

Appendix B: Cover Page

DISTRICT WISE ANALYSIS OF SDG GOAL 2 and 3
indicators and HMIS vs NFHS-5
2022-23

MADHYA PRADESH

Dissertation Submitted to



The IIHMR University, Jaipur
for the partial fulfillment for the award of the degree of
Master of Business Administration (MBA)
in
Hospital and Health Management/Pharmaceutical
Management/Development Management
by
ANANYA SHRIVASTAV
Under the Supervision and Guidance of
J.P SINGH

2023

Appendix C: Title Page

DISTRICT WISE ANALYSIS OF SDG GOAL 2 and 3 indicators and
HMIS vs NFHS-5

2022-23

MADHYA PRADESH

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management/Pharmaceutical

Management/Development Management

by

ANANYA SHRIVASTAV

Under the Supervision and Guidance of

J.P SINGH

2023

Appendix D: Declaration by Student

DECLARATION BY STUDENT

I hereby declare that this dissertation titled DISTRICT WISE
ANALYSIS OF SDG GOAL 2 and 3 indicators and HMIS vs
NFHS-5

2022-23

MADHYA PRADESH is the bonafide record of my original
research

work. I declare that it has not been submitted to any other
university or institution for the
award of any degree or diploma. Information derived from the
published or unpublished work
of others has been duly acknowledged in the text.

(Signature) - 

Name of Student -ANANYA SHRIVASTAV

Date-7.06.2023

**DIRECTORATE MEDICAL EDUCATION
MADHYA PRADESH**

6th Floor, Satpura Bhawan, Bhopal, Madhya Pradesh

E-mail : dme12001@yahoo.com
Website : www.medicaleducation.mp.gov.in

Phone : 0755-2550186

S. No. 597 / YoVi/2023

Bhopal, Date 31/05/2023

CERTIFICATE

This is to certify that Ms. Ananya Shrivastav in partial fulfillment of the requirement for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur has successfully completed her internship at Directorate Medical Education Madhya Pradesh during 13th March 2023 - 31st May 2023.

Place: Bhopal
Date: 31/05/2023


Section In-charge
Planning & Projects
Department of Medical Education
संचालनालय शिक्षण

Appendix F: Certificate from Faculty Guide and School Dean

CERTIFICATE

This is to certify that dissertation titled.....is a record of
the research
work undertaken by (Name of Student) in partial fulfillment of the requirements
for the award
of the degree of MBA (Hospital and Health Management)/MBA (Pharmaceutical
Management)/MBA (Development Management) from the IIHMR University,
Jaipur under
my guidance and supervision and his/her approach to the research study has been
sincere,
scientific, and analytical.

Faculty Guide
IIHMR University, Jaipur
Jaipur

School Dean IIHMR
IIHMR University,

Date

Date

ABSTRACT

BACKGROUND- MP, a state in central India has made significant progress towards achieving SDG goals since adoption. The state has taken several initiatives to achieve maximum of scores and is marked as front runner overall.

In the context of SDG goal 2& 3 ,despite of continuous efforts and steps of improvement made by Government of Madhya Pradesh, the state is still a low performer in health indicators.

This report highlights few of the indicators analyzed and identifies the poor performing districts and blocks also contributing in finding substantial difference in between HMIS and NFHS-5 reporting system with possible reasons for gaps present in the state.

METHOD- A cross sectional study done on secondary data using composite method ranking to identify performance of each district in terms of SDG goal 2&3 for the year 2022-23 in Madhya Pradesh.Each district is been coded with specific colour to understand it's current position.

RESULT- Districts colour coded into different colours denotes their performances with possible gaps present in the state.Majority of districts lack in proper data management system which makes monitoring scattered and unclear.

CONCLUSION- While there are significant improvements in some of the health indicators ,there are several challenges that are yet to be addressed.

Data monitoring and capturing is still a major challenge to overcome as some of the developed districts of MP lacks in performance due to inadequate data management.

KEY WORDS-SDG,SDG goal 2 and 3,Niti aayog,health indicators,Madhya Pradesh,HMIS,NFHS-5

ACKNOWLEDGMENT

The completion of this project would not have been possible without many who supported me and guided me. I would like to express my sincere appreciation to IIHMR University for giving me this opportunity to work on this project.

I would also like to thank my mentor Mr. J.P. Singh, Professor, IIHMR for his valuable guidance during my project.

My special thanks to Mr. VIPUL SINGHAL and Mr.ABHISHEK BHARGAVA , planning consultant at MPSPPC for helping me with finalizing my project to work on during my internship ,who guided me and helped me tackle any roadblocks I faced during the period of my internship.

Also, my sincere appreciation to the staff members at NATIONAL HEALTH MISSION (HMIS) who were cooperative and helpful with whatever data I needed for my project.

Last but not least, I would also like to acknowledge with a deep sense of gratitude the sacrifices made by my parents and thus have helped me secure the opportunity to be at this university.

DISTRICT WISE ANALYSIS OF SDG
GOAL 2 and 3 INDICATORS & HMIS vs
NFHS-5
2022-23
MADHYA PRADESH

CHAPTER 1- INTRODUCTION

SDGs, also referred to as global goals, are a group of 17 integrated and connected objectives that must be accomplished by 2030 in order to safeguard the environment, eradicate poverty, and make it possible for all people to live in peace and prosperity.

India is critical to the success of SDG globally having a huge impact on earth and a making it a beautiful planet, it will be a world with fewer challenges and more hope. Niti aayog, the Indian government's leading think tank was tasked with coordinating theSDG mapping related programmes and their targets and identifying lead and supporting ministries for each goal.

Because they are best positioned to put people first and ensure that no one is left behind, state governments are essential to India's achievement on SDG. Under the supervision of the department of statistics and programme implementation MoSPI, state governments are also driving debates on the creation of national indicators for the SDG. (SDG INDIA. (2021). NITI AYOOG. <https://sdgindiaindex.niti.gov.in>)

The Niti Ayog union ministries and state governments are receiving help from the UN country team in India as they work to forge connections to guarantee that no one is left behind and advocate for enough funds to accomplish SDGs United Nations India. (2022). (THE INDIAN MODEL OF SDG LOCALISATION. New Delhi: NITI Aayog)

There are a total of 17 SDGs and 169 sub-targets. Although all important and interdependent, some indicators of Goals 2 and 3 are covered in this report.

MP, a state in central India has made significant progress towards achieving SDG goals since adoption. The state has taken several initiatives to achieve maximum of scores and is marked as front runner overall.

In the context of SDG goal 2& 3 ,despite of continuous efforts and steps of improvement made by Government of Madhya Pradesh, the state is still a low performer in health indicators. (MPSPPC. (2022). SDG:MADHYA PRADESH. In [https://mpplanningcommission.gov.in/.](https://mpplanningcommission.gov.in/))

This report highlights few of the indicators analyzed and identifies the poor performing districts and blocks also contributing in finding substantial difference in between HMIS and NFHS-5 reporting system with possible reasons for gaps present in the state.

AIM-

This study intends to define variations in the data reporting systems of the National Family Health Survey (NFHS-5) and the Health Management Information System (HMIS) in order to analyse a few health indicators in SDG Goals 2 and 3 with current performance.

OBJECTIVE-

1. To identify current position of health indicators with respect to SDG goal 2 and 3 indicators district wise.
2. To identify current position of health indicators with respect to SDG goal 2 and 3 indicators block level.
3. To differentiate between two data reporting sets.

CHAPTER 2-REVIEW OF LITERATATURE

S.NO	PAPER TITLE	LEARNING	REFERENCES	PUBLISHED ON
1.	Maternal and neonatal health in Madhya Pradesh :trends ,insights and scope	MP particularly in North East divisions of MP rate of reduction in MMR and NMR is behind. By expanding on platforms like the vncd and enhancing human resource availability and skills the coverage of important community intervention a n see and PNC services can be improved. India tribal districts there needs to be special emphasis on increasing the number of health facilities and human resources specially specialist. A cohort study or serial cross sectional service might assist track behaviours among pregnant women and healthcare providers that would step health changes in services utilisation over time home birth must be decreased and attended to	Maternal and Neonatal Health in Madhya Pradesh: Trends, Insights and Scope - India Health Action Trust (IHAT). (n.d.). India Health Action Trust (IHAT). https://www.ihat.in/resources/mnh-in-madhya-pradesh-trends-insights-and-scope/	2022

		by competent birth attendance.		
2.	Medical centre Madhya Pradesh number of sub centres	the data on the number of sub centers updated yearly with 17 observations covering a period of time with an average of 8869 000 units, 1 1 1 9 2 000 unit was all time high for the data, and 8 7 6 4 000 unit was the record low. Medical centres central Bureau of health intelligence reports that the number of sub centres in Madhya Pradesh is still active in CEIC.	Medical Centers: Madhya Pradesh: Number of Sub Centers Economic Indicators CEIC. (n.d.). Medical Centers: Madhya Pradesh: Number of Sub Centers Economic Indicators CEIC. https://www.ceicdata.com/en/india/health-infrastructure-medical-centers/medical-centers-madhya-pradesh-number-of-sub-centers	2020
3.	Addressing Maternal mortality in selected districts of Madhya Pradesh India-human rights based approach	ineffective prenatal care and shortage of human resources where the main cause of death in every facility the beneficiaries level of rights fulfillment was determined to be extremely low.	Toppo, M., Pal, D. K., Gour, D., Melwani, V., Khan, A., & Sethia, S. (n.d.). Addressing Maternal Mortality in Selected Districts of Madhya Pradesh, India –	2019

			A Human Rights-based Approach. PubMed Central (PMC). https://doi.org/10.4103/ijcm.IJCM_315_18	
4.	SRS statistical report, infant mortality rate highest in Madhya Pradesh, lowest in Kerala	Madhya Pradesh has the highest infant mortality rates, with 48 infants dying for every 1000 live births in 2018. Additionally MP performed the worst in terms of under 5 mortality rate with 56 fatalities per 1000 live births which is worse than its performance in 2017 at 55.	https://www.monneycontrol.com/news/india/srs-statistical-report-infant-mortality-rate-highest-in-madhya-pradesh-lowest-in-kerala-	2020
5.	Health information system India: issues of data availability and quality.	A new era in global health is beginning. India is going through a rapid health transition which involves changes in socio cultural norms, nutrition and epidemiology in edition 2 demographic and epidemiological changes. The consequences for developing health policies and programmes are both urgent and extensive. The country's current health information system are underprepared and frequently false short of meeting the demand of	TY - JOUR AU - Pandey, Arvind AU - Roy, Nandini AU - Bhawsar, Rahul AU - Mishra, Ram PY - 2010/01/01 SP - 111 TY - JOUR	2010

		this complicated health shift . This suggests that in addition to institutional raising a reliable health information system of data collection, analysis, and use of health statistics must go beyond the current routine system and traditional focus on infectious diseases and nutritional data to include chronic, non communicable diseases, injuries and their associated risk factors. Additionally, there is a greater need for health statistics due to the growing interest in evidence based planning for health programmes and the promotion of the values of accountability and transparency as fundamental components of democratic governance in India and around the world at various levels.	AU - Pandey, Arvind AU - Roy, Nandini AU - Bhawsar, Rahul AU - Mishra, Ram PY - 2010/01/01 SP - 111 EP - 128 T1 - Health Information System in India: Issues of Data Availability and Quality 1 (“Health Information System in India: Issues of Data Availability and Quality 1”) VL - 39 JO - Demography India ER -	
--	--	---	---	--

CHAPTER 3-RESEARCH METHODOLOGY

STUDY TYPE- Cross sectional study type

SETTINGS OF THE STUDY- MADHYA PRADESH AND it's 52 districts

STUDY PERIOD- one year (2022-23)

SAMPLE SIZE-

Inclusion period- reported under HMIS and NFHS-5.

Exclusion period- left out population that is out of the survey, under reported data on indicators

SAMPLING METHOD-The sampling method used is systematic sampling where population of Madhya Pradesh is been observed on specific indicators during one year period.

STUDY PROCEDURE-

To study each indicator and it's performance in each districts, composite ranking method is used to calculate the scoring against each district and colour coding them with aspirant (very low),performer(low),front runner (average),achiever (good).Also a study was conducted to analyze the difference between two different data reporting system i.e HMIS and NFHS-5.

A COMPOSITE INDEX IS GENERATED

The standardised combination of a specific number of indicators yields the composite index. It is a practical statistical metric for assessing a region's overall performance over a specific time frame.

- Creation of 7 indicators
- Set maximum value and minimum value
- Calculation of the index value for each region and indicator
- Positive indicator: Indicators positively associated with development
(A higher value corresponds to better performance).

$$Xid - \text{Min}(Xid)$$

Index value, Xid = _____

$$\text{Max}(Xid) - \text{Min}(Xid)$$

In this case, XBid is a state's d. indicates the value of the indicator in region I.

(i=1,2,3.....16: d=1,2,3....., n) n is the total number of counties in a state.

For this indicator in all districts of a state, the minimum and maximum values are given by the notation Min(XBid) and Max(XBid).

- Negative indicator: indications that are negatively associated Improvement (greater value because of subpar performance).

$$\text{Max}(Xid) - Xid$$

Index value, Xid = _____

$$\text{Max}(Xid) - \text{Min}(Xid).$$

Next, the composite district results are divided into 4 parts (ex. single category) with a quarter.

The lowest ranked circles (bottom quartile) were coded

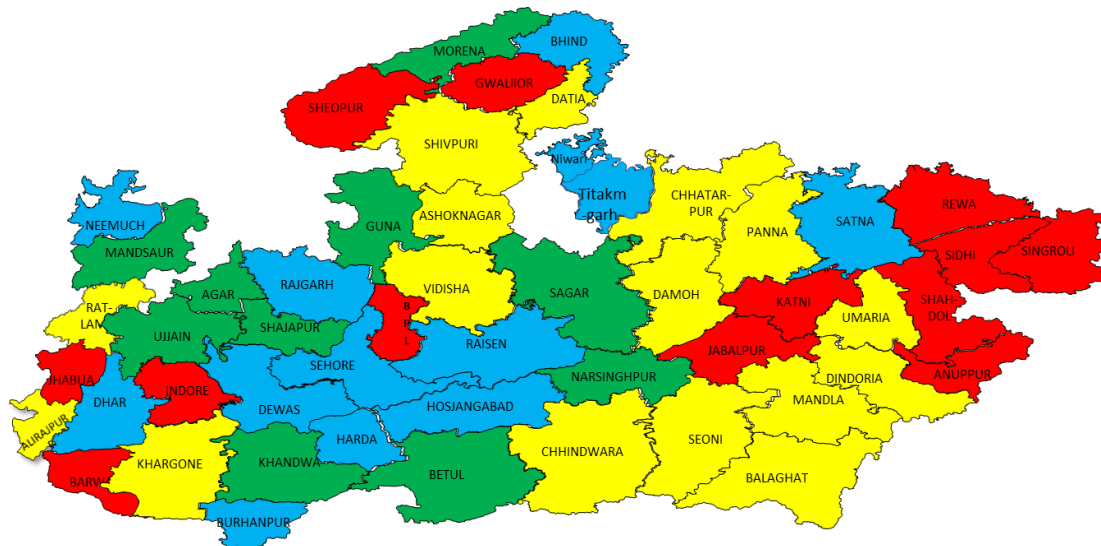
IN RED - VERY LOW POWER (ASPIRATING), YELLOW - LOW

POWER (PLAYER), GREEN - Front runner and Blue - good (successful) performance. .

ASPIRANT	
PERFORMER	
FRONT RUNNER	
ACHIEVER	

CHAPTER4- RESULTS

INDICATOR – MATERNAL MORTALITY RATE



State Maternal mortality rate (MMR) talks about maternal deaths per 100,000 of total live births.

State aims to reduce it by 70 per lakh live births .Above mentioned scoring shows the least to best performing districts of Madhya Pradesh.

The analysis shows districts like Rewa ,Shehdol,Katni ,Anuppur ,Sidhi have significant low progress than others ,which majorly comprises of majority of state tribal area whereas districts like Bhopal ,Indore also depicts higher MMR in consideration to other districts .

GAPS IDENTIFIED -

- ## 1. DATA HANDLING AND MANAGEMENT- Districts like

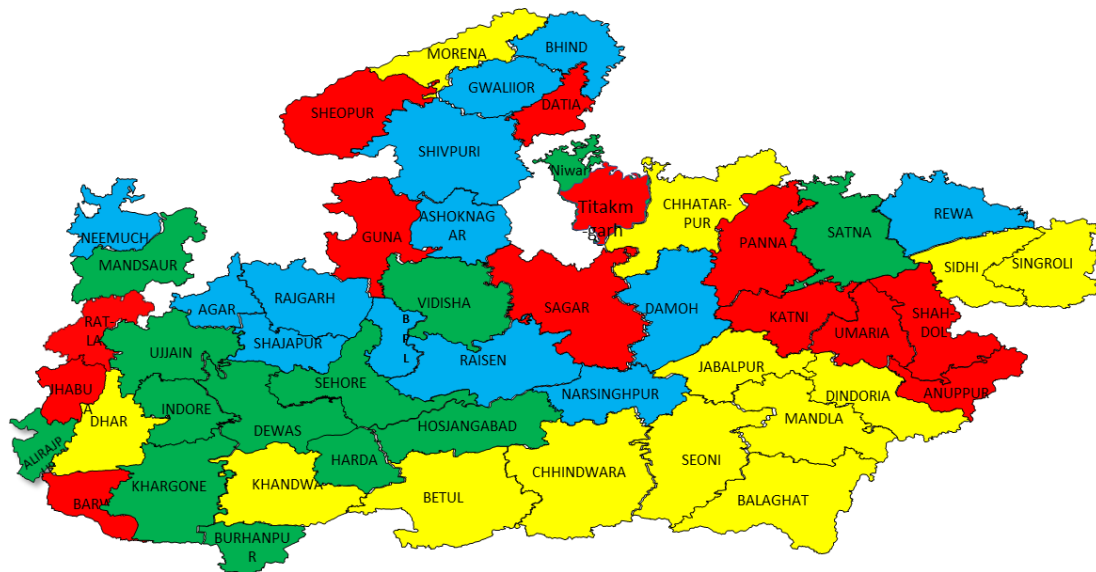
Bhopal, Indore, Jabalpur, Gwalior who have absolute facilities and infrastructure still ranks in low performing districts. A possible reason identified is fine managing data and keeping a clean, undisrupted and meaningful data.

- ## 2. TRIBAL AREAS & THIER CULTURAL BELIEFS- Districts like

shahdol,sidhi,singroli,annupur,jhabua distributes in major tribal regions and follow their own set of norms which are difficult to mould.

3. POOR REPORTING OF MIGRANTS- another possible reason identified is the under reporting and monitoring of low skilled workers, as it became difficult to track and maintain records.
4. INTER STATE BORDER DATA - with migrant workers , population who are in continuous change of their area of working, makes the data loss and monitoring difficult.

INDICATOR-UNDER 5 MORTALITY RATE



State Under 5 mortality rate is number of children who die by the age of 5 years ,per 1000 live births.

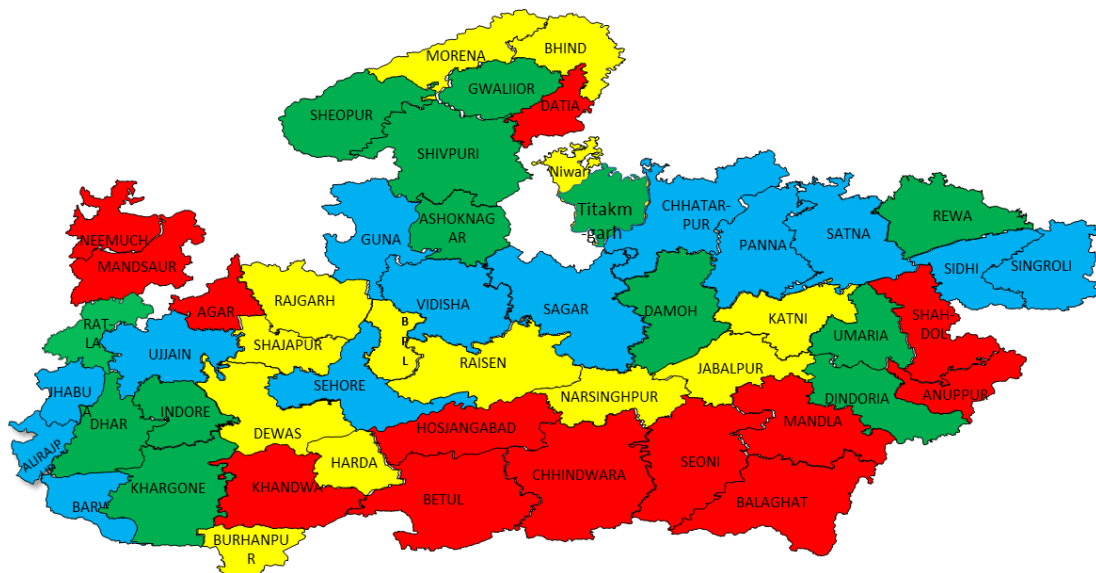
Districts such as Panna, Katni, Anuppur, Umariya, Guna, Sheopur ,Sagar shows relatively higher U5 mortality .

GAPS IDENTIFIED -

1. NUTRITIONAL CARE AND IMPROVED SANITATION – malnourishment prevalence is seen higher in state ,whereas sanitation promotion needs to be accelerated.

2. POST NATAL FOCUSED CARE- an under lying cause of under 5 mortality could be unfocused post natal care.
3. LOW INCOME ZONES OF TRIBAL- poverty and low economic status of undeveloped districts.
4. TRACKING DATA AND MONITORING- missed out data on mortality should be strengthen.
5. CAPACITY BUILDING OF ASHA & ANM -to identify the serious and on risk under 5 age group.

INDICATOR- FULL IMMUNIZATION COVERAGE UNDER 9-11 MONTHS



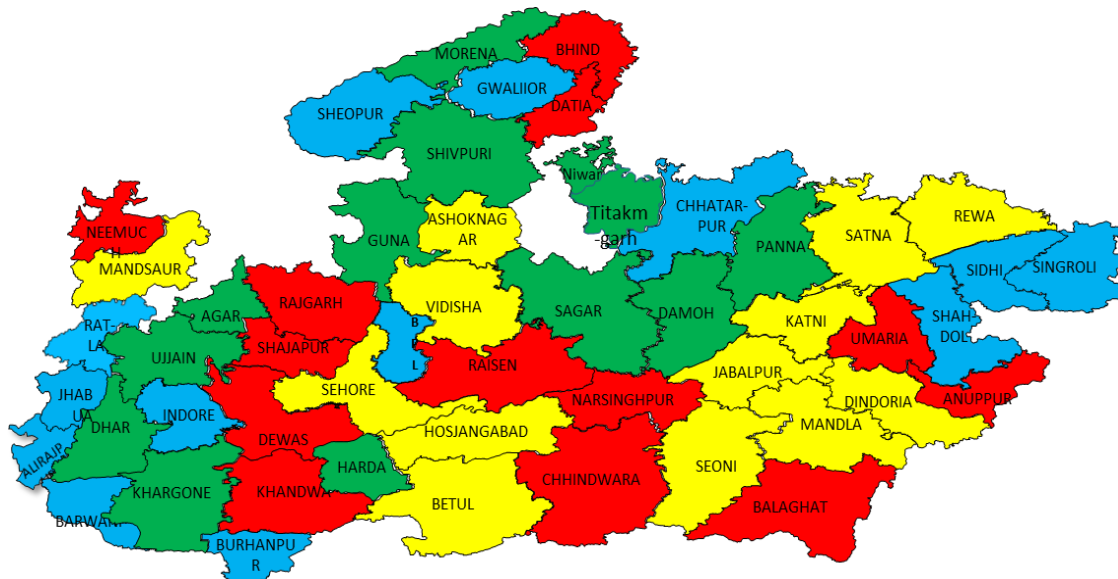
State full immunization works on full immunization coverage for 9-11 months of children and is one of the most critical aspect in detecting child health per live birth.

Madhya Pradesh immunization coverage shows that districts such as Betul, Chindwara, seoni, mandla ,balaghat have low coverage with respect overall state performance .

GAPS IDENTIFIED -

1. RURAL URBAN DIVISION-districts who are in rural regions tend to have low immunization coverage with respect to urban.
2. AWARENESS AND ACCEPTABILITY - low performing districts could fall in low awareness which results in hesitancy to adapt .
3. COLD CHAIN SUPPLY AND UNAVAILABILITY OF ACTIVE SUB CENTRES low rate of tackling vaccines and inactive sub centers could be a possible reason.

INDICATOR- INSTITUTIONAL DELIVERIES



State institutional deliveries is derived from % of women who gave birth /total live birth *100.

Madhya Pradesh institutional deliveries describes the status of pregnant women health issues .Districts like chindwara ,

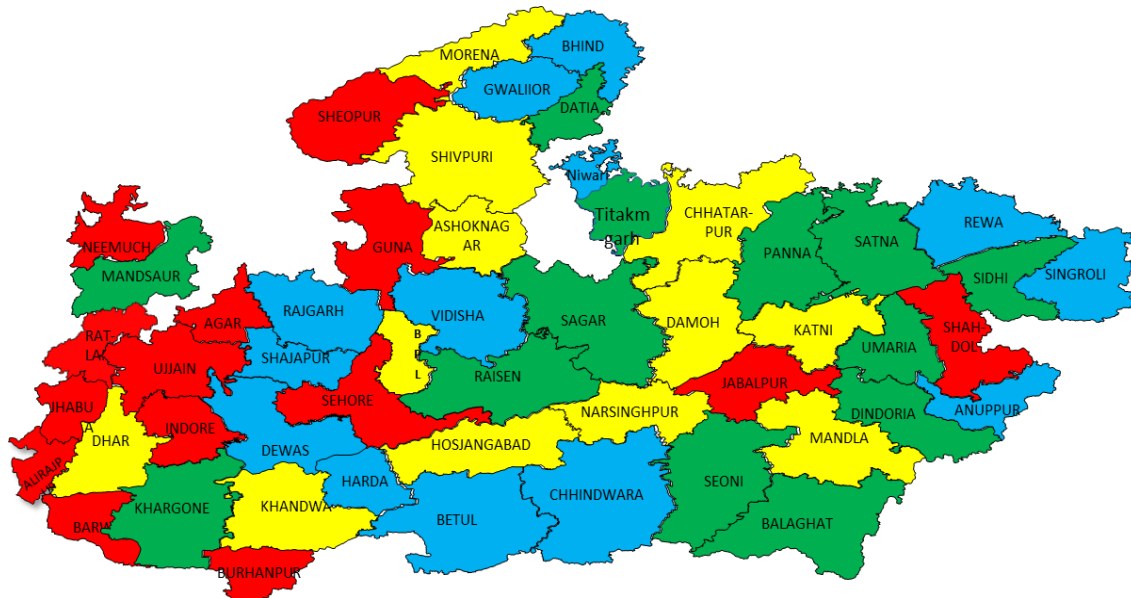
narsinghpur,umaria,annupur,balaghat,rajgargh,shahjapur,dewas,Khandwa shows low rate in institutional deliveries.

GAPS IDENTIFIED -

1. CULTURAL AND SOCIAL NORMS- following their own rules and culture could lead to unaware population.

2. INDIRECT COST OF TRANSPORTATION ,FOOD AND ACCOMODATION- low income status reflects the burden on indirect cost of expenses.
3. LIMITED SKILLED BIRTH ATTENDENTS - low human resource for deliveries could be a possible reason.

INDICATOR- NEW BORN WEIGHT UNDER 2.5 kg



State low birth weight is a major health issue with prevalence of more than 22% according to NFHS.

Madhya Pradesh low birth weight reflects neonatal morbidity and mortality directly.

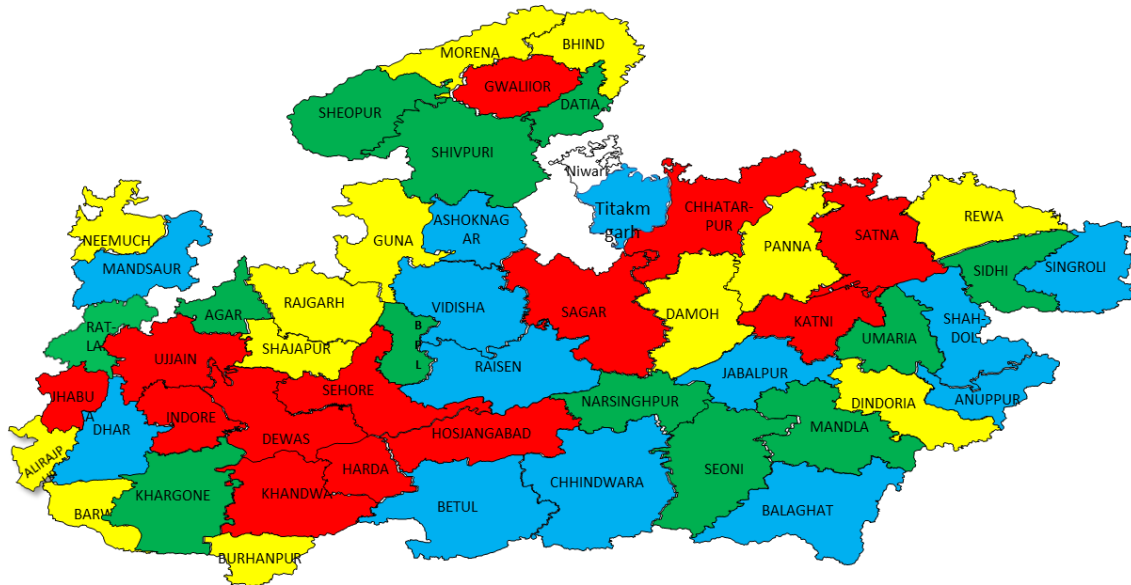
Districts like Ujjain, Indore ,ratlam ,jhabua ,alirajpur, barwani, burhanpur ,agar malwa shows higher number of low birth weight .

GAPS IDENTIFIED -

1. LOW MATERNITY NUTRITION- low intake of iron folic acid ,calcium and other supplements could lead to low maternal nutrition.
2. PNC AND ANC DATA - track records of total ANC and PNC could hinder the state indicator.

3. EARLY MARRIAGES AND CHILD BEARING - unaware family planning and teen pregnancies can cause higher low new born weight.

INDICATOR- UNDER 5 ANEMIA



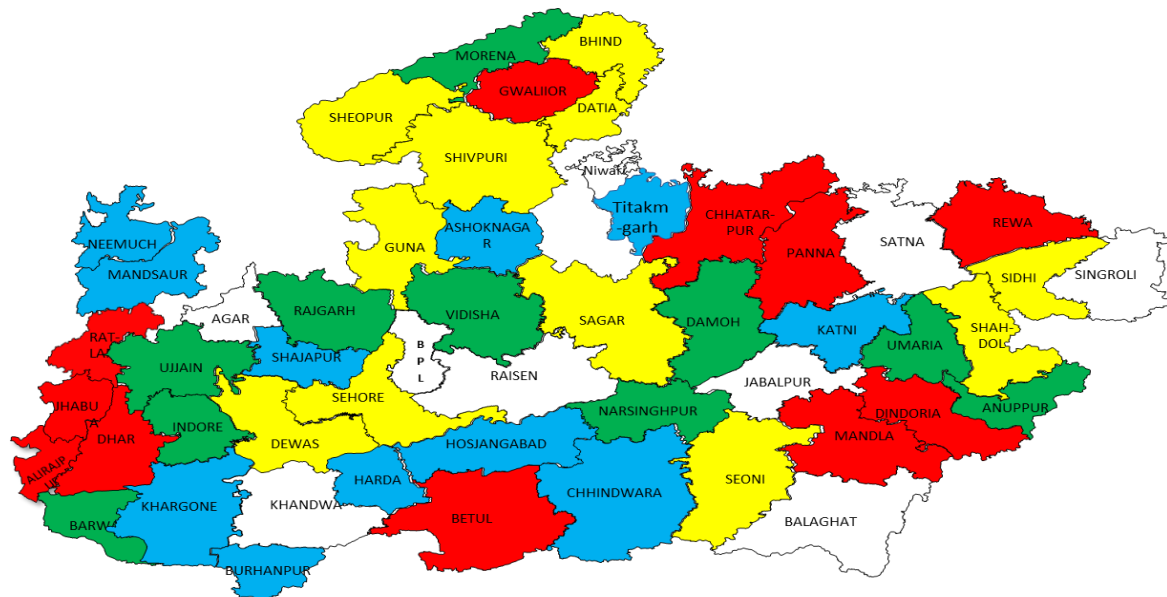
State under 5 anemia prevalence rate among 5-59 months is 55.8% according to NFHS-5.

Districts such as khandwa, Indore, harda, hoshangabad, dewas, jhabua, sehore, Ujjain shows higher prevalence rate in the state.

GAPS IDENTIFIED -

1. POOR DIETARY HABITS- higher carbs consumption and low essential nutrients such as iron , vitamins could be a possible.
2. LOW INTAKE OF IRON SUPPLEMENTS-lack of follow up in consumption .
3. LACK OF AWARENESS- awareness among population about anemia causes
4. unbalanced eating patterns and low demand for nutritional and iron rich food.

INDICATOR- PREGNANT WOMEN UNDER AGE 15-49 YEARS WHO ARE ANEMIC



State pregnant women anemia prevalence rate is around 52. Districts like dhar, betul, chattarpur, panna, mandla, dindori show higher anemic rate according to NFHS-5.

GAPS IDENTIFIED -

1. POOR DIETARY HABITS- higher carbs consumption and low consumption of essential nutrients such as iron , vitamins could be a possibility.
2. LOW INTAKE OF IRON SUPPLEMENTS-lack of follow up in consumption .
3. LACK OF AWARENESS- awareness among population about anemia causes unbalanced eating patterns and low demand for nutritional and iron rich food.

HMIS vs NFHS-5

The Niti Health Index clearly indicates that the overall performance of the system monitored by the NFHS5 does not guarantee high quality information.

All of this raises the question of how to compare actual information to estimated information.

Data diversification studies, possibly involving a combination of two data sets and independent validation of these indicators, will provide the most realistic understanding of the differences that exist, therefore this report will provide the mapping of two separate indicators with two different data sets from NFHS-5 and HMIS using two indicators i.e institutional deliveries and low birth weight analyzed to determine the possible difference between the two.

NFHS is a representative sample survey conducted across India. NFHS-5, conducted in 2019-21, includes the collection of health indicator information from 29 states and 6 union territories. Health and certain communicable and non-communicable diseases.

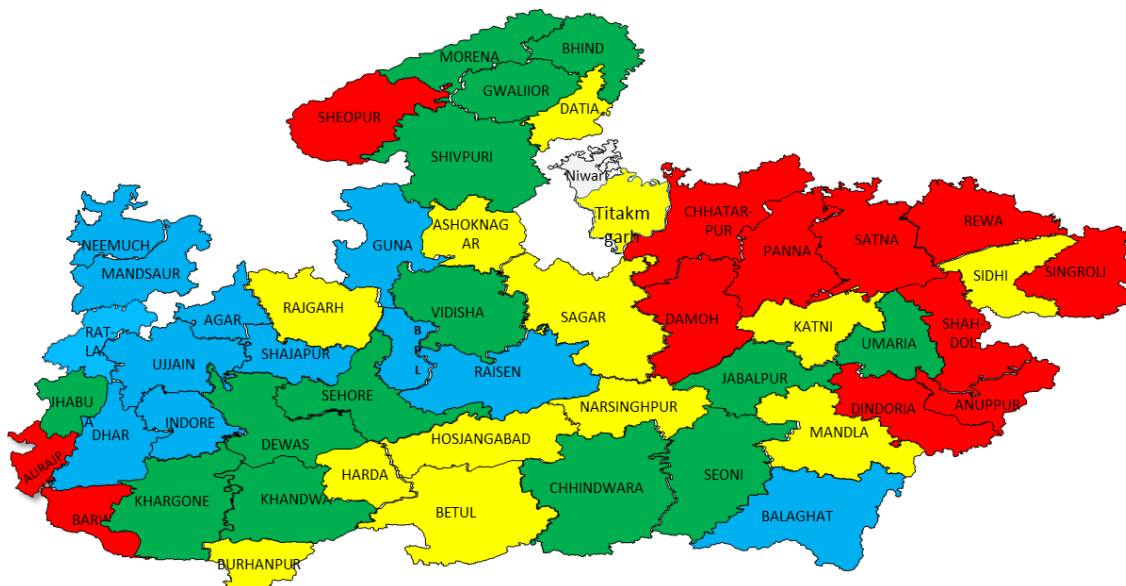
The National Health Mission (NHM) has recently evolved, giving the Indian health system the chance to capture real-time data and steadily move towards digitalization, strengthening the foundation of health data. An effort called the Health Management Information System, or HMIS, was started in 2008 by New Mexico and is a digital platform for service delivery monitoring with an emphasis on reproductive, maternal, and child health. It collects 117 things at Primary Health facilities and 70 items at Sub facilities. HMIS has offered a platform for information gathering and aggregation that can be further evaluated and used for monitoring, improving the performance of health systems.

The following mapping represents the visualisation of these 2 different data sets marking significant differences in results.

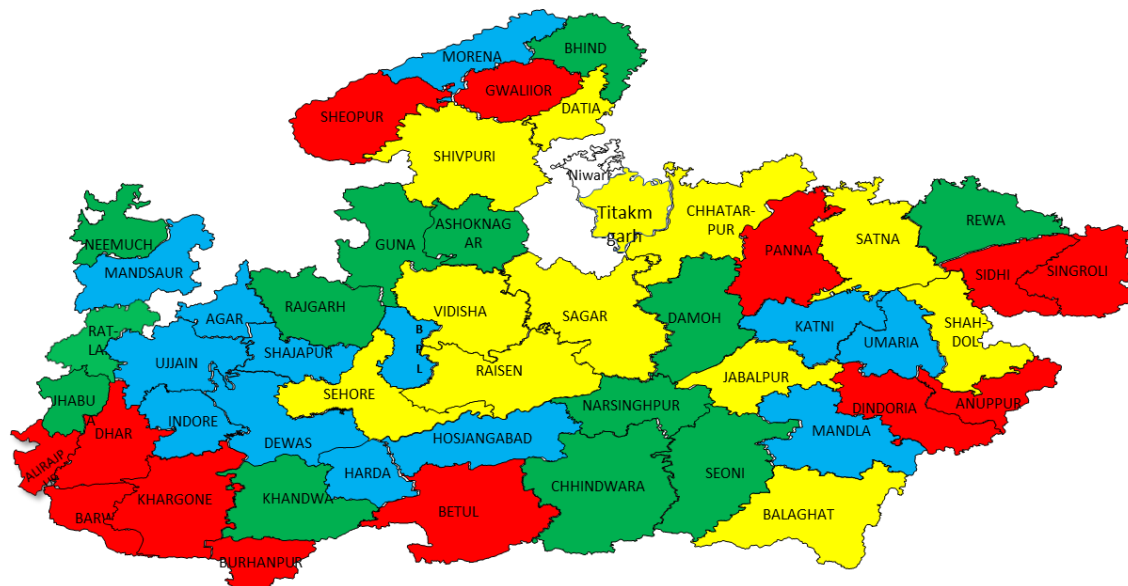
Thus, HMIS comes out to be better reporting system in terms of continuous monitoring and evaluation of SDG health goals.

1. INSTITUTIONAL DELIVERIES-

NFHS-5

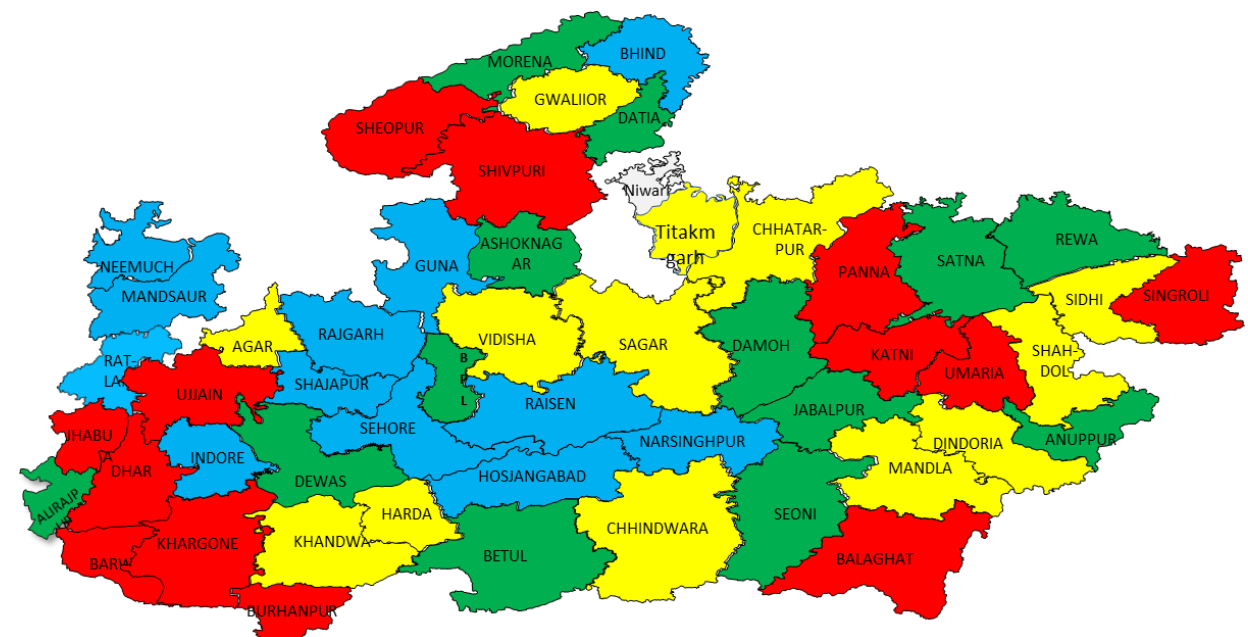


HMIS 2019-20

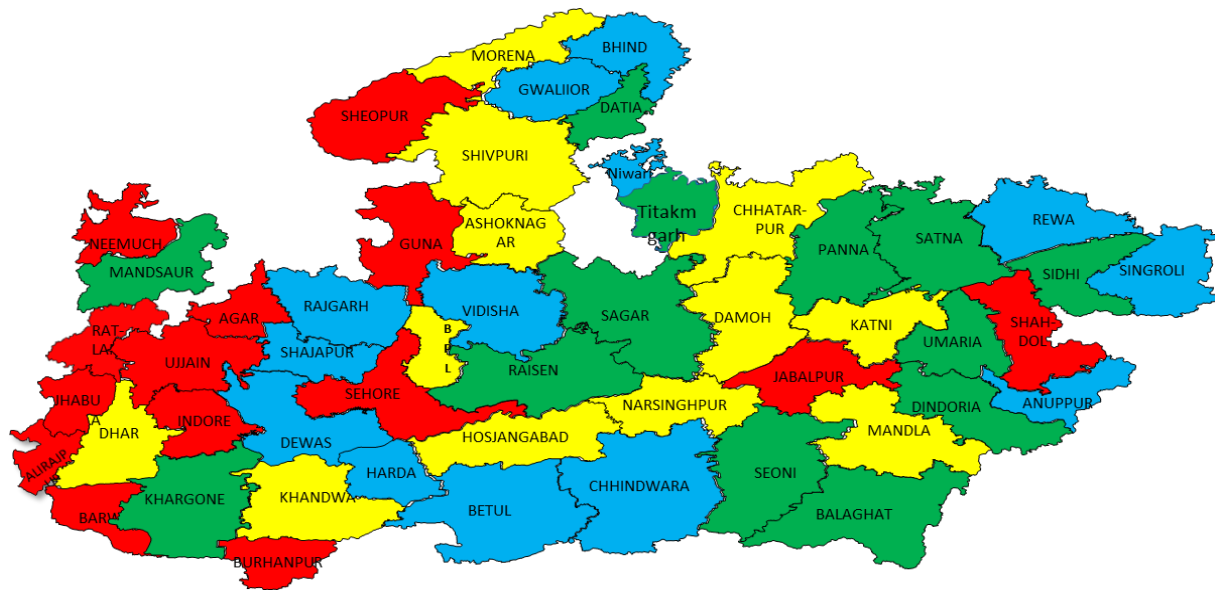


A detailed map of Madhya Pradesh, India, showing its various districts. The districts are color-coded based on their linguistic majority:

- Red:** BHIND, DATIA, NEEMUCH, RAJGARH, SHAJAPUR, RAISEN, UMARIA, ANUPPUR, BALAGHAT, CHHINDWARA.
- Yellow:** MANDSAUR, SATNA, REWA, KATNI, JABALPUR, DINDORIA, SEONI, HOSANGABAD, BETUL, DEWAS, KHARGONE, BURHANPUR.
- Green:** MORENA, GUNAWAR, AGAR, UJJAIN, DHAR, KHANDWA, HARDA, SHIVPURI, GUNA, SAGAR, DAMOH, PANNAR, NARSINGHPUR.
- Blue:** SHEOPUR, GWALIOR, NIWAR, TITKUMGARH, CHHATTARPUR, SIDHI, SINGROLI, SHAHDOL, MANDLA, BARWAN, ALIRAJ, RATL, JHABUA, INDORE, BILASPUR, BHILAI.

NFHS-5

HMIS 2022-23



CONCLUSION

While there are significant improvements in some of the health indicators ,there are several challenges that are yet to be addressed.

Data monitoring and capturing is still a major challenge to overcome as some of the developed districts of MP lacks in performance due to inadequate data management.

THEREFORE

By addressing issues and bolstering the health care system, Madhya Pradesh can ensure that everyone has access to high-quality healthcare. However, there is still a long way to go before achieving SDG GOAL 2 and 3.

REFERENCES-

1. <https://www.ihat.in/resources/mnh-in-madhya-pradesh-trends-insights-and-scope/>
2. <https://www.ceicdata.com/en/india/health-infrastructure-medical-centers/medical-centers-madhya-pradesh-number-of-sub-centers>
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6625273/>
4. <https://www.moneycontrol.com/news/india/srs-statistical-report-infant-mortality-rate-highest-in-madhya-pradesh-lowest-in-kerala-5505861.ht>
5. https://www.researchgate.net/publication/232084914_Health_Information_System_in_India_Issues_of_Data_Availability_and_Quality_1