamantri Shramik Seva (Prasuti Sahayata) Yojana, 2018 introduced to provide cash rewards for institutional deliveries. These efforts should be further strengthened. (2)

According to Sukumar Vellakkalab et al, there has been an increased availability of basic and comprehensive emergency obstetric care services, the provision of free transportation for delivery and a conditional cash transfer for institutional deliveries in Madhya Pradesh. However, several challenges still remain for proper implementation of various policies and programmes. As a result, the access to the services of maternal health care in the state is low.

Needless to mention that compared to home deliveries, institutional deliveries end up with more success without or minimal complications in delivery outcome. JSY in Madhya Pradesh has contributed in improving the institutional delivery rates. As per various reports provision of free transport, food, drugs and consumables to pregnant females and infants under Janani Shishu Suraksha Karyakaram has brought an increase in institutional delivery rate with reduction in out of pocket expenditures.(4,10) Data shows that Sidhi district of MP shows lack of birth preparedness and readiness for complications during pregnancy. Data shows less number of CS deliveries in public sector as compared to private facility which is an indication of lack of competent health work force in the form of specialists in the public health facility.

The improvement is required in all aspects of maternal health, pregnancy, child birth and post partum care. From both the data source, it is clear that the progress in maternal health indicators in the states of MP has not achieved as expected, and still in needs to be improved.

6. CONCLUSION:

This study concludes that more concentrated efforts are required in the state to enhance and improve maternal health indicators with normative elements, i.e. availability, accessibility, acceptability and quality. The Ante natal care, Safe delivery, institutional delivery, and post natal care needs to be increased in all areas of the state. Keeping in view the Sustainable Development Goals and Universal Health Coverage the maternal health indicators need to be improved in all the geographical locations.

Antenatal checkup registration was found to be more in Districts like and Bhopal which makes them high performer while Indore and Rewa was found to be a low performer.

Iron Folic Acid tablets were more consumed by the women of District Ujjain, Bhopal and Hoshangabad and were found to be at low risk of Anemia while Rewa, Sidhi, and Singrauli were at higher risk.

Mothers receiving financial assistance under JSY were found to be more in Hoshangabad and Indore while Sidhi, Vidisha and Rewa are low performing district with less number of mothers availing the service.

Institutional deliveries was found to be least in Districts Sidhi and Vidisha and were the low performing districts in the state while Indore and Bhopal recorded the highest institutional deliveries.

Bhopal, Gwalior and Indore recorded the highest caesarean section rate and Rewa recorded the least c-section rate in the state.

Districts such as Sidhi, Rewa and Hoshangabad were the low performing districts as per both the data sources and the services needs to be strengthened. On the other hand Bhopal was found to be high performing district among others.

7. SUMMARY:

Maternal health constitutes the health of women during pregnancy, childbirth and the postpartum period. According to the Health Index edition 2(2016-2018), Uttar Pradesh, Bihar, Odisha, Madhya Pradesh are the low performing states out of the 21 big state .

There are schemes which were launched under government of Madhya Pradesh for the pregnant women. The government of Madhya Pradesh stands committed to improving the state statistics and strengthens the system by launching various schemes such as Sardar Vallabh Bhai Patel Yojna, Deen Dayal Upadhyay Yojna, Pradhan Mantri Matratva Vandana Yojna, Janani Suraksha Yojna, LaQshya, Dakshata, Mukhyamantri Shramik Sewa Prasuti Sahayata Yojna and Pradhan Mantri Surakshit Matritva Yojana Abhiyan.

The indicators compared in this study includes Early registration for Ante natal checkup, 100 IFA tablets given, per cent of mothers received financial assistance under JSY delivered in institution, per cent of institutional births, per cent of public facility birth, per cent of home delivery by SBA, and per cent of birth by c-section.

The study concluded that Ante natal care, Safe delivery, institutional delivery, and post natal care needs to be increased in some areas of the state and Districts like Sidhi, Rewa and Hoshangabad were the low performing districts as per both the data sources and the services needs to be strengthened while Bhopal was found to be high performing district among others.

8. Reference:

1. Chaturvedi, S., James, T. C., Saha, S., & Shaw, P. (2019). Introduction: Sustainable Development Goals and India. In *2030 Agenda and India: Moving from Quantity to Quality* (pp. 1-13). Springer, Singapore

2. Tiwari, R., & Gupta, S. (2018). Spatial inequalities in maternal healthcare utilization in Madhya Pradesh.

3. Prusty, R. K., Gouda, J., & Pradhan, M. R. (2015). Inequality in the utilization of maternal healthcare services in Odisha, India. International Journal of Population Research, 2015.

4. Jat, T. R., Ng, N., & San Sebastian, M. (2011). Factors affecting the use of maternal health services in Madhya Pradesh state of India: a multilevel analysis. International journal for equity in health, 10(1), 59.

5. Singh, R., Neogi, S. B., Hazra, A., Irani, L., Ruducha, J., Ahmad, D & Mavalankar, D. (2019). Utilization of maternal health services and its determinants: a cross-sectional study among women in rural Uttar Pradesh, India. Journal of Health, Population and Nutrition, 38(1), 13.

6. Gupta, S. K., Pal, D. K., Tiwari, R., Garg, R., Shrivastava, A. K., Sarawagi, R., ... & Lahariya, C. (2012). Impact of Janani Suraksha Yojana on institutional delivery rate and

maternal morbidity and mortality: an observational study in India. Journal of health, population, and nutrition, 30(4), 464.

7. Sharma, A., Thakur, P. S., Tiwari, R., & Sharma, R. (2019). Utilization of antenatal care services in tribal area of Madhya Pradesh: a community based cross sectional study. International Journal of Community Medicine and Public Health, 6(6), 2465.

8. Radhakrishnan, T., Vasanthakumari, K. P., & Babu, P. K. (2017). Increasing trend of caesarean rates in India: evidence from NFHS-4. JMSCR, 5(8), 26167-76.

9. Pradhan MantriMatruVandanaYojana. Available from URL: http://www.wcd.nic.in/schemes/pradhan-mantri-matru-vandana-yojana

10. Janani Shishu Suraksha Karyakaram. Available from URL: http://nhp.gov.in/janani-shishu-suraksha-karyakaram-jssk_pg. Accessed on 19-9-2018

11. JSY, Janani Suraksha Yojna. Available from URL: https://nhm.gov.in/index1.php?lang=1&level=3&lid=309&sublinkid=841

12. https://nhm.gov.in/index1.php?lang=1&level=3&lid=309&sublinkid=841

13. Pradhan Mantri SurakshitMatritvaYojanaAbhiyan .Available from URL: https://pmsma.nhp.gov.in/. Accessed on 18-10-2018

14. Dakshata. Available from URL: http://nhm.gov.in/nrhm-components/rmnch-a/maternal-health/dakshata/dakshata-3-days-training.html#. Accessed on 10-10-2018

15. National family health survey 4. Available from URL: http://rchiips.org/nfhs/factsheet_NFHS-4.shtml. Accessed on 10-08-2018

16. Sustainable development goals. Available from URL: http://www.undp.org/content/undp/en/home/sustainable-development-goals.html. Accessed on 10-09-2018

17. HMIS Data Analysis – 2015 – 16 Madhya Pradesh from URL: http://nhsrcindia.org/hmis-details/hmis-analysis-2015---16/NjQy

18. Dehury, R. K., & Samal, J. (2016). Maternal health situation in bihar and madhya pradesh: a comparative analysis of state fact sheets of National Family Health Survey (NFHS)-3 and 4. Journal of clinical and diagnostic research: JCDR, 10(9), IE01.

9. ANNEXURE

S.NO	DISTRICT	%ANC registra		100 IFA tablets giv		% of mothers receiv		% of inst
		NFHS-4	NHSRC	NFHS-4	NHSRC	NFHS-4	NHSRC	NFHS-4
1	Alirajpur	29.7	65%	12.6	100%	63.9	84.25	50.4
2	Anuppur	44.8	68%	30.6	100%	67.3	87.90	76.7
3	Ashoknag	68.3	57%	18.1	97%	69.7	82.15	82.3
4	Balaghat	60.22	69%	33.2	100%	65.5	87.90	83.7
5	Barwani	42.7	68%	20	100%	65.6	81.50	50.7
6	Betul	62	67%	26.8	99%	55	85.20	76
7	Bhind	55.3	49%	23.3	99%	74.1	90.90	85.6
8	Bhopal	77.2	68%	37.1	100%	51.6	91.50	91.7